



**ELECTRICAL  
VEHICLE  
INSTALLATION**



**BUSINESS.**



**SIMPLIFIED.**

**Everything we do revolves around our customers.**

In order to ensure that business runs smoothly, HELLA supports wholesalers as your daily business is already complicated enough. That's why we see it as our job to make this as simple as possible for you.

For the aftermarket, we offer outstanding availability of goods using sophisticated logistics and first-class data management as well as targeted sales support. This speeds up and simplifies the wholesale business – for greater efficiency.

We support workshops throughout the entire repair process. We search proactively for new solutions to help independent workshops successfully master the growing complexity of the different models so that customer cars can "hit the road" that much faster. This is how we make your daily business run faster and more profitable.

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# 1 Fuses / Circuit-breakers / Fuse holders / Fuse boxes

## 1.1 Fuses

### 1.1.1 Blade fuses



#### Application



Blade fuses are primarily used in automotive electrical fuse systems. A distinction is made between the following:

1. The very common ATO standard version (up to max. 40 A)
2. The large-sized MAXI blade terminal fuse for the high-current range (up to max. 80 A)
3. The small-sized MINI blade terminal fuse for individual consumer protection (up to max. 30 A)
4. The even more space-saving low-profile MINI variant (also up to 30 A)





#### Range advantages

- OEM quality in accordance with ISO 8820-3 requirements
- Compact design
- Easy to use
- Complete product range, including special variants for electric vehicles and LED fuses for expedited replacement (in the night as well)

## 1.1.1 Blade fuses


	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>ATO BLADE FUSES</b>						
	1 A	■	5	D 131	8JS 711 683-831	1
	2 A	■	5	D 132	8JS 711 683-841	1
	3 A	■	5	D 16	8JS 711 683-821	1
	4 A	■	5	D 190	8JS 711 683-881	1
	5 A	■	5	D 17	8JS 711 684-821	1
	7.5 A	■	5	D 18	8JS 711 685-821	1
	10 A	■	5	D 19	8JS 711 686-821	1
	15 A	■	5	D 20	8JS 711 687-821	1
	20 A	■	5	D 21	8JS 711 688-821	1
	25 A	□	5	D 22	8JS 711 689-821	1
	30 A	■	5	D 23	8JS 711 690-821	1
	35 A	■	5	D 191	8JS 711 683-871	1
	40 A	■	5	D 133	8JS 711 683-851	1
	1 A	■	50	D 128	8JS 711 683-011	50
	2 A	■	50	D 129	8JS 711 683-021	50
	3 A	■	50	D 69	8JS 711 683-002	50
	4 A	■	50	D 188	8JS 711 683-052	50
	5 A	■	50	D 70	8JS 711 684-002	50
	7.5 A	■	50	D 71	8JS 711 685-002	50
	10 A	■	50	D 72	8JS 711 686-002	50
15 A	■	50	D 73	8JS 711 687-002	50	
20 A	■	50	D 74	8JS 711 688-002	50	
25 A	□	50	D 75	8JS 711 689-002	50	
30 A	■	50	D 76	8JS 711 690-002	50	
35 A	■	50	D 189	8JS 711 683-042	50	
40 A	■	50	D 130	8JS 711 683-031	50	
<b>MINI BLADE FUSE</b>						
	2 A	■	5	D 134	8JS 728 596-861	1
	3 A	■	5	D 135	8JS 728 596-881	1
	4 A	■	5	D 30	8JS 728 596-801	1
	5 A	■	5	D 31	8JS 728 596-811	1
	7.5 A	■	5	D 136	8JS 728 596-891	1
	10 A	■	5	D 32	8JS 728 596-821	1
	15 A	■	5	D 33	8JS 728 596-831	1
	20 A	■	5	D 34	8JS 728 596-841	1
	25 A	□	5	D 137	8JS 728 596-871	1
	30 A	■	5	D 35	8JS 728 596-851	1
	2 A	■	50	D 138	8JS 728 596-081	50
	3 A	■	50	D 139	8JS 728 596-101	50
	4 A	■	50	D 140	8JS 728 596-121	50
	5 A	■	50	D 141	8JS 728 596-131	50
	7.5 A	■	50	D 142	8JS 728 596-111	50
	10 A	■	50	D 143	8JS 728 596-141	50
	15 A	■	50	D 144	8JS 728 596-151	50
	20 A	■	50	D 145	8JS 728 596-161	50
	25 A	□	50	D 146	8JS 728 596-091	50
	30 A	■	50	D 147	8JS 728 596-171	50


## 1.1.1 Blade fuses

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces	
<b>LOW PROFILE MINI BLADE FUSES</b>							
	2 A	■	5	D 233	8JS 728 596-262	5	
	3 A	■	5	D 234	8JS 728 596-272	5	
	4 A	■	5	D 235	8JS 728 596-282	5	
	5 A	■	5	D 236	8JS 728 596-292	5	
	7.5 A	■	5	D 237	8JS 728 596-302	5	
	10 A	■	5	D 238	8JS 728 596-312	5	
	15 A	■	5	D 239	8JS 728 596-322	5	
	20 A	■	5	D 240	8JS 728 596-332	5	
	25 A	□	5	D 241	8JS 728 596-342	5	
	30 A	■	5	D 242	8JS 728 596-352	5	
<b>MAXI BLADE FUSES</b>							
	20 A	■	1	D 148	8JS 728 595-051	1	
	30 A	■	1	D 149	8JS 728 595-061	1	
	40 A	■	1	D 150	8JS 728 595-071	1	
	50 A	■	1	D 151	8JS 728 595-081	1	
	60 A	■	1	D 152	8JS 728 595-091	1	
	70 A	■	1	D 153	8JS 728 595-101	1	
	80 A	□	1	D 154	8JS 728 595-111	1	
	20 A	■	10	D 156	8JS 728 595-131	10	
	25 A	■	10	D 249	8JS 728 595-212	10	
	30 A	■	10	D 157	8JS 728 595-141	10	
	40 A	■	10	D 158	8JS 728 595-151	10	
	50 A	■	10	D 159	8JS 728 595-161	10	
	60 A	■	10	D 160	8JS 728 595-171	10	
	70 A	■	10	D 161	8JS 728 595-181	10	
	80 A	□	10	D 162	8JS 728 595-191	10	
	<b>ATO BLADE FUSES WITH LED, UP TO 32 V</b>						
		3 A	■	10	D 194	8JS 711 683-062	10
		5 A	■	10	D 195	8JS 711 683-072	10
7.5 A		■	10	D 196	8JS 711 683-082	10	
10 A		■	10	D 197	8JS 711 683-092	10	
15 A		■	10	D 198	8JS 711 683-102	10	
20 A		■	10	D 199	8JS 711 683-112	10	
25 A		□	10	D 200	8JS 711 683-122	10	
30 A		■	10	D 201	8JS 711 683-132	10	
<b>MINI BLADE FUSES WITH LED, UP TO 32 V</b>							
	3 A	■	10	D 203	8JS 728 596-182	10	
	5 A	■	10	D 204	8JS 728 596-192	10	
	7.5 A	■	10	D 205	8JS 728 596-202	10	
	10 A	■	10	D 206	8JS 728 596-212	10	
	15 A	■	10	D 207	8JS 728 596-222	10	
	20 A	■	10	D 208	8JS 728 596-232	10	
	25 A	□	10	D 209	8JS 728 596-242	10	
	30 A	■	10	D 210	8JS 728 596-252	10	






## 1.1.1 Blade fuses

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>MICRO 2</b>						
	5A	■	5	D269	8JS 218 229-012	5
	7,5A	■	5	D275	8JS 218 229-072	5
	10A	■	5	D270	8JS 218 229-022	5
	15A	■	5	D271	8JS 218 229-032	5
	20A	■	5	D272	8JS 218 229-042	5
	25A	□	5	D273	8JS 218 229-052	5
	30A	■	5	D274	8JS 218 229-062	5

<b>MICRO 3</b>						
	5A	■	5	D276	8JS 218 230-012	5
	7,5A	■	5	D279	8JS 218 230-042	5
	10A	■	5	D277	8JS 218 230-022	5
	15A	■	5	D278	8JS 218 230-032	5


### BLADE FUSES FOR ELECTRIC VEHICLES UP TO 80 V

	3 A	■	10	D 262	8JS 711 683-202	10
	5 A	■	10	D 261	8JS 711 683-212	10
	7.5 A	■	10	D 260	8JS 711 683-222	10
	10 A	■	10	D 259	8JS 711 683-232	10
	15 A	■	10	D 258	8JS 711 683-242	10
	20 A	■	10	D 257	8JS 711 683-252	10
	25 A	□	10	D 256	8JS 711 683-262	10
	30 A	■	10	D 255	8JS 711 683-272	10

	Description	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>FUSE GRIPPER/TESTER</b>					
	ATO/MINI blade terminal fuse gripper with integrated function check	1	A 96	8PE 713 576-011	1
	MAXI blade fuse gripper	1	D 225	8PE 713 576-021	1

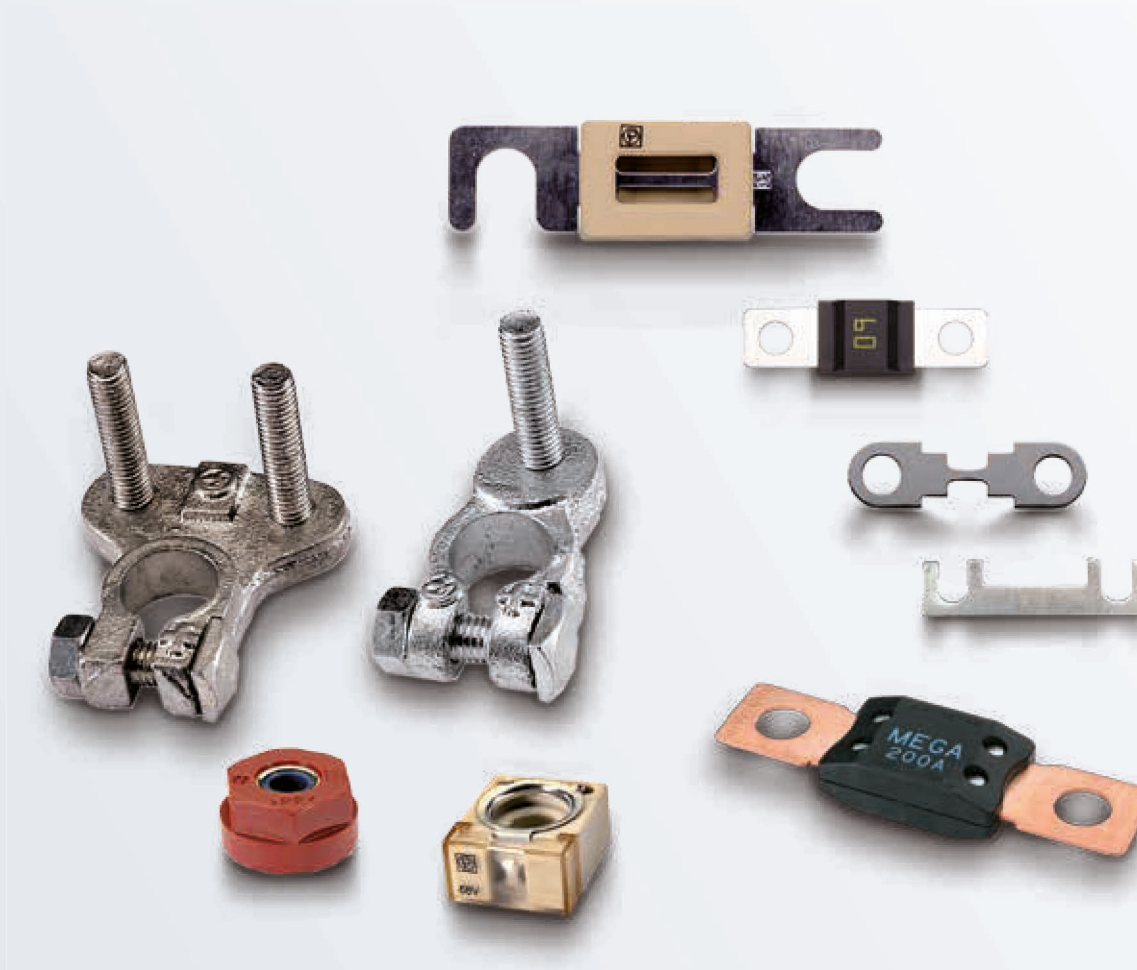
## 1.1.1 Blade fuses

Description	Ampere	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>FUSE ASSORTMENT</b>					
Product range with ATO fuses and 4 fuse holders (page 20) 8KV 004 418-004	15 pcs. each, 5 A / 7.5 A / 10 A / 15 A / 20 A / 25 A / 30 A	105	D 99	8JS 004 743-803	1
ATO product range	1 pc. each, 3 A / 5 A / 7.5 A / 15 A, 25 A / 30 A; 2 pcs. each, 10 A / 20 A	10	D 49	8JS 711 683-903	1
ATO product range	5 pcs. each, 2 A / 5 A / 7.5 A / 15 A, 20 A / 30 A	30	D 263	8JS 711 683-861	1
MINI product range	3 pcs. each, 4 A / 5 A / 30 A / 5 pcs. each 10 A / 15 A / 20 A	24	D 44	8JS 728 596-901	1
MAXI product range	1 x 20 A, 3 pcs. each, 30 A / 40 A / 50 A / 60 A	13	D 43	8JS 728 595-901	1
ATO product range with LED	1 pc. each, 5 A / 7.5 A / 10 A / 15 A / 20 A	5	D 202	8JS 711 683-931	1
MINI product range with LED	1 pc. each, 5 A / 7.5 A / 10 A / 15 A / 20 A	5	D 211	8JS 728 596-921	1

Description	Part number	Order unit in pieces
<b>FUSE ASSORTMENT CASE</b>		
 <p>Comprising: ATO (25 pcs. each per rated current), MINI blade terminal fuses (20 pcs. each per rated current) and a MINI/ATO blade terminal fuse tester/gripper.</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	8JS 009 257-801	1

Description	Ampere	Colour	Quantity in the assortment	Short designation	Part number Fuses	Order unit in pieces
<b>CONTENT, PRODUCT RANGE CASE, FUSES</b>						
ATO blade terminal fuse	2 A	■	25	D 129	8JS 711 683-021	50
	3 A	■	25	D 69	8JS 711 683-002	50
	4 A	■	25	D 188	8JS 711 683-052	50
	5 A	■	25	D 70	8JS 711 684-002	50
	7.5 A	■	25	D 71	8JS 711 685-002	50
	10 A	■	25	D 72	8JS 711 686-002	50
	15 A	■	25	D 73	8JS 711 687-002	50
	20 A	■	25	D 74	8JS 711 688-002	50
	25 A	□	25	D 75	8JS 711 689-002	50
	30 A	■	25	D 76	8JS 711 690-002	50
40 A	■	25	D 130	8JS 711 683-031	50	
MINI blade fuse	2 A	■	20	D 138	8JS 728 596-081	50
	3 A	■	20	D 139	8JS 728 596-101	50
	4 A	■	20	D 140	8JS 728 596-121	50
	5 A	■	20	D 141	8JS 728 596-131	50
	7.5 A	■	20	D 142	8JS 728 596-111	50
	10 A	■	20	D 143	8JS 728 596-141	50
	15 A	■	20	D 144	8JS 728 596-151	50
	20 A	■	20	D 145	8JS 728 596-161	50
	25 A	□	20	D 146	8JS 728 596-091	50
	30 A	■	20	D 147	8JS 728 596-171	50
<b>SPARE PARTS FOR REFILLING</b>						

## 1.1.2 Strip and screw fuses

**Application**






Strip fuses or leaf fuses primarily comprise a punched out locking plate. In addition to the open variant without jacket material, closed types with a plastic insulating body or ceramic housing are also common. Due to the more robust design, these fuse types are mainly used to provide fuse protection for electrical systems operating at higher currents and voltages.

The CF8 main fuse is specially designed for applications at the battery terminal. Accompanying insulating nuts and terminals are included in the range.


**Range advantages**



- OEM quality to standard
- Various versions for a wide range of applications

## 1.1.2 Strip and screw fuses

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>MIDI HIGH-VOLTAGE FUSES</b>						
	30 A	Orange	1	D 164	8JS 742 901-061	1
	40 A	Green	1	D 165	8JS 742 901-001	1
	50 A	Red	1	D 166	8JS 742 901-011	1
	60 A	Yellow	1	D 167	8JS 742 901-021	1
	70 A	Brown	1	D 168	8JS 742 901-031	1
	80 A	White	1	D 169	8JS 742 901-041	1
	100 A	Blue	1	D 170	8JS 742 901-051	1
	125 A	Pink	1	D 171	8JS 742 901-071	1
	150 A	Grey	1	D 172	8JS 742 901-081	1
	175 A	Dark Green	1	D 267	8JS 742 901-091	1
	200 A	Purple	1	D 268	8JS 742 901-101	1
<b>MEGA HIGH-VOLTAGE FUSES</b>						
	100 A	Yellow	1	D 173	8JS 742 902-001	1
	125 A	Green	1	D 174	8JS 742 902-011	1
	150 A	Red	1	D 175	8JS 742 902-021	1
	175 A	White	1	D 176	8JS 742 902-031	1
	200 A	Blue	1	D 177	8JS 742 902-041	1
	225 A	Brown	1	D 178	8JS 742 902-061	1
	250 A	Pink	1	D 179	8JS 742 902-051	1
	300 A	Grey	1	D 180	8JS 742 902-071	1
	350 A	Dark Green	1	D 243	8JS 742 902-081	1
	400 A	Purple	1	D 244	8JS 742 902-091	1
	450 A	Orange	1	D 245	8JS 742 902-101	1
500 A	Brown	1	D 246	8JS 742 902-111	1	
<b>FUSE STRIP, 41.0 X 11.0 MM</b>						
	30 A		100		8JS 713 575-011	100
	50 A		100		8JS 713 575-021	100
	60 A		100		8JS 713 575-031	100
	80 A		100		8JS 713 575-001	100
	100 A		100		8JS 713 575-041	100
	125 A		100		8JS 713 575-051	100
	150 A		100		8JS 713 575-061	100
<b>HSB FUSE STRIP, 42.0 X 12.0 MM</b>						
	30 A		10		8JS 713 575-102	10
	40 A		10		8JS 713 575-112	10
	50 A		10		8JS 713 575-122	10
	60 A		10		8JS 713 575-132	10
	80 A		10		8JS 713 575-142	10
	110 A		10		8JS 713 575-152	10
	150 A		10		8JS 713 575-162	10
	175 A		10		8JS 713 575-172	10
<b>FUSE STRIP FOR TRACKLESS BATTERY VEHICLES, 82.0 X 20.0 MM (DIN 43560, PART 1)</b>						
	35 A		1		8JS 713 575-201	1
	50 A		1		8JS 713 575-211	1
	63 A		1		8JS 713 575-221	1
	80 A		1		8JS 713 575-231	1
	100 A		1		8JS 713 575-241	1
	125 A		1		8JS 713 575-251	1
	160 A		1		8JS 713 575-261	1
	200 A		1		8JS 713 575-271	1
	250 A		1		8JS 713 575-281	1
	300 A		1		8JS 713 575-291	1
	355 A		1		8JS 713 575-301	1
425 A		1		8JS 713 575-311	1	

## 1.1.2 Strip and screw fuses

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>CF 8 MAIN FUSES UP TO 58 V</b>						
	50 A		1		8JS 747 876-001	1
	75 A		1		8JS 747 876-011	1
	100 A		1		8JS 747 876-021	1
	125 A		1		8JS 747 876-031	1
	150 A		1		8JS 747 876-041	1
	175 A		1		8JS 747 876-051	1
	200 A		1		8JS 747 876-061	1
	250 A		1		8JS 747 876-071	1
	300 A		1		8JS 747 876-081	1

	Ampere	Contents in pieces	Part number	Order unit in pieces
<b>ACCESSORIES, CF 8 MAIN FUSES</b>				
	Insulating nut	1	9MJ 747 877-001	1
	Battery terminal, 1-pin + terminal Ø 17.5 mm pin Ø 8.0 mm	1	8KX 747 875-001	1
	Battery terminal, 2-pin + terminal Ø 17.5 mm pin Ø 8.0 mm	1	8KX 747 875-011	1

### 1.1.3 Cartridge fuses (PAL fuses)



#### Application








PAL fuses (up to a maximum of 120 A) have a similar range of application to MAXI blade fuses, but unlike these they are installed primarily in Japanese vehicles.

These fuse types are also available in different sizes and designs. Late-model vehicles in particular have JCASE or even the particularly space-saving, low-profile JCASE fuses fitted.




#### Range advantages

- Compact design
- Easy to use
- Complete assortment for all vehicle generations




### 1.1.3 Cartridge fuses (PAL fuses)

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>FEMALE (AS)</b>						
	20 A	■	1	D 100	8JS 740 026-001	1
	30 A	■	1	D 101	8JS 740 026-011	1
	40 A	■	1	D 102	8JS 740 026-021	1
	50 A	■	1	D 103	8JS 740 026-031	1
	60 A	■	1	D 104	8JS 740 026-041	1
<b>FEMALE SMALL (F)</b>						
	30 A	■	1	D 105	8JS 740 026-101	1
	40 A	■	1	D 106	8JS 740 026-111	1
<b>MALE (B)</b>						
	30 A	■	1	D 107	8JS 740 026-201	1
	40 A	■	1	D 112	8JS 740 026-241	1
	50 A	■	1	D 113	8JS 740 026-251	1
	60 A	■	1	D 108	8JS 740 026-211	1
	70 A	■	1	D 114	8JS 740 026-261	1
	80 A	■	1	D 109	8JS 740 026-221	1
	100 A	■	1	D 110	8JS 740 026-231	1
	120 A	□	1	D 115	8JS 740 026-271	1
<b>BENT (C)</b>						
	30 A	■	1	D 116	8JS 740 026-311	1
	40 A	■	1	D 117	8JS 740 026-321	1
	50 A	■	1	D 118	8JS 740 026-331	1
	60 A	■	1	D 119	8JS 740 026-341	1
	70 A	■	1	D 120	8JS 740 026-351	1
	80 A	■	1	D 111	8JS 740 026-301	1
	100 A	■	1	D 121	8JS 740 026-361	1
	120 A	□	1	D 122	8JS 740 026-371	1
<b>BENT SHORT (CS)</b>						
	30 A	■	1	D 212	8JS 740 026-501	1
	40 A	■	1	D 213	8JS 740 026-511	1
	50 A	■	1	D 214	8JS 740 026-521	1
	60 A	■	1	D 215	8JS 740 026-531	1
	70 A	■	1	D 216	8JS 740 026-541	1
	80 A	■	1	D 217	8JS 740 026-551	1
	100 A	■	1	D 218	8JS 740 026-561	1
	120 A	□	1	D 219	8JS 740 026-571	1
<b>FEMALE SLOT (D)</b>						
	25 A	■	1	D 220	8JS 740 026-601	1
	30 A	■	1	D 221	8JS 740 026-611	1
<b>FEMALE SLOT (E)</b>						
	45 A	■	1	D 222	8JS 740 026-701	1
	65 A	■	1	D 223	8JS 740 026-711	1
	75 A	■	1	D 224	8JS 740 026-721	1

### 1.1.3 Cartridge fuses (PAL fuses)

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>JCASE</b>						
	20 A	■	1	D 123	8JS 740 026-401	1
	30 A	■	1	D 124	8JS 740 026-411	1
	40 A	■	1	D 125	8JS 740 026-421	1
	50 A	■	1	D 126	8JS 740 026-431	1
	60 A	■	1	D 127	8JS 740 026-441	1
<b>LOW PROFILE JCASE</b>						
	20 A	■	1	D 227	8JS 740 026-731	1
	25 A	■	1	D 228	8JS 740 026-741	1
	30 A	■	1	D 229	8JS 740 026-751	1
	40 A	■	1	D 230	8JS 740 026-761	1
	50 A	■	1	D 231	8JS 740 026-771	1
	60 A	■	1	D 232	8JS 740 026-781	1
<b>MCASE+</b>						
	15A	■	1	D280	2JS 218 228-011	1
	20A	■	1	D281	2JS 218 228-021	1
	25A	■	1	D282	2JS 218 228-031	1
	30A	■	1	D283	2JS 218 228-041	1
	40A	■	1	D284	2JS 218 228-051	1
	50A	■	1	D285	2JS 218 228-061	1
	60A	■	1	D286	2JS 218 228-071	1

### 1.1.4 Other fuses

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>TORPEDO FUSES, 6.0 X 25.0 MM (DIN 72581, PART 1)</b>						
	5 A	■	5	D 11	8JS 704 073-801	1
	8 A	□	5	D 12	8JS 025 889-801	1
	16 A	■	5	D 13	8JS 089 015-801	1
	25 A	■	5	D 14	8JS 091 603-801	1
	5 A	■	100	D 64	8JS 704 073-003	100
	8 A	□	100	D 65	8JS 025 889-003	100
	16 A	■	100	D 66	8JS 089 015-003	100
	25 A	■	100	D 67	8JS 091 603-003	100
	40 A	■	100	D 68	8JS 713 144-003	100
<b>GLASS TUBE FUSES, 5.0 X 20.0 MM, FAST</b>						
	1A		100	D 50	8JS 713 549-003	100
	2.5 A		100	D 51	8JS 713 804-003	100
	5 A		100	D 52	8JS 713 550-003	100
<b>GLASS TUBE FUSES, 6.3 X 32.0 MM, FAST</b>						
	5 A		50	D 53	8JS 713 564-002	50
	10 A		50	D 54	8JS 713 805-003	50
	15 A		50	D 55	8JS 713 806-003	50
	20 A		50	D 57	8JS 713 807-003	50
	25 A		50	D 58	8JS 713 808-003	50
	30 A		50	D 59	8JS 713 567-003	50



## 1.1.4 Other fuses

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>GLASS TUBE AND TORPEDO FUSE PRODUCT RANGE</b>						
5.0 x 20.0 mm	1 x 2.5 A					
6.3 x 32 mm	3 x 10 A 3 x 20 A 1 x 25 A		8	D 48	<b>8JS 003 481-823</b>	1
<b>GLASS TUBE FUSE PRODUCT RANGE</b>						
5.0 x 20.0 mm	1 x 2.5 A					
Torpedo	1 x 5 A 4 x 8 A 3 x 16 A 1 x 25 A		10	D 47	<b>8JS 003 481-803</b>	1

## 1.2 Circuit-breakers



### Application

Automatic fuses as well as conventional fuses provide protection from overloads and short circuits by interrupting the electrical circuit of the application.

The advantage they have over a standard fuse is that they can carry out this action many times without having to be replaced every time they are tripped. An automatic or manual reset facility allows the automatic fuse to be reverted to its initial state – this saves both time and money.




Circuit-breakers are able to distinguish between brief start-up surges and genuine overloads, so they can guarantee optimal protection without triggering unnecessarily or wasting power.

The variant with a hand release allows the user to quickly and conveniently interrupt an electrical circuit and subsequently close it with a manual reset – optimal for a large number of electrical tests as are carried out in car workshops, for example.

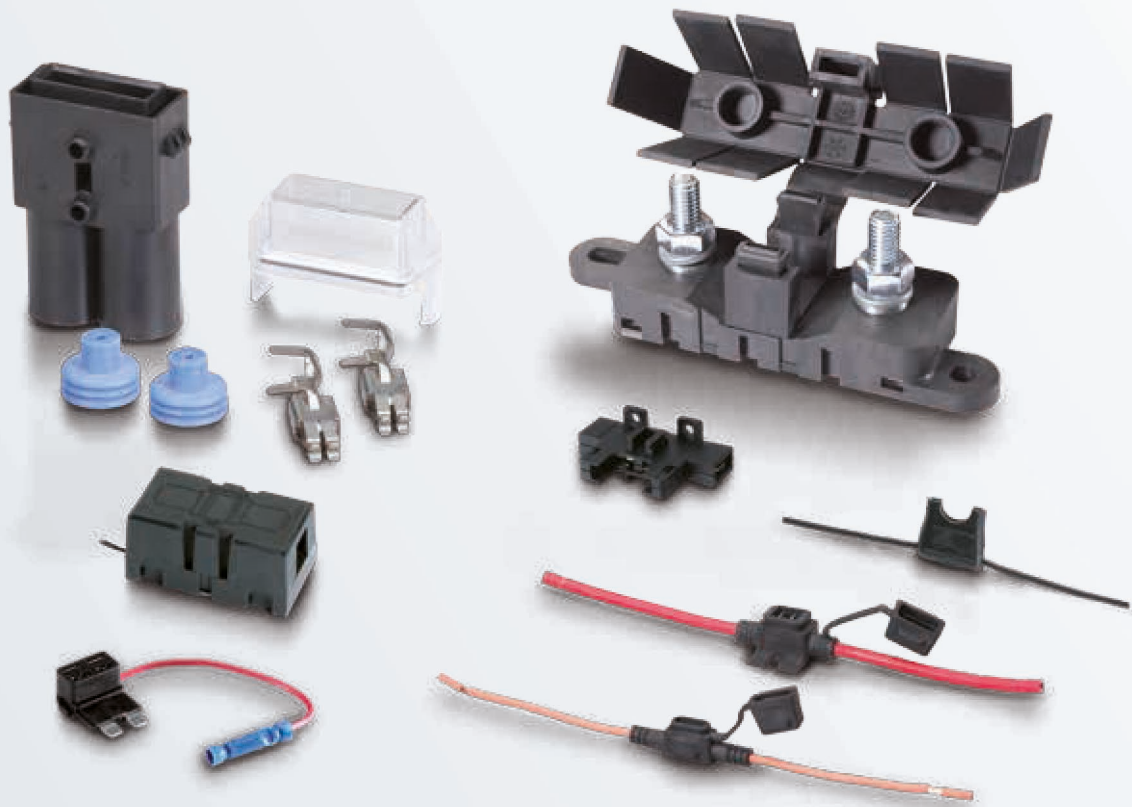
### Range advantages

- Compact design
- Easy and reliable to use
- Available in all common blade fuse sizes

## 1.2 Circuit-breakers

	Ampere	Colour	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>RESETTABLE, CONNECTIONS I.A.W. ATO FUSES</b>						
	5 A	■	1	C 01	8JS 174 320-001	1
	7.5 A	■	1	C 02	8JS 174 320-011	1
	10 A	■	1	C 03	8JS 174 320-021	1
	15 A	■	1	C 04	8JS 174 320-031	1
	20 A	■	1	C 05	8JS 174 320-041	1
	25 A	□	1	C 06	8JS 174 320-051	1
	30 A	■	1	C 07	8JS 174 320-061	1
	40 A	■	1	C 08	8JS 174 320-071	1
<b>WITH HAND RELEASE, CONNECTIONS I.A.W. ATO FUSES</b>						
	5 A	■	1	C 09	8JS 174 326-001	1
	7.5 A	■	1	C 10	8JS 174 326-011	1
	10 A	■	1	C 11	8JS 174 326-021	1
	15 A	■	1	C 12	8JS 174 326-031	1
	20 A	■	1	C 13	8JS 174 326-041	1
	25 A	■	1	C 14	8JS 174 326-051	1
	30 A	■	1	C 15	8JS 174 326-061	1
	35 A	■	1	C 16	8JS 174 326-081	1
40 A	■	1	C 17	8JS 174 326-071	1	
<b>SELF-RESETTING, 2 BLADE TERMINAL CONNECTIONS, 6.3 X 0.8 MM</b>						
	12 A	■	1	C 18	8JS 174 328-001	1
	15 A	■	1	C 19	8JS 174 328-011	1
	20 A	■	1	C 20	8JS 174 328-021	1
	30 A	■	1	C 21	8JS 174 328-031	1

## 1.3 Fuse holders



### Application

The fuse holder acts as a connector between the cable and fuse link whenever setting up or converting an electrical system requires additional fuse protection against overloads (e.g. when integrating an additional consumer).

Here the range of products is at least as wide as the range of possible applications.

Depending on requirements, variants can be fitted for many different fuse types – including with an integrated line, cover cap or even a rubberised full seal for maximum protection against moisture.





### Range advantages

- Wide assortment of products for numerous applications
- Practical safeguarding solutions for minor upgrades and conversions




### 1.3.1 Inline fuse holders

	Description	Load-carrying capacity	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>ATO INLINE FUSE HOLDER</b>						
	With cables 1.3 mm <sup>2</sup> , splash water-protected	max. 20 A	1	D 81	8JD 743 557-021	1
	With cables 3.3 mm <sup>2</sup> , splash water-protected	max. 30 A	1	D 82	8JD 743 557-031	1
	with 1.3 mm <sup>2</sup> cables	max. 20 A	1	D 83	8JD 743 557-041	1
	with cables 3.3 mm <sup>2</sup>	max. 30 A	1	D 84	8JD 743 557-051	1
<b>MINI INLINE FUSE HOLDER</b>						
	With cables 2.0 mm <sup>2</sup> , splash water-protected	max. 20 A	1	D 181	8JD 743 557-001	1
	With cables 3.0 mm <sup>2</sup> , splash water-protected	max. 30 A	1	D 182	8JD 743 557-011	1
<b>MINI INLINE FUSE HOLDER</b>						
	With protective cap, with lines 2.5 mm <sup>2</sup> , splash water-protected, butt-mounting several holders possible	max. 20 A	1	D 264	8JD 187 871-001	1
<b>LOW-PROFILE MINI INLINE FUSE HOLDER</b>						
	With cables 1.5 mm <sup>2</sup> , splash water-protected	max. 15 A	1	D 265	8JD 187 871-011	1
	With cables 2.5 mm <sup>2</sup> , splash water-protected	max. 20 A	1	D 266	8JD 187 871-021	1
<b>LOW-PROFILE MINI INLINE FUSE HOLDER</b>						
	With cables 0.75 mm <sup>2</sup> , splash water-protected	max. 10 A	1	D 247	8JD 743 557-091	1
	With cables 3.0 mm <sup>2</sup> , splash water-protected	max. 30 A	1	D 248	8JD 743 557-101	1







### 1.3.1 Inline fuse holders

	Description	Load-carrying capacity	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>JCASE INLINE FUSE HOLDERS</b>						
	With cables 8.3 mm <sup>2</sup> , splash water-protected	max. 60 A	1	D 250	8JD 743 557-111	1
<b>LOW-PROFILE JCASE INLINE FUSE HOLDER</b>						
	With cables 8.3 mm <sup>2</sup> , splash water-protected	max. 60 A	1	D 251	8JD 743 557-121	1
<b>INLINE FUSE HOLDER FOR GLASS TUBE FUSES</b>						
	For 5.0 x 20.0 mm glass tube fuses, without fuse	max. 10 A at 32 V	1	D 252	8JD 003 285-011	1
	For 6.3 x 32.0 mm glass tube fuses, without fuse	max. 20 A at 32 V	1	D 253	8JD 003 285-021	1

### 1.3.2 Other fuse holders

	Description	Load-carrying capacity	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>MAXI FUSE HOLDERS</b>						
	with blade terminal connections (6.3 x 0.8 mm)		10	I 59	8KV 004 418-004	10
			2	I 09	8KV 004 418-821	1
	for direct clamping to the cable		10	I 60	8KV 714 340-002	10
	With 2 double-spring contacts 8KW 054 944-003 (page 110), butt-mounting several holders possible, compatible with socket housing 8JA 003 526-001 for mini relay (see HELLA main electrics catalogue)		1		8JA 007 024-001	1

### 1.3.2 Other fuse holders

	Description	Load-carrying capacity	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>MAXI FUSE HOLDERS</b>						
	With 2 double-spring contacts 8KW 054 944-003 (page 110) and cover, for lines up to 2.5 mm <sup>2</sup>	max. 30 A	6	D 77	8JD 005 235-002	6
	For lines 2.5 - 4.0 mm <sup>2</sup> , use double-spring contacts 8KW 054 943-003 (page 110)	max. 30 A	2	D 24	8JD 005 235-801	1
Butt-mounting several holders possible.						
<b>MINI FUSE HOLDER</b>						
	With protective cap, accommodates up to 4 MINI blade terminal fuses Matching JPT contacts not included (product family 8KW 863 934-xxx, page 102)		10		8JD 187 871-031	10
<b>MAXI FUSE HOLDERS</b>						
	Splash water-protected, with cover, 2 screws each, contacts for cables from 2.5 - 6.0 mm <sup>2</sup> and 5.0 - 10.0 mm <sup>2</sup>	20 A - 60 A	1	D 183	8JD 743 708-001	1
	Water-tight, with cover, seals and contacts, for cables 4.0 - 6.0 mm <sup>2</sup>	20 A - 80 A	1	D 184	8JD 743 710-001	1
	For cables 6.0 - 10.0 mm <sup>2</sup>		1	D 185	8JD 743 709-001	1
<b>AUXILIARY FUSE HOLDER</b>						
	MINI fuse holder with 4 blade fuses 1 each of 3 A, 5 A, 7.5 A, 10 A		1	D 192	8JD 743 557-801	1
	ATO fuse holder with 4 blade fuses 1 each of 3 A, 5 A, 7.5 A, 10 A		1	D 193	8JD 743 557-811	1

### 1.3.2 Other fuse holders

	Description	Load-carrying capacity	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>MIDI AND MEGA FUSE HOLDERS</b>						
	MIDI fuse holder	30 A - 150 A	1	D 187	8JD 743 136-001	1
	MEGA fuse holder	100 A - 250 A	1	D 186	8JD 743 135-001	1
	MEGA fuse holder with flexible cover that permits cable feed from all directions	Max. 500 A	1	D 254	8JD 743 135-011	1
<b>MIDI / MEGA COMBO-FUSE HOLDERS</b>						
	With protective cap, for 4 x MIDI and 1 x MEGA fuse, housing construction with additional attachment points and recesses for cable feeding		1		8JD 187 871-041	1
<b>FUSE HOLDER FOR TRACKLESS BATTERY VEHICLES</b>						
	For fuses 8JS 713 575-201 up to -311 (page 10)		1	D 226	8JD 743 557-081	1
<b>TORPEDO FUSE HOLDER FOR CABLE CROSS SECTION 1.5 - 2.5 MM<sup>2</sup></b>						
	with fuse insert 8 A		2	I 04	8KV 002 127-801	1
			10	I 55	8KV 002 127-003	10
	with fuse insert 5 A		10		8KV 002 136-001	10
	With fuse link 16 A		10		8KV 002 127-021	10
	with fuse link 25 A		10		8KV 002 127-011	10
	Without fuse link		10		8KV 002 136-011	10



## 1.4 Fuse boxes



### Application

If a single fuse holder is not sufficient to integrate an additional device into the electrical system or several functions are to be added at the same time, it's a good idea to install a fuse box.

Bundling the safety functions at one central point makes this clearer and easier to maintain.

As for the fuse holders, there are numerous variants for every type of fuse, in different shapes, colours, sizes, contacts and protection classes.

### Range advantages

- Wide assortment of products for numerous applications
- The modular set system for ATO offers a highly customisable solution

## 1.4 Fuse boxes

The fuse box sets are modular by design, whereby the fuse box assembly can be configured individually for the application at hand.

The new fin contact system allows the box to also be used for high currents: With the accompanying individual contacts rated up to 60 A and the contact busbars that are available separately, 125 A is also possible.

The order set includes the housing, the insert, 16 individual contacts and, depending on the set in question, a matching cover for standard ATO fuses or the 8JS 174 320-xxx or 8JS 174 326-xxx automatic fuse (page 17).

One coding set and contact busbars of different sizes are available as accessories.

### Fuse box sets from HELLA:

#### 1. 8JD 005 993-161

With standard cover

#### 2. 8JD 005 993-171

With tall cover

#### 3. 8JD 005 993-181

With open cover



Fuse box set with high cover for circuit-breakers 8JS 174 320-xxx.



Fuse box set with open cover for circuit-breakers 8JS 174 826-xxx.

### This is how it's done:



The empty housing is fitted with contact busbars or individual contacts.



The housing insert is inserted ...



... and clicked into place.



Next step: insert fuses.






Put cover in place.



Finished.

## 1.4 Fuse boxes

	Description	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>ATO FUSE BOXES</b>						
	Fuse box set for ATO blade terminal fuses, each comprising a housing, insert and cover as well as 16 individual contacts	8-pin	1 set		8JD 005 993-161	1
	Fuse box set for 8JS 174 320-xxx automatic fuse, each comprising a housing, insert and cover as well as 16 individual contacts	8-pin	1 set		8JD 005 993-171	1
	Fuse box set for 8JS 174 326-xxx automatic fuses, each comprising a housing, insert and cover as well as 16 individual contacts	8-pin	1 set		8JD 005 993-181	1
	Contact rails for currents up to 125 A	2-pin	10		9MK 741 492-022	10
		3-pin	10		9MK 741 492-032	10
		4-pin	10		9MK 741 492-042	10
		5-pole	10		9MK 741 492-052	10
		6-pin	10		9MK 741 492-062	10
		7-pole	10		9MK 741 492-072	10
		8-pin	10		9MK 741 492-082	10


## 1.4 Fuse boxes

	Description	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>ATO FUSE BOXES</b>						
	with 8 axial outputs, (6.3 x 0.8 mm), transparent cover and contact parts	4-pin	10		<b>8JD 005 993-072</b>	10
	With 8 lateral outputs (6.3 x 0.8 mm), transparent cover and contact parts	4-pin	10		<b>8JD 005 993-082</b>	10
	With 10 axial outputs (6.3 x 0.8 mm), transparent cover, for max. 5 x 30 A flat blade inserts, with 2 angle brackets	5-pole	10		<b>8JD 005 993-001</b>	10
			1	D 95	<b>8JD 005 993-002</b>	1
	With 10 axial solder connections (2.2 mm), transparent cover, for max. 5 x 15 A flat blade fuse inserts	5-pole	10		<b>8JD 005 993-021</b>	10
	With 10 lateral outputs (6.3 x 0.8 mm), transparent cover, for max. 5 x 30 A flat blade fuse inserts	5-pole	10		<b>8JD 005 993-032</b>	10
	with 12 axial outputs (6.3 x 0.8 mm), transparent cover and contact parts	6-pin	10		<b>8JD 005 993-092</b>	10
	With 12 lateral outputs (6.3 x 0.8 mm), transparent cover and contact parts	6-pin	10		<b>8JD 005 993-102</b>	10

## 1.4 Fuse boxes

	Description	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>ATO FUSE BOXES</b>						
	With 24 axial connections (6.3 x 0.8 mm), transparent cover	6-pin	10		8JD 005 993-051	10
	Bridge (width 15.8 mm)		80		9MK 741 492-001	80
	with 16 axial outputs (6.3 x 0.8 mm), transparent cover and contact parts	8-pin	10		8JD 005 993-112	10
	With 16 lateral outputs (6.3 x 0.8 mm), transparent cover and contact parts	8-pin	10		8JD 005 993-122	10
	with either 32 axial connections (6.3 x 0.8 mm) or 64 axial connections (2.8 x 0.8 mm), transparent cover	8-pin	10		8JD 005 993-061	10
	Bridge (width 11.5 mm)		80		9MK 741 492-011	80
	Coding set		4		8JB 742 649-001	1
	Coding set		4		8JB 742 649-041	1

## 1.4 Fuse boxes

	Description	Cover color	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces.
<b>TORPEDO FUSE BOXES WITH 8 A FUSE INSERTS</b>							
	Screw connections for cables up to 6.0 mm <sup>2</sup>	■	2-pin	1		8JD 002 289-201	1
		transparent	2-pin	1		8JD 002 289-211	1
	Blade terminal connection, 6.3 x 0.8 mm <sup>2</sup>	transparent	2-pin	10		8JD 002 289-081	10
	Screw connections for cables up to 6.0 mm <sup>2</sup>	■	4-pin	1		8JD 002 294-201	1
		transparent	4-pin	1		8JD 002 294-211	1
	Blade terminal connection, 6.3 x 0.8 mm <sup>2</sup>	transparent	4-pin	10		8JD 002 294-081	10
	Screw connections for cables up to 6.0 mm <sup>2</sup>	■	6-pin	1		8JD 002 291-201	1
		transparent	6-pin	1		8JD 002 291-211	1
	Blade terminal connection, 6.3 x 0.8 mm <sup>2</sup>	transparent	6-pin	10		8JD 002 291-141	10
	Screw connections for cables up to 6.0 mm <sup>2</sup>	■	8-pin	1		8JD 002 290-201	1
		transparent	8-pin	1		8JD 002 290-211	1
	Blade terminal connection, 6.3 x 0.8 mm <sup>2</sup>	transparent	8-pin	10		8JD 002 290-141	10
	60 male blade connections 6.3 x 0.8 mm	transparent	12-pin	10		8JD 004 588-001	15

## 2 Plug-type connections

### 2.1 Cigarette lighters and power sockets



#### Application


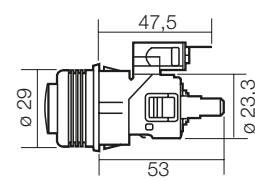

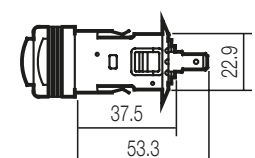

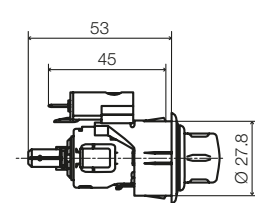

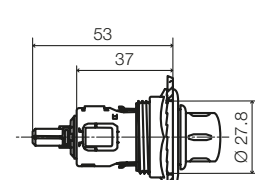
Cigarette lighters and/or power sockets are absolute basic equipment in today's vehicles. In addition to conventional cigarette lighters, power sockets provide a further connection option to supply a large number of small consumers such as lamps, fans, cooler boxes, phones, laptops, portable refrigerators and coffee machines, for example. The HELLA product range offers the right socket for every application.

#### Range advantages

- Easy to assemble
- Screw thread and clamping sleeve
- Optionally with light
- 12 V and 24 V versions available
- Proven technology for OEMs

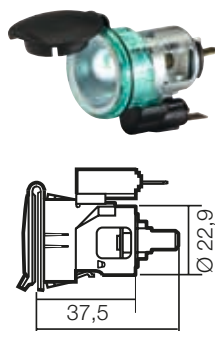
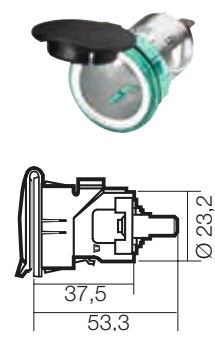
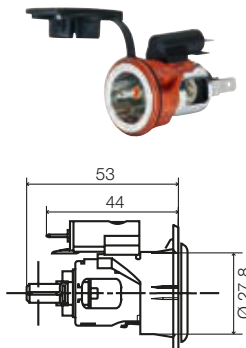
## 2.1 Cigarette lighters and power sockets

2

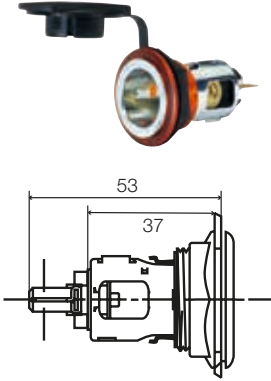
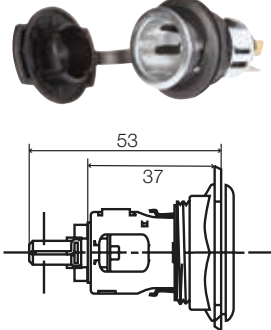
	Description	Voltage	max. load-carrying capacity as socket	Part number	Order unit in pieces
<b>UNIVERSAL CIGARETTE LIGHTER WITH LIGHTING</b>					
 	Connection type: Blade terminal connection 6.3 mm, attachment via green split sleeve, installation opening: Ø 28.0 mm, control panel thickness: max. 2.5 mm  In folding box	12 V	10 A	8EZ 008 021-001	1
		24 V	5 A	8EZ 008 021-011	1
<b>UNIVERSAL CIGARETTE LIGHTER WITHOUT LIGHTING</b>					
 	Connection type: Blade terminal connection 6.3 mm, attachment via spring washer, installation opening: Ø 23.5 mm, control panel thickness: max. 2.5 mm  In folding box	12 V	10 A	8EZ 008 022-001	1
		24 V	5 A	8EZ 008 022-011	1
<b>UNIVERSAL CIGARETTE LIGHTER, SAE STANDARD WITH LIGHTING</b>					
 	Connection type: Blade terminal connection 6.3 mm, attachment via red split sleeve, installation opening: Ø 28.0 mm, control panel thickness: max. 2.0 mm  In folding box	12 V		8EZ 008 021-021	1
		24 V		8EZ 008 021-031	1
<b>UNIVERSAL CIGARETTE LIGHTER, SAE STANDARD WITHOUT LIGHTING</b>					
 	Connection type: Blade terminal connection 6.3 mm, attachment via hexagon nut, installation opening: Ø 28.0 mm, control panel thickness: 2.0 - 8.0 mm  In folding box	12 V		8EZ 008 021-041	1
		24 V		8EZ 008 021-051	1



## 2.1 Cigarette lighters and power sockets

	Description	Voltage	max. load-carrying capacity as socket	Part number	Order unit in pieces
<b>POWER SOCKET WITH LIGHTING AND COVER</b>					
	<p>Connection type: Blade terminal connection 6.3 mm, attachment via green split sleeve, installation opening: Ø 28.0 mm, control panel thickness: max. 2.5 mm with 12 V bulb installed, an additional bulb must be ordered for 24 V application.</p> <p>In folding box</p>	12 V	15 A	<b>8JB 008 023-011</b>	1
<b>POWER SOCKET, UNLIT, WITH COVER</b>					
	<p>Connection type: Blade terminal connection 6.3 mm, attachment via green split sleeve, installation opening: Ø 28.0 mm, control panel thickness: max. 2.5 mm</p> <p>In folding box</p>	12 V / 24 V	15 A	<b>8JB 008 023-001</b>	1
<b>POWER SOCKET WITH LIGHTING AND COVER</b>					
	<p>Connection type: Blade terminal connection 6.3 mm, attachment via red split sleeve, installation opening: Ø 28.0 mm, inner diameter: 21.0 mm</p> <p>In folding box</p>	12 V	20 A	<b>8JB 008 023-021</b>	1
		24 V	20 A	<b>8JB 008 023-031</b>	1

## 2.1 Cigarette lighters and power sockets

	Description	Voltage	max. load-carrying capacity as socket	Part number	Order unit in pieces
<b>POWER SOCKET, UNLIT, WITH COVER</b>					
	<p>Connection type: Blade terminal connection 6.3 mm, attachment via hexagon nut, red sleeve, installation opening: Ø 28.0 mm, inner diameter: 21.0 mm control panel thickness: 2.0 - 8.0 mm</p> <p>In folding box</p>	12 / 24 V	20 A	<b>8JB 008 023-031</b>	1
<b>POWER SOCKET, UNLIT</b>					
	<p>Connection type: 2 blade terminal connections 6.3 mm, attachment via black hexagon nut, black sleeve, installation opening: Ø 28.0 mm, inner diameter: 21.0 mm, cover blank control panel thickness: 2.0 - 8.0 mm</p>	12 / 24 V	20 A	<b>8JB 008 023-067</b>	160

## 2.2 Universal plug-type connections / 2-pole plug system compliant with ISO 41 65



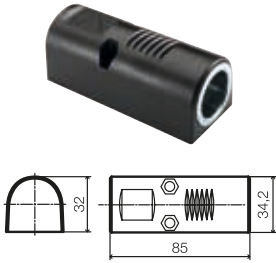
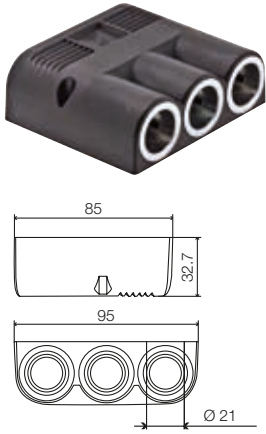
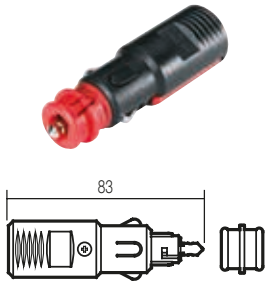

### Application

Similar to power sockets, the proven connector system in accordance with ISO 4165 provides an additional connection option to supply a large number of small consumers such as lamps, fans, cooler boxes, phones, laptops, portable refrigerators and coffee machines. Depending on the version, the connector systems can be installed inside or outside the vehicle. Universal connectors, thanks to their red front adapter, allow both systems to be used with the same connector. Here, too, the diverse HELLA product range offers the right version for almost every application.


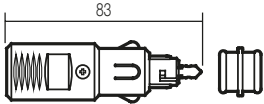

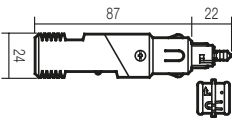


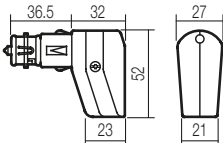
### Range advantages

- Easy to assemble
- A number of different connection options (screw terminals and blade couplings)
- Sockets with and without cover
- Alloy and plastic designs available
- Sockets in accordance with ISO 4165 available with inverse-polarity protection in the form of a T-plug connection
- Extensions, battery monitors and adapters for final consumers in the product range

## 2.2.1 Universal plugs, sockets, adapters and couplings

	Description	Connection	Part number	Order unit in pieces
<b>MOUNTED SOCKET</b>				
	<p>2-pin, without cover, plastic housing</p> <p>Inner diameter: 21.0 mm, for universal connector</p> <p>Load-carrying capacity: Max. 20 A at 24 V (cable cross section 2.5 mm<sup>2</sup>) max. 15 A at 24 V (cable cross section 1.5 mm<sup>2</sup>)</p> <p>In folding box</p>	2 blade terminal connections 6.3 mm	<b>8JB 004 123-042</b>	5
<b>MOUNTED TRIPLE POWER SOCKET</b>				
	<p>2-pin, plastic housing</p> <p>Inner diameter: 21.0 mm, for universal connector</p> <p>Load-carrying capacity: Max. 20 A at 24 V (cable cross section 2.5 mm<sup>2</sup>) max. 15 A at 24 V (cable cross section 1.5 mm<sup>2</sup>)</p> <p>In PE bag</p>		<b>8JB 004 123-051</b>	1
<b>SAFETY UNIVERSAL CONNECTOR WITH POSITIVELY-DRIVEN STRAIN RELIEF</b>				
	<p>With integrated, replaceable 8A fuse and pulling tool</p> <p>Opening for 7.0 mm cable feed, load-carrying capacity: max. 8 A at 6 - 24 V, cable cross section at 0.75 mm<sup>2</sup></p> <p>In folding box</p>	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-001</b>	10
	In Pro-fit packaging	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-002</b>	1
<b>SAFETY UNIVERSAL CONNECTOR WITH LED AND SCREWED-ON STRAIN RELIEF</b>				
	<p>With integrated, replaceable 8A fuse and pulling tool</p> <p>Opening for 7.0 mm cable feed Load-carrying capacity: max. 8 A at 6 - 24 V</p> <p>In folding box</p>	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-032</b>	10
	In Pro-fit packaging	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-031</b>	1

## 2.2.1 Universal plugs, sockets, adapters and couplings

	Description	Connection	Part number	Order unit in pieces
<b>SAFETY UNIVERSAL CONNECTOR WITH SCREWED-ON STRAIN RELIEF</b>				
 	<p>Without fuse, with pulling tool</p> <p>Opening for 7.0 mm cable feed</p> <hr/> <p>Load-carrying capacity: 8 A at 24 V In folding box</p> <hr/> <p>Load-carrying capacity: 16 A at 24 V in folding box</p>	<p>2 screw terminals up to 2.5 mm<sup>2</sup></p> <hr/> <p>2 screw terminals up to 2.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-011</b></p> <hr/> <p><b>8JA 007 589-021</b></p>	<p>10</p> <hr/> <p>10</p>
<b>UNIVERSAL ANGLE PLUG</b>				
 	<p>With screwed-on strain relief, with integrated, replaceable 8A fuse, continuously adjustable through 180 degrees, with sufficient space for electronics</p> <p>(dimensions for circuit board: 28.5 x 26.5 x 1.5 mm)</p> <p>In folding box</p>	<p>2 screw terminals up to 2.5 mm<sup>2</sup></p> <hr/> <p>2 screw terminals up to 2.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-042</b></p> <hr/> <p><b>8JA 007 589-041</b></p>	<p>8</p> <hr/> <p>1</p>
 	<p>With screwed-on strain relief, with printed-on rocker O-I and integrated, replaceable 8 A fuse, continuously adjustable through 180 degrees</p> <p>In folding box</p>	<p>2 screw terminals up to 1.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-152</b></p>	<p>8</p>
 	<p>With screwed-on strain relief, with integrated 7.5 A ATO blade terminal fuse and function check via LED</p> <p>In folding box</p>	<p>2 screw terminals up to 1.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-052</b></p>	<p>8</p>

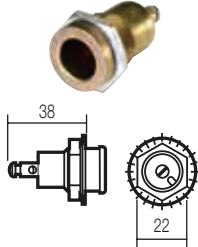
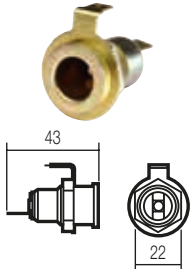
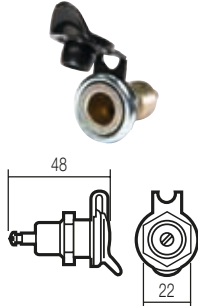
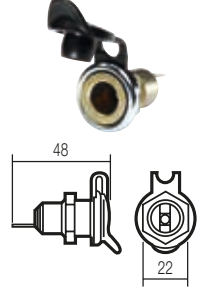
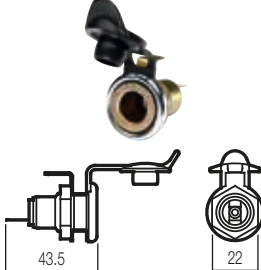
## 2.2.1 Universal plugs, sockets, adapters and couplings

	Description	Connection	Part number	Order unit in pieces
<b>EXTENSION CABLES</b>				
	<p>For adapting standard or cigarette lighter sockets to cigarette lighter connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> Safety universal connector with integrated 8 A fuse Load-carrying capacity: max. 8 A at 24 V</p> <p>In PE bag</p>	4.0 m	<b>8KA 007 589-081</b>	1
<b>FILAMENT EXTENSION CABLE</b>				
	<p>For adapting standard or cigarette lighter sockets to cigarette lighter connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> Safety universal connector with integrated 8 A fuse Load-carrying capacity: max. 8 A at 24 V</p> <p>In PE bag</p>	0.6 – 3.0m	<b>8KA 007 589-091</b>	1
<b>ADAPTER CABLE</b>				
	<p>For adapting standard sockets to cigarette lighter socket</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> Load-carrying capacity: max. 8 A at 24 V</p> <p>In PE bag</p>	0.25 m	<b>8KA 007 589-101</b>	1
		In Pro-fit packaging	<b>8KA 007 589-102</b>	1
<b>ADAPTER</b>				
	<p>For adapting standard sockets to cigarette lighter socket</p> <p>Load-carrying capacity: max. 16 A at 12 V / 24 V</p> <p>In PE bag</p>	93 mm	<b>8KA 007 589-131</b>	1

## 2.2.1 Universal plugs, sockets, adapters and couplings


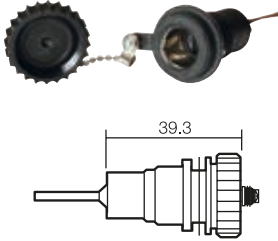
	Description	Connection	Part number	Order unit in pieces
<b>ADAPTER CABLE</b>				
	<p>For adapting standard or cigarette lighter sockets to 2 standard sockets</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> Safety universal connector with integrated 8 A fuse Load-carrying capacity: max. 8 A at 24 V</p> <p>In PE bag</p>	0.12 m	<b>8JB 008 032-001</b>	1
<b>TWIN COUPLING</b>				
	<p>For adapting standard or cigarette lighter sockets to 2 cigarette lighter connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> Safety universal connector with integrated 16 A fuse Load-carrying capacity: max. 2 x 8 A at 24 V</p> <p>In PE bag</p>	0.25 m	<b>8JA 007 589-111</b>	1
	<p>For adapting standard or cigarette lighter sockets to 2 cigarette lighter connectors</p> <p>Load-carrying capacity: max. 16 A at 12 V / 24 V</p> <p>In PE bag</p>	65 mm	<b>8JA 007 589-141</b>	1
<b>BATTERY MONITOR</b>				
	<p>Protects the battery from deep discharging by switching off consumers in good time for low voltage. Consumers include: Cooler boxes, seat heaters, fans and other mobile 12 V devices. Automatic activation when operating voltage reinstated.</p> <p>Cable: 2 x 0.75 mm<sup>2</sup>, suitable for standard and cigarette lighter sockets, LED function check and short circuit protection Load-carrying capacity: max. 8 A at 12 V</p> <p>In PE bag</p>	1.0 m	<b>8ES 007 589-121</b>	1

## 2.2.2 2-pole plug system compliant with ISO 41 65


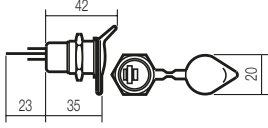



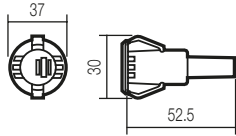
	Description	Connection	Part number	Order unit in pieces
<b>SOCKETS I.A.W. ISO 4165, ALLOY HOUSING</b>				
Installation opening: $\varnothing$ 18,5 mm Control panel thickness: max. 7,0 mm Load-carrying capacity: max. 8 A at 24 V				
	<b>Standard socket</b> 2-pin In folding box	1 screw terminal, ground at the housing	<b>8JB 001 946-031</b>	10
	<b>Standard socket</b> 2-pin, with additional ground connector In folding box	2 blade terminal connections 6.3 mm	<b>8JB 001 946-041</b>	10
	<b>Standard socket</b> 2-pin, with cover In folding box	1 screw terminal, ground at the housing	<b>8JB 001 946-021</b>	10
	<b>Socket</b> 2-pin, with cover In folding box	1 blade terminal connection 6.3 mm, ground to housing	<b>8JB 001 946-011</b>	10
	<b>Socket</b> 2-pin, with cover, with additional ground connector In folding box	2 blade terminal connections 6.3 mm	<b>8JB 001 946-051</b>	10



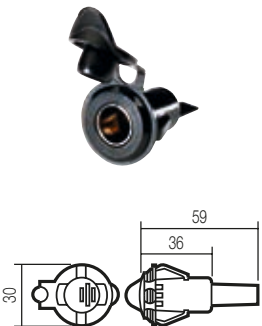


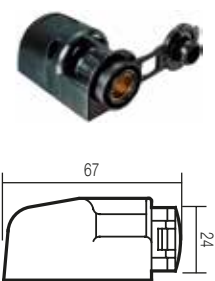
## 2.2.2 2-pole plug system compliant with ISO 41 65

	Description	Connection	Part number	Order unit in pieces
<b>SOCKETS I.A.W. ISO 4165, PLASTIC HOUSING</b>				
Inverse-polarity protection via T-plug connection, recommended female connector housings 8JD 008 152-021 (10 pcs.), recommended flat receptacles 8KW 701 235-033 (100 pcs.), installation opening: Ø 18.5 mm, control panel thickness: max. 7.0 mm, load-carrying capacity: max. 16 A at 6 - 24 V				
	<p><b>Socket</b> 2-pin, without cover</p> <p>In folding box</p>	<p>2 blade terminal connections 6.3 mm</p>	<p><b>8JB 001 946-072</b></p>	<p>10</p>
	<p><b>Socket</b> 2-pin, with snap-on cover, cover does not engage</p> <p>Load-carrying capacity: max. 16 A at 6 - 24 V</p> <p>In folding box</p>	<p>2 blade terminal connections 6.3 mm</p>	<p><b>8JB 001 946-082</b></p>	<p>10</p>
	<p><b>Socket</b> 2-pin, with snap-on cover (the cover remains in the open position; the engaging mechanism is released when a connection is made so that the cover automatically closes when the connector is pulled.)</p> <p>Load-carrying capacity: max. 16 A at 6 - 24 V</p> <p>In folding box</p>	<p>2 blade terminal connections 6.3 mm</p>	<p><b>8JB 001 946-092</b></p>	<p>10</p>
	<p><b>Socket</b> 2-pin, waterproof i.a.w. IP 67, with captive cover 300.0 mm cable 2.5 mm<sup>2</sup>, exceptionally well suited to applications in boats and in engine areas</p> <p>Temperature range: -40 °C up to +105 °C</p> <p>In folding box</p>	<p>Blade contact and earth sleeve</p>	<p><b>8JB 001 946-101</b></p>	<p>1</p>

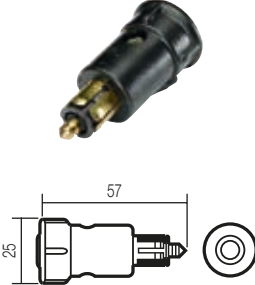
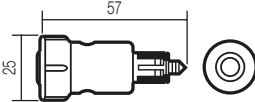
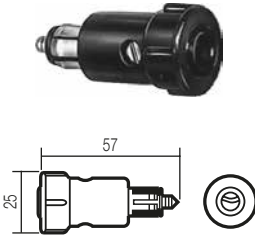
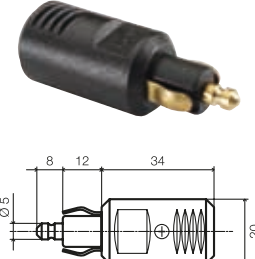
## 2.2.2 2-pole plug system compliant with ISO 41 65

	Description	Connection	Part number	Order unit in pieces
	<p><b>Socket</b> 2-pin, with cover In folding box</p>	2 blade terminal connections 6.3 mm	<b>8JB 004 777-001</b>	5
	In Pro-fit packaging	2 blade terminal connections 6.3 mm	<b>8JB 004 777-002</b>	1
	<p><b>Socket</b> 2-pin, with cover In folding box</p>	2 screw terminals	<b>8JB 004 777-011</b>	5
	<p><b>Clutch</b> For realising individual extensions for supplying power to electrical devices and lamps. Load-carrying capacity: max. 16 A at 24 V In folding box</p>	2 blade terminal connections 6.3 mm	<b>8JA 007 589-062</b>	20
	<p><b>Socket</b> 2-pin, without cover Control panel thickness: max. 3.0 mm Installation opening: Ø 23.0 mm Load-carrying capacity: max. 8 A at 6 - 24 V In folding box</p>	2 blade terminal connections 6.3 mm	<b>8JB 002 286-021</b>	10
				

## 2.2.2 2-pole plug system compliant with ISO 41 65

	Description	Connection	Part number	Order unit in pieces
	<p><b>Socket</b> 2-pin, with cover</p> <p>Control panel thickness: max. 2.0 mm Installation opening: Ø 23.0 mm</p> <p>Load-carrying capacity: max. 8 A at 6 - 24 V</p> <p>In folding box</p>	<p>2 blade terminal connections 6.3 mm</p>	<p><b>8JB 002 286-031</b></p>	<p>10</p>
	<p><b>Mounted socket</b> 2-pin, without cover, plastic housing</p> <p>CuZn contacts</p> <p>In folding box</p>	<p>2 screw terminals</p>	<p><b>8JB 004 123-001</b></p>	<p>5</p>
	<p><b>Mounted socket</b> 2-pin, without cover, plastic housing, marine-compatible version</p> <p>CuZn contacts nickel-plated</p> <p>In folding box</p>	<p>2 screw terminals</p>	<p><b>8JB 004 123-012</b></p>	<p>5</p>
	<p><b>Mounted socket</b> 2-pin, with cover, plastic housing</p> <p>In folding box</p>	<p>2 blade terminal connections 6.3 mm</p>	<p><b>8JB 004 123-032</b></p>	<p>5</p>
	<p>In Pro-fit packaging</p>	<p>2 blade terminal connections 6.3 mm</p>	<p><b>8JB 004 123-031</b></p>	<p>1</p>

## 2.2.2 2-pole plug system compliant with ISO 41 65

	Description	Connection	Part number	Order unit in pieces
<b>PLUG COMPLIANT WITH ISO 4165, PLASTIC DESIGN</b>				
	<p><b>Connector, without strain relief</b></p> <p>Opening for cable feed: <math>\varnothing</math> 9.2 mm Load-carrying capacity: max. 18 A at 24 V</p> <p>In folding box</p>	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 002 262-001</b>	10
	<p>In Pro-fit packaging</p>	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 002 262-003</b>	1
	<p><b>Connector, with screwed-on strain relief</b></p> <p>Opening for cable feed: <math>\varnothing</math> 9.2 mm Load-carrying capacity: max. 18 A at 24 V</p> <p>In folding box</p>	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 001 915-001</b>	10
	<p><b>Connector, with solder contacts and positively-driven strain relief</b></p> <p>Opening for cable feed: <math>\varnothing</math> 6.5 mm Load-carrying capacity: max. 8 A at 24 V</p> <p>In folding box</p>	2 solder contacts	<b>8JA 001 915-032</b>	10

## 2.3 2-pole plug system in accordance with DIN 14 690



### Application

This plug system is mainly used for charging batteries on a fire engine.

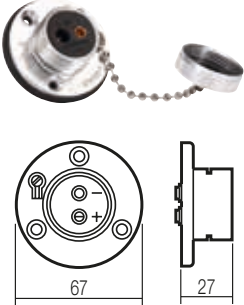
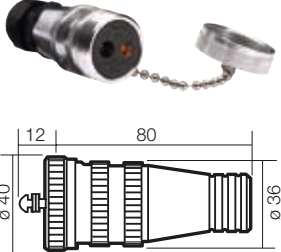
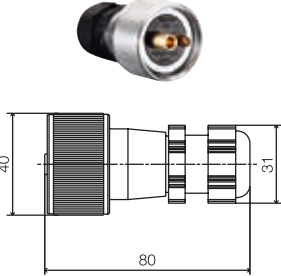


### Range advantages

- Entire range consisting of connector, socket and coupling socket
- Socket and coupling box with captive cover

### Technical data

- Operating temperature: -40 °C to +100 °C
- Operating voltage: 6 - 42 V
- Amperage: max. 16 A

## 2.3 2-pole plug system in accordance with DIN 14 690

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET, ALLOY, WITH CAPTIVE SCREW CAP, FORM A</b>				
	<p>With seal in screw cap, with rubber base for cables Ø 6.0 - 8.0 mm</p> <p>In folding box</p> <hr/> <p>In Pro-fit packaging</p>	<p>2 screw terminals</p> <hr/> <p>2 screw terminals</p>	<p><b>8JB 002 281-001</b></p> <hr/> <p><b>8JB 002 281-002</b></p>	<p>1</p> <hr/> <p>1</p>
<b>COUPLING SOCKET, ALLOY, WITH CAPTIVE SCREW CAP, FORM B</b>				
	<p>With seal in screw cap, with protective cable cover for cable Ø 6.0 - 10.0 mm</p> <p>In folding box</p>	<p>2 screw terminals</p>	<p><b>8JB 002 281-011</b></p>	<p>1</p>
<b>CONNECTOR, ALLOY, FORM C</b>				
	<p>With union nut, for cable Ø 6.0 - 10.0 mm</p> <p>In folding box</p>	<p>2 screw terminals</p>	<p><b>8JA 001 925-001</b></p>	<p>1</p>
<b>RUBBER BASE</b>				
	<p>For cables Ø 6.0 - 8.0 mm</p> <p>In folding box</p>		<p><b>9GD 735 641-032</b></p>	<p>10</p>
<b>CONTACT INSERT</b>				
	<p>For 2-pin connector i.a.w. DIN 14 690 (HELLA Part number: 8JA 001 925-001)</p> <p>In PE bag</p>	<p>2 screw terminals</p>	<p><b>9MK 748 467-001</b></p>	<p>1</p>

## 2.4 3-pole plug systems



### Application

The 3-pin connector system in accordance with DIN 9680 is used on tractors and agricultural machinery to electrically connect continuous consumers such as mowers, built-on excavators and sweepers with a max. current consumption of 25 A. This standard does not apply to electrical connections for supplying lighting equipment (see ISO 1724).

The 3-pin connector system without standard is used to transfer auxiliary functions between the tractor and trailer.

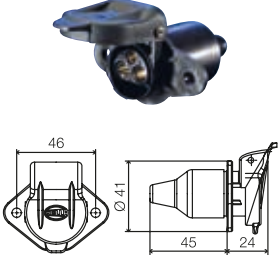

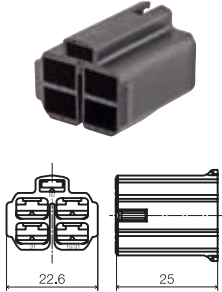

### Range advantages

- Easy to assemble
- Various different connection options (screw-on and blade terminal connection)
- Robust plastic housing with high mechanical rigidity

### Technical data

- Operating voltage: 6 - 24 V
- Amperage: max. 16 A

## 2.4 3-pole plug systems

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET WITH RUBBER GROMMET</b>				
	<p>Black plastic version, DIN 9680, with rubber grommet</p> <p>Installation opening: <math>\varnothing</math> 30.0 mm            Temperature range: -25 °C to +75 °C            Waterproof in accordance with IP 54</p> <p>In folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm blade terminal connections</p>	<p><b>8JB 001 933-011</b></p>	<p>10</p>
<b>SOCKET WITH SCREW CAP</b>				
	<p>DIN 9680, with screw cap</p> <p>Temperature range -25 °C to +75 °C            Waterproof i.a.w. IP 54</p> <p>In folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm blade terminal connections</p>	<p><b>8JB 001 933-042</b></p>	<p>10</p>
<b>FEMALE CONNECTOR HOUSING</b>				
	<p>For 8JB 001 933-011 and -042</p> <p>In folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm blade terminal connections</p>	<p><b>9MK 180 175-001</b></p>	<p>20</p>
<b>MALE CONNECTOR</b>				
	<p>Black plastic version, DIN 9680, with rubber seals for cables <math>\varnothing</math> 8.0 - 13.0 mm</p> <p>In folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm Blade terminal connections</p>	<p><b>8JA 002 263-011</b></p>	<p>10</p>



## 2.4 3-pole plug systems

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET WITH RUBBER SEAL IN COVER</b>				
	<p>Black plastic version, with rubber seal in cover, base: Ø 65.0 mm (round housing)</p> <p>In folding box</p>	3 screw terminals	<b>8JB 001 933-031</b>	1
<b>CONNECTOR WITH UNION NUT AND RUBBER GROMMET</b>				
	<p>Black plastic version, for cable Ø 6.3 - 8.3 mm, with union nut and rubber grommet</p> <p>In folding box</p>	3 screw terminals	<b>8JA 002 263-031</b>	1
<b>CONNECTOR WITH CABLE GROMMET</b>				
	<p>Black plastic version, for cable Ø 6.3 - 8.3 mm, with cable grommet</p> <p>In folding box</p>	3 screw terminals	<b>8JA 002 263-001</b>	1
<b>RUBBER BASE</b>				
	<p>For cables Ø 6.8 mm</p> <p>In folding box</p>		<b>9GD 735 641-032</b>	10

## 2.5 4-pin connector system i.a.w. DIN 72 575



### Application

The 4-pole plug system compliant with DIN 72 575 is used for the transfer of auxiliary functions between the tractor and the trailer.

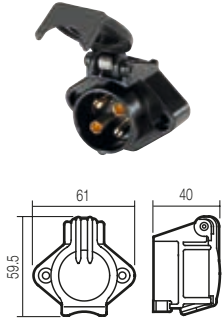
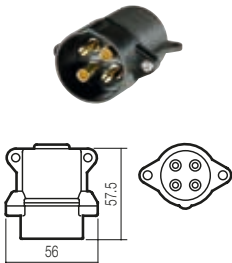
### Range advantages

- Easy to assemble
- Robust plastic housing with high mechanical rigidity

### Load-carrying capacity

- Max. 16 A at 6 - 24 V (cable cross section 1.5 mm<sup>2</sup>)
- Max. 25 A at 6 - 24 V (cable cross section 2.5 mm<sup>2</sup>)

## 2.5 4-pin connector system i.a.w. DIN 72 575

Description	Connection	Part number	Order unit in pieces
<b>SOCKET</b>			
 <p data-bbox="501 600 762 712">With rubber seal in cover, 90-degree cable branch-off point for cable Ø 7.2 - 9.0 mm Operating temperature: -40 °C to +85 °C</p> <p data-bbox="501 734 611 757">In folding box</p>	4 screw terminals	<b>8JB 001 944-011</b>	1
<b>MALE CONNECTOR</b>			
 <p data-bbox="501 1003 762 1055">With screwed-on strain relief, for cable Ø 5.0 - 9.0 mm</p> <p data-bbox="501 1070 611 1093">In folding box</p>	4 screw terminals	<b>8JA 001 920-011</b>	1

## 2.6 Plug-type connections 12 V

### 2.6.1 5-pole plug system compliant with ISO 17 24



#### Application

The 5-pin connector system in accordance with ISO 1724 is used to transfer auxiliary functions between the tractor and the trailer.


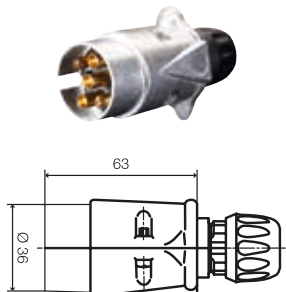
#### Range advantages

- Easy to assemble
- Robust plastic housing with high mechanical rigidity

#### Load-carrying capacity

- Max. 16 A at 6 - 24 V (cable cross section 1.5 mm<sup>2</sup>)
- Max. 25 A at 6 - 24 V (cable cross section 2.5 mm<sup>2</sup>)

### 2.6.1 5-pole plug system compliant with ISO 17 24

Description	Connection	Part number	Order unit in pieces
<b>SOCKET WITH COVER</b>			
 <p data-bbox="494 593 686 672">Base: Ø max. 72.0 mm, temperature range: -25 °C to +75 °C</p> <p data-bbox="494 683 606 716">In folding box</p>	5 screw terminals	<b>8JB 001 940-001</b>	1
<b>MALE CONNECTOR</b>			
 <p data-bbox="494 940 726 1041">Screwed-on strain relief and union nut for cables up to Ø 8.0 mm, temperature range: -25 °C to +75 °C</p> <p data-bbox="494 1052 606 1086">In folding box</p>	5 screw terminals	<b>8JA 001 916-001</b>	1

## 2.6.2 7-pin plug system i.a.w. ISO 1724 (N-type)



### Application

The 7-pin, 12 V connector system in accordance with ISO 1724/ISO 3732 is the most popular system for establishing electrical connections between the towing vehicle and trailer using the 12 V on-board electrical system. The system is primarily used for applications with average requirements. It includes a standard plug connector, type N, in accordance with ISO 1724 and an auxiliary plug connector, type S, in accordance with ISO 3732. The auxiliary system is distinguished from the standard system by its white housing, contact inserts and non-interchangeable contact arrangement.

### Range advantages

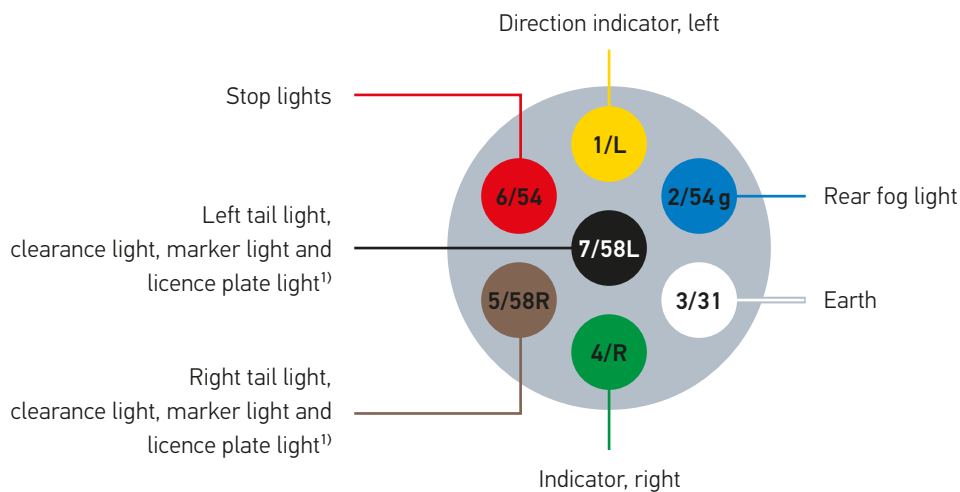
- Economical system for simple applications
- Easy to assemble
- Various different connection options (screw-on and blade terminal connection)
- Coupling sockets available
- Sockets with rear fog light switch-off available

### Load-carrying capacity

- Max. 15 A at 12 V
- Cable cross section: max. 1 x 2.5 mm<sup>2</sup>, max. 2 x 1.5 mm<sup>2</sup>
- Permissible temperature range: -25 °C to 70 °C Ambient temperature

## 2.6.2 7-pin plug system i.a.w. ISO 1724 (N-type)

### Assignment diagram – Trailer plug fitting, 12 V/7-pin N-version, ISO 1724


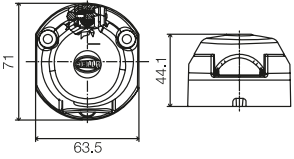

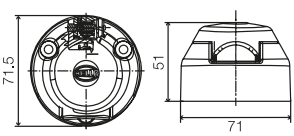

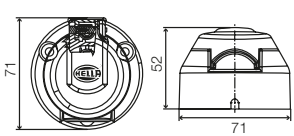

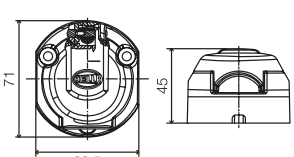


### Contact assignment for normal plug-type connectors compliant with ISO 1724, 12 V, 7-pole N

Contact no.	Function	Cable cross section in mm <sup>2</sup>	Colour of wire insulation
1/L	Direction indicator, left	1.5	■
2/54g	Rear fog light	1.5	■
3/31	Earth	2.5	□
4/R	Indicator, right	1.5	■
5/58R <sup>1)</sup>	Right taillight, clearance light, sidelight and licence plate lights	1.5	■
6/54	Stop lights	1.5	■
7/58L <sup>1)</sup>	Left taillight, clearance light, sidelight and licence plate lights	1.5	■

<sup>1)</sup> The licence plate lights must be connected in such a way that none of its lamps are connected to the two contacts 5 and 7.

## 2.6.2 7-pin plug system i.a.w. ISO 1724 (N-type)

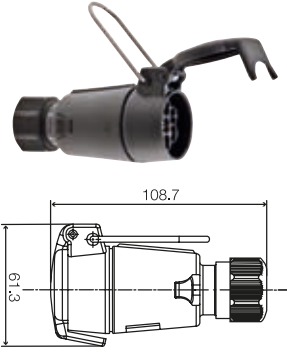
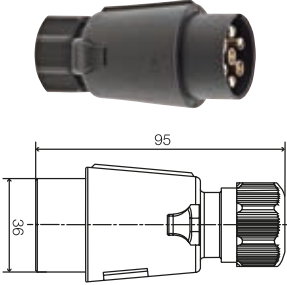





	Description	Connection	Part number	Order unit in pieces
Socket: Centre contact 7/58L as pin Connector: Centre contact 7/58L as sleeve Base: Ø max. 72.0 mm				
<b>SOCKET</b>				
	With cover, solid metal version, removable contact insert	7 screw terminals	<b>8JB 001 941-002</b>	25
	In folding box			
	In Pro-fit packaging	7 screw terminals	<b>8JB 001 941-001</b>	1
	<b>With switch-off contact for the rear fog light on the motor vehicle</b>			
	In folding box	7 screw terminals with auxiliary terminal	<b>8JB 001 941-062</b>	10
	With cover, solid metal version, removable contact insert	7 blade terminal connections 6.3 mm	<b>8JB 001 941-041</b>	25
	In folding box			
				
	With cover, black plastic version, removable contact insert	7 blade terminal connections 6.3 mm	<b>8JB 006 462-001</b>	25
	In folding box			
				
	With cover, black plastic version, removable contact insert	7 screw terminals	<b>8JB 001 943-003</b>	25
	In folding box			
	In Pro-fit packaging	7 screw terminals	<b>8JB 001 943-001</b>	1
	<b>With switch-off contact for the rear fog light on the motor vehicle</b>			
	In folding box	7 screw terminals	<b>8JB 001 943-011</b>	10



## 2.6.2 7-pin plug system i.a.w. ISO 1724 (N-type)

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET BASE</b>				
	For cable Ø 8.0 - 11.0 mm, with 180° line branch-off point, suitable for the following sockets: 8JB 001 941-002 8JB 001 941-001 8JB 001 941-062 8JB 001 943-003 8JB 001 943-001 8JB 001 943-011		<b>9GD 735 641-001</b>	10
	In folding box			
	For cable Ø 8.0 - 11.0 mm, with 180° line branch-off point, suitable for the following sockets: 8JB 006 462-001 8JB 001 941-041		<b>9GD 735 641-051</b>	10
	In folding box			
<b>RUBBER BASE</b>				
	For cable Ø 8.0 - 11.0 mm, with 90° line branch-off point, suitable for the following sockets: 8JB 001 943-003 8JB 001 943-001 8JB 001 943-011		<b>9GD 735 641-042</b>	10
	In folding box			
<b>MALE CONNECTOR</b>				
		7 screw terminals	<b>8JA 001 918-002</b>	25
	Metal version, with screwed-on strain relief and rubber grommet			
	In folding box			
		7 blade terminal connections 6.3 mm	<b>8JA 001 918-011</b>	25
		7 screw terminals	<b>8JA 001 918-021</b>	25
	Metal version, with screwed-on strain relief and rubber grommet, robust version			
	In folding box			
		7 screw terminals	<b>8JA 001 930-003</b>	25
	Black plastic version, with screwed-on strain relief and rubber grommet			
	In folding box			
	In Pro-fit packaging	7 screw terminals	<b>8JA 001 930-001</b>	1
	In folding box			
		7 blade terminal connections 6.3 mm	<b>8JA 001 930-041</b>	25

## 2.6.2 7-pin plug system i.a.w. ISO 1724 (N-type)

	Description	Connection	Part number	Order unit in pieces
<b>COUPLING SOCKET</b>				
	<p>With cover, black plastic version, with screwed-on strain relief, suspension device and rubber grommet for 7-wire extension cables</p> <p>In folding box</p>	7 screw terminals	<b>8JB 001 939-001</b>	10
<b>MALE CONNECTOR</b>				
	<p>Black plastic version, folding version with strain relief, contact insert and union nut, included individually</p> <p>In folding box</p>	7 screw terminals	<b>8JA 005 476-002</b>	5
	Industrial packaging	7 screw terminals	<b>8JA 005 476-001</b>	100
<b>GROMMET FOR 7-PIN CONNECTOR</b>				
Compatible with 005 476-001, 005 476-002 and 001 939-001				
	In PE bag	Ø 10.2 mm	<b>9GD 179 708-002</b>	10
	In PE bag	Ø 16.2 mm	<b>9GD 179 708-012</b>	10
	In PE bag	Ø 13.2 mm	<b>9GD 179 708-022</b>	10
	In PE bag	Ø 2 x 6.5 mm	<b>9GD 179 708-032</b>	10
	In PE bag	Ø 8.5 mm	<b>9GD 179 708-042</b>	10

### 2.6.3 7-pin plug system i.a.w. ISO 3732 (S-type)



#### Application

The 7-pin, 12 V connector system in accordance with ISO 1724/ISO 3732 is the most popular system for establishing electrical connections between the towing vehicle and trailer using the 12 V on-board electrical system. The system is primarily used for applications with average requirements. It includes a standard plug connector, type N, in accordance with ISO 1724 and an auxiliary plug connector, type S, in accordance with ISO 3732. The auxiliary system is distinguished from the standard system by its white housing, contact inserts and non-interchangeable contact arrangement.

#### Range advantages

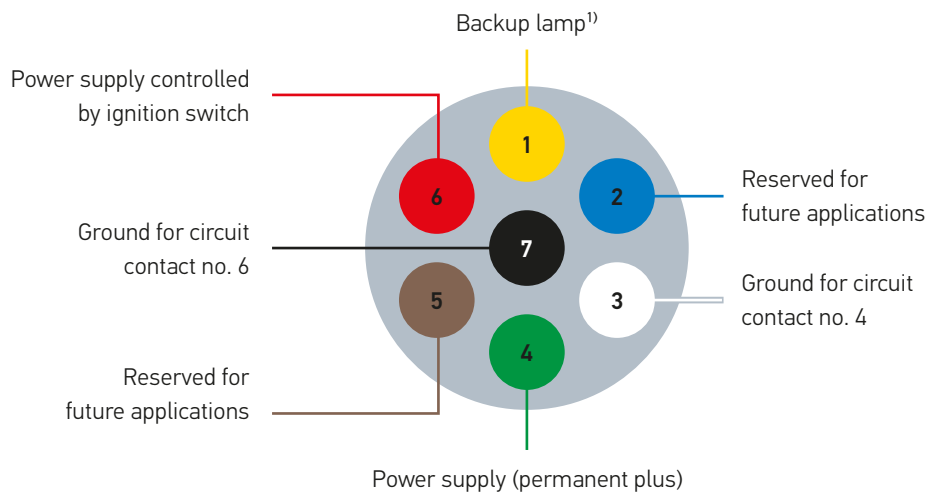
- Economical system for simple applications
- Easy to assemble
- Various different connection options (screw-on and blade terminal connection)
- Coupling sockets available
- Sockets with rear fog light switch-off available

#### Load-carrying capacity

- Max. 15 A at 12 V
- Cable cross section: max. 1 x 2.5 mm<sup>2</sup>, max. 2 x 1.5 mm<sup>2</sup>
- Permissible temperature range: -25 °C to 70 °C ambient temperature

### 2.6.3 7-pin plug system i.a.w. ISO 3732 (S-type)

#### Pin-out – trailer plug fitting 12 V/7-pole S type ISO 3732



#### Contact assignment for auxiliary plug-type connectors compliant with ISO 3732, 12 V, 7-pole S

Contact no.	Function	Cable cross section in mm <sup>2</sup>	Colour of wire insulation
1	Backup lamp <sup>1)</sup>	1.5	■
2	Reserved for future applications	not prescribed	No cable or blue
3	Ground for circuit contact no. 4	2.5	□
4	Power supply (permanent plus)	2.5	■
5	Reserved for future applications	1.5	■
6	Power supply via the ignition switch	2.5	■
7	Earth for circuit contact no. 6	2.5	■

<sup>1)</sup> The ground for this contact is traditionally contact no. 3 of the 12 V, 7-pin N plug connector in accordance with ISO 1724.

### 2.6.3 7-pin plug system i.a.w. ISO 3732 (S-type)

	Description	Connection	Part number	Order unit in pieces
Socket: Centre contact 7/58L as sleeve Connector: Centre contact 7/ 58L as pin, base: Ø max. 72.0 mm				
<b>SOCKET</b>				
	<p>Black plastic version with light gray cover, removable contact insert</p> <p>In folding box</p>	7 screw terminals	<b>8JB 001 943-041</b>	25
	<p>Light gray plastic version, with screwed-on strain relief and rubber grommet</p> <p>In folding box</p>	7 screw terminals	<b>8JA 001 930-031</b>	25
<b>COUPLING SOCKET</b>				
	<p>Black plastic version with light gray cover, with screwed-on strain relief, suspension device and rubber grommet for 7-wire extension cables</p> <p>In folding box</p>	7 screw terminals	<b>8JB 006 464-001</b>	10
<b>SOCKET BASE</b>				
	<p>For cable Ø 8.0 - 11.0 mm, with 180° branch-off point</p> <p>In folding box</p>		<b>9GD 735 641-001</b>	10
<b>RUBBER BASE</b>				
	<p>For cable Ø 8.0 - 11.0 mm, with 90° branch-off point</p> <p>In folding box</p>		<b>9GD 735 641-042</b>	10

## 2.6.4 13-pin plug system i.a.w. ISO 11446



### Application

The 13-pin connector system in accordance with ISO 11446 was developed as the 1980s drew to a close. Unlike the 7-pin system, the high number of pins makes it possible to transfer all lighting and auxiliary functions using just one connector. The system is also replacing older plug connector generations due to the benefits it offers, including with respect to water tightness, stability, contact security and ease of handling thanks to the bayonet closure.

### Range advantages

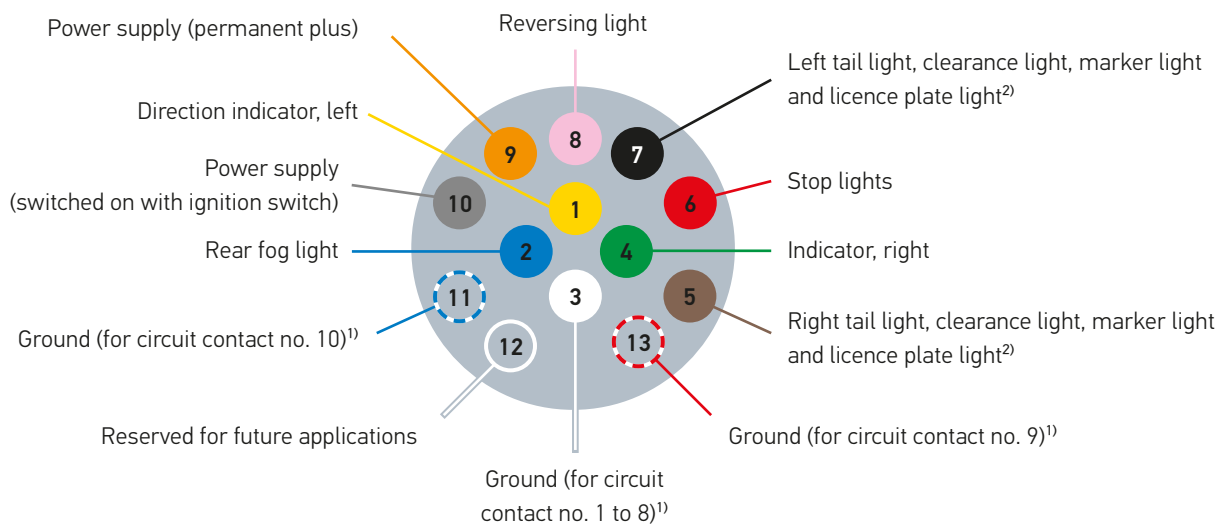
- Easy handling thanks to the bayonet closure
- Easy to assemble
- Tightness compliant with protection class IP 54K
- Sockets with rear fog light switch-off available

### Load-carrying capacity

- Max. 16 A at 6 - 24 V (cable cross section 1.5 mm<sup>2</sup>)
- Max. 25 A at 6 - 24 V (cable cross section 2.5 mm<sup>2</sup>)
- Permissible temperature range: -40 °C to 85 °C

## 2.6.4 13-pin plug system i.a.w. ISO 11446

### Assignment diagram – Trailer plug fitting, 13-pin, ISO 11446



### Contact assignment for plug-type connectors compliant with ISO 11446, 12 V, 13-pole

Contact no.	Function	Cable cross section in mm <sup>2</sup>	Colour of wire insulation
1	Direction indicator, left	1.5	■
2	Rear fog light	1.5	■
3 <sup>1)</sup>	Earth for contacts no. 1 to 8	2.5	□
4	Indicator, right	1.5	■
5 <sup>2)</sup>	Right taillight, clearance light, sidelight and licence plate lighting	1.5	■
6	Stop lights	1.5	■
7 <sup>2)</sup>	Left taillight, clearance light, sidelight and licence plate lighting	1.5	■
8	Reversing light	1.5	■
9	Power supply (permanent plus)	2.5	■
10	Power supply via the ignition switch	2.5	■
11 <sup>1)</sup>	Earth for contact no. 10	2.5	□ ■
12	Reserved for future applications	not prescribed	not prescribed
13 <sup>1)</sup>	Earth for contact no. 9	2.5	□ ■

<sup>1)</sup> The 3 ground wires may not be connected to conduct electricity in the trailer.

<sup>2)</sup> The licence plate lights must be connected in such a way that none of its lamps are connected to the two contacts 5 and 7.

## 2.6.4 13-pin plug system i.a.w. ISO 11446

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET WITH COVER</b>				
 	Black plastic version, with removable contact insert, rubber base and rubber seal in cover	13 screw terminals	<b>8JB 005 949-001</b>	1
	In folding box			
	<b>With switch-off contact for the rear fog light on the motor vehicle</b>			
	In folding box	13 screw terminals with auxiliary screw terminal	<b>8JB 005 949-011</b>	1
	In Pro-fit packaging	13 screw terminals with auxiliary screw terminal	<b>8JB 005 949-012</b>	1
	With microswitch, three-way switch left		<b>8JB 005 949-041</b>	1
<b>MALE CONNECTOR</b>				
  	Black plastic version, with rubber seal, union nut and bayonet lock	13 screw terminals	<b>8JA 005 951-001</b>	1
	In folding box			
	In folding box	13 screw terminals	<b>8JA 005 951-027</b>	16
	In Pro-fit packaging	13 screw terminals	<b>8JA 005 951-003</b>	1
 	Black plastic version, click version, connector cannot be re-opened after installation; includes parking socket	13 screw terminals	<b>8JA 005 951-041</b>	1
	In PE bag			
<b>PARK SOCKET</b>				
  	Black plastic version with blue cover; protects the 13-pin connector when trailer is parked		<b>8HG 005 953-001</b>	1
	In folding box			



## 2.6.5 7+6-pole plug system compliant with NEN 61 20



### Application

The 7+6-pole plug system for the electrical connection of traction and trailer vehicles can be used for both 7 and 13-pole applications.

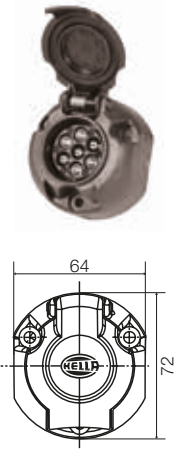
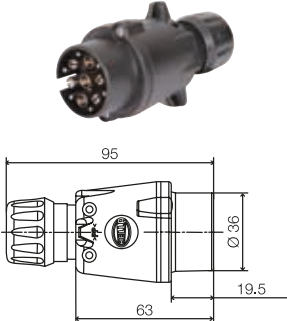
### Range advantages

- Compatible with standard ISO 1724
- Simple and rational fitting
- The socket contains microswitches with a changeover function to activate the rear fog light, parking aid and/or trailer detection.

### Load-carrying capacity

- Max. 20 A (for 2.5 mm<sup>2</sup> cable)
- Operating temperature: -25 °C to + 75 °C

## 2.6.5 7+6-pole plug system compliant with NEN 61 20

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET</b>				
	<p>7+6-pin, black plastic version, rubber seal in cover, with microswitch</p> <p>Compatible with MULTICON and WeSt connectors</p> <p>In folding box</p>	13 screw terminals	<b>8JB 005 949-031</b>	1
<b>MALE CONNECTOR</b>				
	<p>7+6-pin, black plastic version, with rubber seal and union nut for cable Ø 11.5 - 14.0 mm</p> <p>Compatible with WeSt sockets. Not suitable for MULTICON sockets.</p> <p>In folding box</p>	13 screw terminals	<b>8JA 005 951-061</b>	1

## 2.7 Plug-type connections 24 V

### 2.7.1 7-pole plug system compliant with ISO 11 85 (N-type)



#### Application

The 7-pin, 24 V connector system in accordance with ISO 1185/ ISO 3731 is currently the most popular system for establishing electrical connections between the towing vehicle and trailer or tractor and trailer in the commercial vehicle sector. The system is primarily used for applications with average requirements. It includes a standard plug connector, type N, in accordance with ISO 1185 and an auxiliary plug connector, type S, in accordance with ISO 3731. The auxiliary system is distinguished from the standard system by its white housing, contact inserts and non-interchangeable contact arrangement.

#### Range advantages

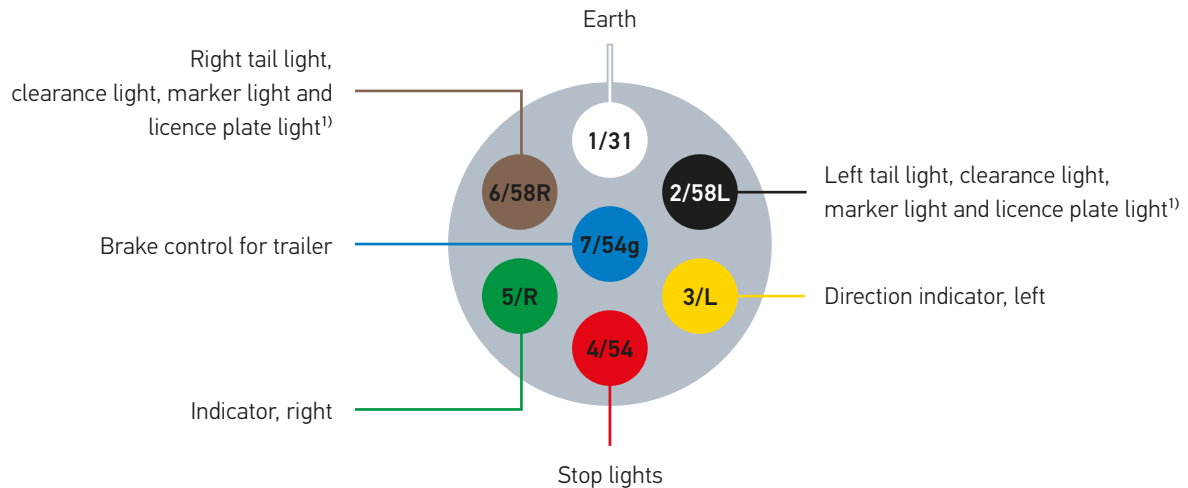
- Economical system for simple applications
- Easy to assemble
- Various different connection options (screw-on and blade terminal connection)
- Housing parts in robust materials (aluminum, break-proof plastic)

#### Load-carrying capacity

- Max. 20 A (for 2.5 mm<sup>2</sup> cable)
- Max. 15 A (for 1.5 mm<sup>2</sup> cable)
- Permissible temperature range: -25 °C to 75 °C

### 2.7.1 7-pole plug system compliant with ISO 11 85 (N-type)

Pin-out – trailer plug fitting 24 V / 7-pole N-type ISO 1185  
31st contact / socket – pin; 31st contact / plug – sleeve

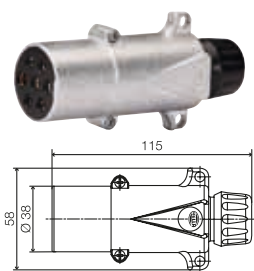
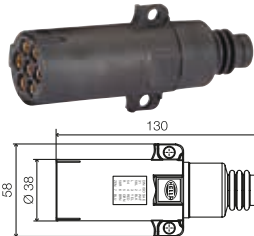


### Contact assignment for normal plug-type connectors compliant with ISO 1185, 24 V, 7-pole N

Contact no.	Function	Cable cross section in mm <sup>2</sup>	Colour of wire insulation
1/31	Earth	2.5	□
2/58L <sup>1)</sup>	Left taillight, clearance light, sidelight and licence plate lighting	1.5	■
3/L	Direction indicator, left	1.5	■
4/54	Stop lights	1.5	■
5/R	Indicator, right	1.5	■
6/58R <sup>1)</sup>	Right taillight, clearance light, sidelight and licence plate lighting	1.5	■
7/54g	Control trailer brake	1.5	■

<sup>1)</sup> The licence plate lights must be connected in such a way that none of its lamps are connected to the two contacts 2 and 6.

### 2.7.1 7-pole plug system compliant with ISO 11 85 (N-type)

Description		Connection	Part number	Order unit in pieces
<b>SOCKET, METAL VERSION</b>				
	With cable grommet for cable Ø 9.5 - 12.5 mm	7 screw terminals	<b>8JB 003 833-001</b>	10
	In folding box	7 blade terminal connections 6.3 mm	<b>8JB 003 833-031</b>	10
		16 blade terminal connections 6.3 mm (5 x 2x/2 x 3x)	<b>8JB 003 833-011</b>	10
<b>SOCKET, PLASTIC VERSION</b>				
	With cable grommet for cable Ø 9.5 - 12.5 mm	7 screw terminals	<b>8JB 008 085-001</b>	10
	In folding box	7 blade terminal connections 6.3 mm	<b>8JB 008 085-021</b>	10
		16 blade terminal connections 6.3 mm (5 x 2x/2 x 3x)	<b>8JB 008 085-041</b>	10
<b>CABLE GROMMET</b>				
	For cable Ø 9.5 - 12.5 mm		<b>9GD 735 641-012</b>	10
	In folding box			
<b>CONNECTOR, METAL VERSION, WITH HIGH-STRENGTH CABLE GLAND</b>				
	Inner seal for cable Ø 9.2 - 11.5 mm	7 screw terminals	<b>8JA 003 831-001</b>	10
	In folding box	7 blade terminal connections 6.3 mm	<b>8JA 003 831-011</b>	10
<b>SOCKET, PLASTIC VERSION</b>				
	With cable grommet for cable Ø 8.0 - 12.0 mm	7 screw terminals	<b>8JA 008 084-001</b>	10
	In folding box	7 blade terminal connections 6.3 mm	<b>8JA 008 084-021</b>	10

## 2.7.2 7-pole plug system compliant with ISO 37 31 (S-type)



### Application

The 7-pin, 24 V connector system in accordance with ISO 1185/ISO 3731 is currently the most popular system for establishing electrical connections between the towing vehicle and trailer or tractor and trailer in the commercial vehicle sector. The system is primarily used for applications with average requirements. It includes a standard plug connector, type N, in accordance with ISO 1185 and an auxiliary plug connector, type S, in accordance with ISO 3731. The auxiliary system is distinguished from the standard system by its white housing, contact inserts and non-interchangeable contact arrangement.

### Range advantages

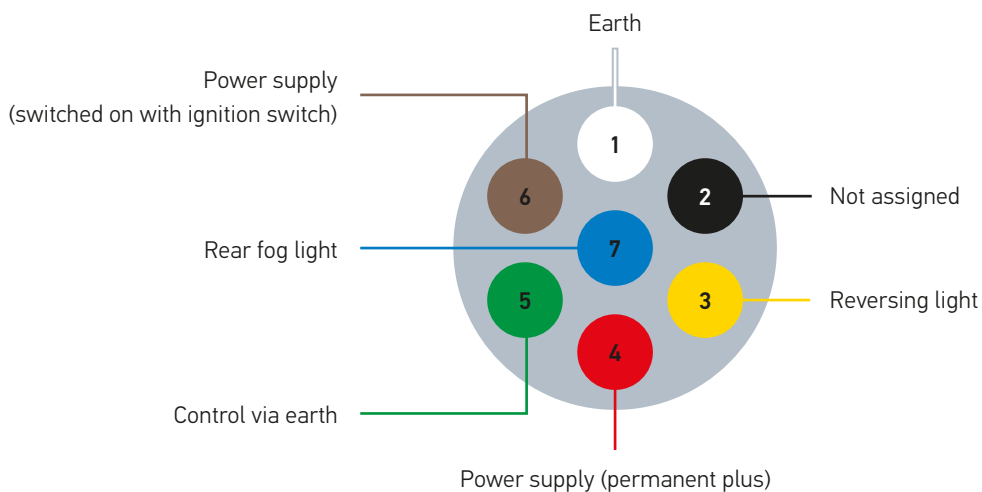
- Economical system for simple applications
- Easy to assemble
- Various different connection options (screw-on and blade terminal connection)
- Housing parts in robust materials (aluminum, break-proof plastic)

### Load-carrying capacity

- Max. 20 A (for 2.5 mm<sup>2</sup> cable)
- Max. 15 A (for 1.5 mm<sup>2</sup> cable)
- Permissible temperature range: -25 °C to 75 °C

### 2.7.2 7-pole plug system compliant with ISO 37 31 (S-type)

Pin-out – trailer plug fitting 24 V/7-pole S-type ISO 3731  
31st contact/socket – sleeve; 31st contact/plug – pin



### Contact assignment for auxiliary plug-type connectors compliant with ISO 3731, 24 V, 7-pole S

Contact no.	Function	Cable cross section in mm <sup>2</sup>	Colour of wire insulation
1	Earth	2.5	□
2	Reserved for future applications	1.5	■
3	Reversing light	1.5	■
4	Power supply (permanent plus)	2.5	■
5	Control via earth	1.5	■
6	Power supply via the ignition switch	2.5	■
7	Rear fog light	1.5	■

## 2.7.2 7-pole plug system compliant with ISO 37 31 (S-type)

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET, METAL VERSION</b>				
		7 screw terminals	<b>8JB 003 834-001</b>	10
	With cable grommet for cable Ø 9.5 - 12.5 mm	7 blade terminal connections 6.3 mm	<b>8JB 003 834-031</b>	10
	In folding box	16 blade terminal connections 6.3 mm (5 x 2x/2 x 3x)	<b>8JB 003 834-021</b>	10
<b>SOCKET, PLASTIC VERSION</b>				
		7 screw terminals	<b>8JB 008 085-011</b>	10
	With cable grommet for cable Ø 9.5 - 12.5 mm	7 blade terminal connections 6.3 mm	<b>8JB 008 085-031</b>	10
	In folding box	16 blade terminal connections 6.3 mm (5 x 2x/2 x 3x)	<b>8JB 008 085-051</b>	10
<b>CABLE GROMMET</b>				
	For cable Ø 9.5 - 12.5 mm		<b>9GD 735 641-012</b>	10
	In folding box			
<b>CONNECTOR, METAL VERSION WITH HIGH-STRENGTH CABLE GLAND</b>				
		7 screw terminals	<b>8JA 003 832-001</b>	10
	Inner seal for cable Ø 9.2 - 11.5 mm.	7 blade terminal connections 6.3 mm	<b>8JA 003 832-011</b>	10
	In folding box			
<b>CONNECTOR, PLASTIC VERSION</b>				
		7 screw terminals	<b>8JA 008 084-011</b>	10
	With cable grommet for cable Ø 9.5 - 12.5 mm	7 blade terminal connections 6.3 mm	<b>8JA 008 084-031</b>	10
	In folding box			



### 2.7.3 15-pole plug system compliant with ISO 12 098



#### Application

The 15-pin plug system in accordance with ISO 12098 is the modern system for the transfer of lighting and auxiliary functions in 24 V vehicle electrical systems. On account of its technical advantages, such as reliable contacting and water tightness, the system is used by many leading commercial vehicle manufacturers for original equipment applications. The system is increasingly replacing the older 7-pin plug connector generations. The plug connectors are suitable for ADR/ GGVS applications.

#### Range advantages

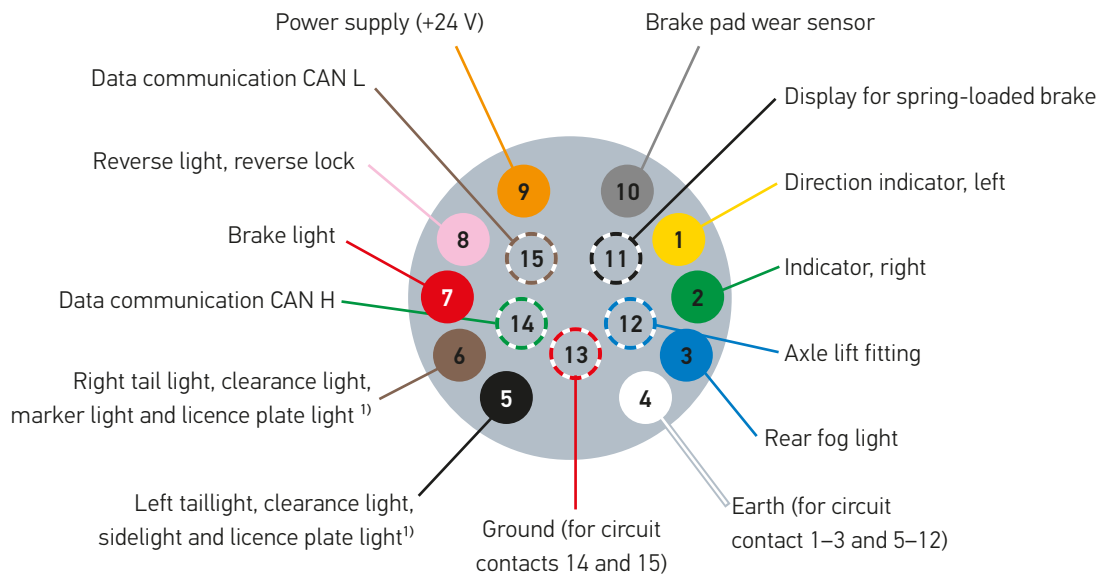
- The system meets the strict requirements for modern trailer plug connectors in accordance with ISO 4091
- High-grade lamella contacts with crimp connection
- Easy to assemble
- Crimp connection for OE applications
- Screw-type connection for spare part applications

#### Load-carrying capacity

- Max. 16 A at 6 - 24 V (cable cross section 1.5 mm<sup>2</sup>)
- Max. 25 A at 6 - 24 V (cable cross section 2.5 mm<sup>2</sup>)

### 2.7.3 15-pole plug system compliant with ISO 12 098

#### Pin-out – trailer plug fitting 15-pole compliant with ISO 12 098


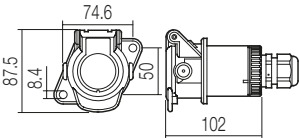

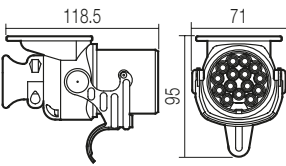

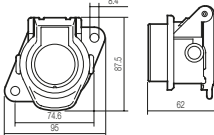




#### Contact assignment for 15-pin plug connector in accordance with ISO 12 098

Contact no.	Function	Cable cross section in mm <sup>2</sup>	Colour of wire insulation
1	Direction indicator, left	1.5	■
2	Indicator, right	1.5	■
3	Rear fog light	1.5	■
4	Earth for contacts 1–3 and 5–12	2.5	□
5 <sup>1)</sup>	Left tail light, clearance light, marker light and licence plate lights	1.5	■
6 <sup>1)</sup>	Right tail light, clearance light, marker light and licence plate lights	1.5	■
7	Stop lights	1.5	■
8	Reversing light	1.5	■
9	Permanent power supply (+ 24 V)	2.5	■
10	Sensor for brake pad wear indication	1.5	■
11	Display for spring-loaded brake	1.5	□ ■
12	Axle lift	1.5	□ ■
13	Earth for data cables 14 and 15	2.5	□ ■
14	CAN H	1.5	□ ■
15	CAN L	1.5	□ ■

<sup>1)</sup> The licence plate lights must be connected in such a way that none of its lamps are connected to the two contacts 5 and 6.

### 2.7.3 15-pole plug system compliant with ISO 12 098

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET</b>				
	<p>Sturdy plastic design with cover, ADR/GGVS tested, with rubber seals and nickel-plated contact pins, made of glass-fiber reinforced polyamide, high-strength cable gland for the cable outlet</p>	15 screw terminals	<b>8JB 007 242-011</b>	1
	<p>Installation opening: Ø 54.0 mm, for cable diameter: 12.0 - 18.0 mm Contact pins: 12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup> In folding box</p>	15 crimped/solder connections	<b>8JB 007 242-021</b>	1
<b>MALE CONNECTOR</b>				
	<p>ADR / GGVS tested, with rubber seals and nickel-plated contact bushings, made of glass fibre reinforced polyamide, mechanical strain relief, safe latching in place through non-rusting metal hoop</p>	15 screw terminals	<b>8JA 007 241-021</b>	1
	<p>For cable diameter: 12.0 - 18.0 mm Contact bushings: 12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup> In folding box</p>	15 crimped/solder connections	<b>8JA 007 241-031</b>	1
<b>PARK SOCKET</b>				
 	<p>For 15-pin, 24 V connectors 8JA 007 241-021 and -031 Installation opening: Ø 54.0 mm In folding box</p>		<b>8HG 007 647-001</b>	1
<b>CRIMPED/SOLDER CONTACT PIN SET*</b>				
	<p>12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup>, for 8JB 007 242-021 socket</p>		<b>9MK 726 761-811</b>	1
<b>CRIMPED/SOLDER CONTACT BUSHINGS SET*</b>				
	<p>12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup>, for 8JA 007 241-031 connector</p>		<b>9MK 726 758-821</b>	1

\* The appropriate tool can be found on page 186.

## 2.8 ABS/EBS plug system in accordance with ISO 7638-1 (24 V) and ISO 7638-2 (12 V)

2



### Application

The plug systems in accordance with ISO 7638-1 / ISO 7638-2 are used in almost all commercial vehicles with ABS / EBS systems. The plug connectors are suitable for ADR / GGVS applications.

### Range advantages

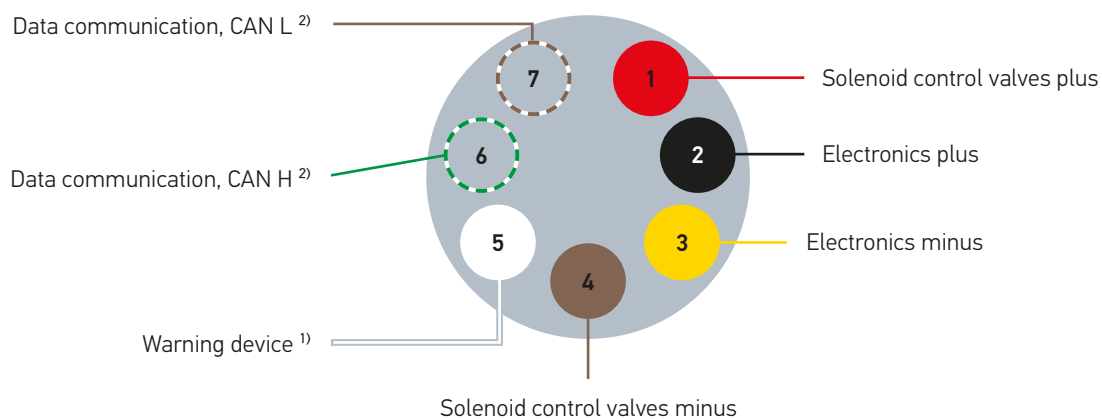
- The system meets the strict requirements for modern trailer plug connectors in accordance with ISO 4091
- High-grade lamella contacts with crimp connection
- Easy to assemble
- Crimp connection for OE applications
- Screw-type connection for spare part applications
- Both 12 V and 24 V versions of this plug system are available

### Load-carrying capacity

- Max. 16 A at 24 V (cable cross section 1.5 mm<sup>2</sup>)
- Max. 25 A at 24 V (cable cross section 2.5 mm<sup>2</sup>)
- Max. 30 A at 24 V (cable cross section 4.0 - 6.0 mm<sup>2</sup>)

## 2.8 ABS/EBS plug system in accordance with ISO 7638-1 (24 V) and ISO 7638-2 (12 V)

### Pin-out – trailer plug fitting ABS/EBS 24 V / 5/7-pole ISO 7638-1



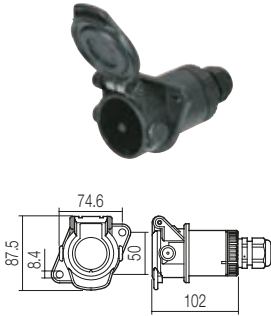
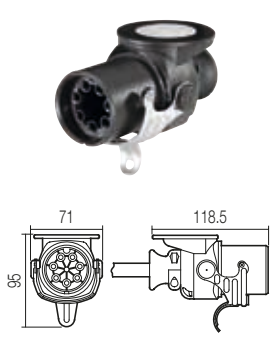
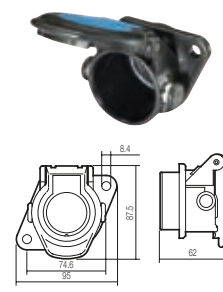
### Contact assignment for plug-type connectors compliant with ISO 7638-1, ABS/EBS 24 V

Contact no.	Function	Cable cross section in mm <sup>2</sup>	Colour of wire insulation
1	Solenoid valve plus	4	■
2	Electronics plus	1.5	■
3	Electronics minus	1.5	■
4	Solenoid valve minus	4	■
5 <sup>1)</sup>	Warning device	1.5	□
6 <sup>2)</sup>	Data communication CAN H	1.5	□ ■
7 <sup>2)</sup>	Data communication CAN L	1.5	□ ■



1) The warning device is triggered via contact no. 5. Under normal operating conditions, this contact's circuit in the trailer is open.

2) According to ISO 11992-1 and ISO 11992-2.

## 2.8 ABS/EBS plug system in accordance with ISO 76 38-1 (24 V) and ISO 7638-2 (12 V)

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET</b>				
	<p>With cover, ADR/GGVS tested, with rubber seals and nickel-plated contact pins, made of glass-fiber reinforced polyamide, high-strength cable gland for the cable outlet</p>	Screw connections	<b>8JB 007 645-031</b>	1
	<p>Installation opening: <math>\varnothing</math> 54.0 mm for cable diameter: 9.0 - 16.0 mm Contact pins: 5 x 1.5 mm<sup>2</sup> + 2 x 4.0 mm<sup>2</sup> + 2 x 6.0 mm<sup>2</sup> and 2 blind plugs</p>	Crimp/solder connections	<b>8JB 007 645-021</b>	1
	In folding box			
<b>12 V variant</b>				
	With screw connections according to ISO 7638-2	Screw connections	<b>8JB 011 895-001</b>	1
<b>MALE CONNECTOR</b>				
	<p>ADR/GGVS tested, with rubber seals and nickel-plated contact bushings, made of glass fiber reinforced polyamide, mechanical strain relief, safe locking in place through non-rusting metal hoop</p>	Screw connections	<b>8JA 007 644-051</b>	1
	<p>For cable diameter: 11.0 - 13.0 mm Contact bushings: 5 x 1.5 mm<sup>2</sup> + 2 x 4.0 mm<sup>2</sup> + 2 x 6.0 mm<sup>2</sup> and 2 blind plugs</p>	Crimp/solder connections	<b>8JA 007 644-041</b>	1
	In folding box			
<b>12 V variant</b>				
	With screw connections according to ISO 7638-2	Screw connections	<b>8JA 011 896-001</b>	1
<b>PARK SOCKET</b>				
	<p>For ABS/EBS 24 V connectors 8JA 007 644-041 and -051</p> <p>Installation opening: <math>\varnothing</math> 54.0 mm made of glass-fiber reinforced polyamide</p>		<b>8HG 007 647-001</b>	1
	In folding box			

## 2.8 ABS/EBS plug system in accordance with ISO 7638-1 (24 V) and ISO 7638-2 (12 V)

	Description	Connection	Part number	Order unit in pieces
<b>CRIMPED/SOLDER CONTACT PIN SET*</b>				
	5 x 1.5 mm <sup>2</sup> + 2 x 4.0 mm <sup>2</sup> + 2 x 6.0 mm <sup>2</sup> and 2 blind plugs for 8JB 007 645-021 socket		<b>9MK 726 762-831</b>	1
<b>CRIMPED/SOLDER CONTACT BUSHINGS SET*</b>				
	5 x 1.5 mm <sup>2</sup> + 2 x 4.0 mm <sup>2</sup> + 2 x 6.0 mm <sup>2</sup> and 2 blind plugs for 8JA 007 644-041 connector		<b>9MK 726 759-831</b>	1

\* The appropriate tool can be found on page 186.

## 2.9 Plug connectors for special vehicles in accordance with VG 96923, VG 96917 and ISO 4165



### Application

This product group includes various plug connectors for special applications that are found primarily in the military sector but also increasingly in applications that involve high levels of current, safety and reliability, and ease of use.

The 12-pin, 24 V system in accordance with VG 96923 is characterised by meeting very high requirements in military operations, particularly with respect to dirt and impact resistance.

The 2-pin, 24 V system in accordance with VG 96917 meets similar requirements and is used for battery charging at currents of up to 500 A (short-term loads up to 10 s).

The connector system in accordance with ISO 4165 is used to electrically connect different consumers.

### Range advantages

- High-grade crimped/solder contacts
- Easy to assemble
- Suitable for high current loads

### Load-carrying capacity

Rated currents:

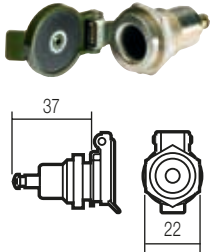
- Max. 15 A (cable cross section 1.5 mm<sup>2</sup>)
- Max. 100 A (cable cross section 25.0 mm<sup>2</sup>)
- Max. 160 A (cable cross section 35.0 mm<sup>2</sup>)
- Max. 200 A (cable cross section 50.0 mm<sup>2</sup>)

Short-term currents to 10 s:

- Max. 35 A (cable cross section 1.5 mm<sup>2</sup>)
- Max. 250 A (cable cross section 25.0 mm<sup>2</sup>)
- Max. 400 A (cable cross section 35.0 mm<sup>2</sup>)
- Max. 500 A (cable cross section 50.0 mm<sup>2</sup>)



## 2.9 Plug connectors for special vehicles in accordance with VG 96923, VG 96917 and ISO 4165

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET</b>				
	<p>With green cover (ISO 4165 / VGV 96921), compact flush-fit version, cover color: RAL 6031</p> <p>Installation opening: Ø 18.5 mm Control panel thickness: max. 7.0 mm</p> <p>In folding box</p>	<p>1 screw terminal, ground at the housing</p>	<p><b>8JB 001 946-001</b></p>	<p>10</p>
<b>SOCKET, ALUMINUM</b>				
	<p>2-pin with green screw cap (VG 96917-3, form A), seal in screw cap, additional sealing ring between thread and screw cap</p> <p>Permissible operating temperature: -40 °C to +85 °C Protection class: IP X4 (connection in plugged-in state) Contacts: CuZn, silver-plated</p> <p>In folding box</p>	<p>2 crimped/solder bushing contacts for cables up to 50.0 mm<sup>2</sup></p>	<p><b>8JB 001 935-031</b></p>	<p>1</p>
		<p>2 crimped/solder bushing contacts for cables up to 35.0 mm<sup>2</sup></p>	<p><b>8JB 001 935-051</b></p>	<p>1</p>
<b>SOCKET, PLASTIC</b>				
	<p>2-pin with black rubber cap (plug compatible with VG 96917)</p> <p>Permissible operating temperature: -40 °C to +85 °C Protection class: IP X6 with closed cap Contacts: CuZn, silver-plated</p> <p>In black folding box</p>	<p>2 crimped/solder bushing contacts for cables up to 35.0 mm<sup>2</sup></p>	<p><b>8JB 001 935-041</b></p>	<p>1</p>
	<p>In yellow folding box</p>	<p>2 crimped/solder bushing contacts for cables up to 50.0 mm<sup>2</sup></p>	<p><b>8JB 001 935-061</b></p>	<p>1</p>
	<p><b>Accessory grommet for 2-pin sockets:</b></p> <p>8JB 001 935-031 8JB 001 935-041 8JB 001 935-051 8JB 001 935-061</p>		<p><b>9GD 735 641-062</b></p>	<p>1</p>



## 2.9 Plug connectors for special vehicles in accordance with VG 96923, VG 96917 and ISO 4165

	Description	Connection	Part number	Order unit in pieces
<b>SOCKET, METAL</b>				
	<p>yellow, 2-pole with black rubber cap (insertion compatible with VT 96 917)</p> <p>In folding box</p>	<p>2 crimped/solder bushing contacts for cables up to 50.0 mm<sup>2</sup></p>	<p><b>8JB 010 806-001</b></p>	<p>1</p>
<b>MALE CONNECTOR</b>				
	<p>2-pin (plug compatible with VG 96917), black</p> <p>Permissible operating temperature: -40 °C to +85 °C Contacts: CuZn, silver-plated</p> <p>Metal design</p>	<p>2 crimped/solder pin contacts for cables up to 35.0 mm<sup>2</sup></p>	<p><b>8JA 001 931-041</b></p>	<p>1</p>
	<p>Plastic design</p>	<p>2 crimped/solder pin contacts for cables up to 35.0 mm<sup>2</sup></p>	<p><b>8JA 001 931-081</b></p>	<p>1</p>
<b>CONNECTOR, METAL</b>				
	<p>2-pin with green threaded ring (VG 96917, form E)</p> <p>Permissible operating temperature: -40 °C to +85 °C Protection class: IP X4 (connection in plugged-in state) Contacts: CuZn, silver-plated</p> <p>In folding box</p>	<p>2 crimped/solder pin contacts for cables up to 35 mm<sup>2</sup></p>	<p><b>8JA 001 931-051</b></p>	<p>1</p>
		<p>2 crimped/solder pin contacts for cables up to 50.0 mm<sup>2</sup></p>	<p><b>8JA 001 931-071</b></p>	<p>1</p>
	<p>2-pin with black, plastic-sheathed threaded ring (VG 96917, form E)</p> <p>Permissible operating temperature: -40 °C to +85 °C Protection class: IP X4 (connection in plugged-in state) Contacts: CuZn, silver-plated</p> <p>In folding box</p>	<p>2 crimped/solder pin contacts for cables up to 35.0 mm<sup>2</sup></p>	<p><b>8JA 001 931-061</b></p>	<p>1</p>

## 2.9 Plug connectors for special vehicles in accordance with VG 96923, VG 96917 and ISO 4165

	Description	Connection	Part number	Order unit in pieces
<b>HELICAL CONNECTION CABLE</b>				
	<p>2-pin, max. working length 4.0 m, cross section 2 x 35.0 mm<sup>2</sup>, with 2 mounted connectors with threaded ring (VG 96917)</p> <p>Permissible operating temperature: -40 °C to +85 °C Rated current: 300 A (at ambient temperature of 20 °C)</p>		<b>8KA 010 807-001</b>	1
<b>SOCKET</b>				
	<p>12-pin with green cover (VG 96 923 A - 12 S), with connection set and screw cap</p> <p>Permissible operating temperature: -40 °C to +85 °C Protection class: IP 68 Connectable cross sections: 12 x 1.5 mm<sup>2</sup>, for cable diameter 18.0 - 23.5 mm Contacts: CuZn, silver-plated</p> <p>In folding box</p>	12 solder contact sleeves	<b>8JB 001 934-021</b>	1
<b>MALE CONNECTOR</b>				
	<p>12-pin, with green cover (VG96 923)</p> <p>Permissible operating temperature: -40 °C to +85 °C Protection class: IP 54 (in plugged-in state) Connectable cross sections: 12 x 1.5 mm<sup>2</sup>, for cable diameter 24.0 mm Contacts: CuZn, silver-plated</p> <p>In folding box</p>	12 solder male contacts	<b>8JA 002 264-051</b>	1
		12 solder contact sleeves	<b>8JA 002 264-061</b>	1

## 2.9 Plug connectors for special vehicles in accordance with VG 96 923, VG 96 917 and ISO 4165

	Description	Connection	Part number	Order unit in pieces
<b>CRIMPED CONTACT BUSHING</b>				
	For cables up to 50.0 mm <sup>2</sup> , for articles: 8JB 001 935-031 8JB 001 935-061	Crimped contact bushing 50.0 mm <sup>2</sup>	<b>9MK 748 466-011</b>	1
	For cables up to 35.0 mm <sup>2</sup> , for articles: 8JB 001 935-041 8JB 001 935-051	Crimped contact bushing 35.0 mm <sup>2</sup>	<b>9MK 748 466-021</b>	1
<b>CRIMP CONTACT PIN</b>				
	For cables up to 50.0 mm <sup>2</sup> , for articles: 8JA 001 931-071	Crimped contact pin 50.0 mm <sup>2</sup>	<b>9MK 748 465-011</b>	1
	For cables up to 35.0 mm <sup>2</sup> , for articles: 8JA 001 931-041 8JA 001 931-051 8JA 001 931-061 8JA 001 931-081	Crimped contact pin 35.0 mm <sup>2</sup>	<b>9MK 748 465-021</b>	1

## 2.10 Adapter 12 V / 24 V


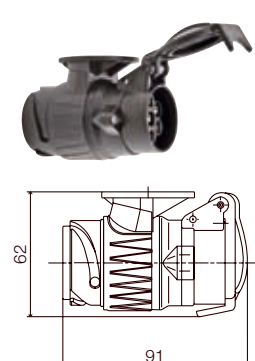

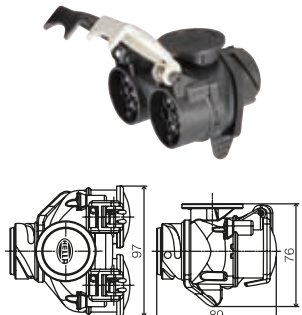


### Application


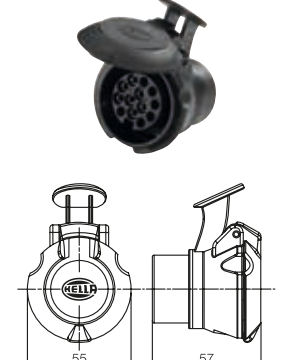


- Adapter from 13-pin socket (ISO 11 446) on towing vehicle to a 7-pin connector (ISO 1724) on the trailer cable
- Adapter from 7-pin socket (ISO 1724) on towing vehicle to a 13-pin connector (ISO 11 446) on the trailer cable
- Cable connection 7-pole (ISO 1724)
- UK short adapter from 13-pin socket (ISO 11 446) on towing vehicle to two 7-pin connectors (ISO 1724 + ISO 3732) on the trailer cables
- 24 V adapter cable from 15-pin socket (ISO 12098) on towing vehicle to two 2-pin sockets (ISO 1185 and ISO 3731) on the trailer
- Adapter cable available in two lengths, other lengths are available upon request

## 2.10 Adapter 12 V / 24 V

2


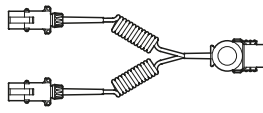

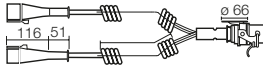
	Description	Length in mm	Part number	Order unit in pieces
<b>SUPER SHORT ADAPTER</b>				
	<p>From 13-pin socket (ISO 11446) on towing vehicle to a 7-pin connector (ISO 1724) on the trailer cable</p> <p>Round cover in accordance with ISO 11446 protects against dirt and damage, insertion aid for single-hand operation, splash water protected in accordance with IP 54, nickel-plated contacts (corrosion protection and continuously low insertion forces), low weight load of the 13-pin socket (only 99 g), load-carrying capacity: max. 16 A at 12 V</p> <p>In folding box</p>	57.0	<b>8JA 008 969-001</b>	1
<b>SHORT ADAPTERS</b>				
	<p>From 13-pin socket (ISO 11446) on towing vehicle to a 7-pin connector (ISO 1724) on the trailer cable</p> <p>Load-carrying capacity: max. 16 A at 12 V</p> <p>In folding box</p>	91.0	<b>8JA 005 952-011</b>	1
	In Pro-fit packaging	91.0	<b>8JA 005 952-013</b>	1
<b>ADAPTER</b>				
	<p>From 13-pin socket (ISO 11446) on towing vehicle to a 7-pin connector (ISO 1724) on the trailer cable, with suspension gear to 7-pin coupling socket</p> <p>In folding box</p>	25.0	<b>8JA 005 952-001</b>	1
<b>"UK" SHORT ADAPTER</b>				
	<p>From 13-pin socket (ISO 11446) to 2 x 7-pin connectors (ISO 1724 + ISO 3732)</p> <p>In folding box</p>	89.0	<b>8JA 179 368-001</b>	1

## 2.10 Adapter 12 V / 24 V

	Description	Length in mm	Part number	Order unit in pieces
<b>SHORT ADAPTERS</b>				
	<p>From 13-pin socket (ISO 11446) on towing vehicle to a 13-pin WeSt connector or 7-pin connector (ISO 1724) on the trailer cable</p> <p>In folding box</p>	106.0	<b>8JA 005 952-091</b>	1
<b>SUPER SHORT ADAPTER</b>				
	<p>From 7-pin socket (ISO 1724) on towing vehicle to a 13-pin connector (ISO 11446) on the trailer cable</p> <p>In folding box</p>	57.0	<b>8JA 008 969-011</b>	1
<b>MINI SHORT ADAPTER</b>				
	<p>From 7-pin socket (ISO 1724) on towing vehicle to a 13-pin connector (ISO 11446) on the trailer cable</p> <p>In folding box</p>	100.0	<b>8JA 008 981-001</b>	1
<b>SHORT ADAPTERS</b>				
	<p>From 15-pin socket (ISO 12098) on towing vehicle to two 7-pin connectors (ISO 1185 + ISO 3731) on trailer made from glass fibre-reinforced polyamide</p> <p>In folding box</p>	155.0	<b>8JA 005 952-061</b>	1

## 2.10 Adapter 12 V / 24 V

2

	Description	Length in m	Part number	Order unit in pieces
<b>ADAPTER CABLE</b>				
	From 15-pin socket (ISO 12098) on towing vehicle to two 7-pin sockets (ISO 1185 + ISO 3731) on trailer, with 15-pin plastic connector and 7-pin metal connectors	max. 3.5 m	<b>8JA 005 952-111</b>	1
	Cable diameter: 8.7 mm Outside filament: Ø 50.0 mm Jacket: Polyurethane  Folding box	Max. 4.0 m	<b>8JA 005 952-041</b>	1
<b>ADAPTER CABLE</b>				
	From 15-pin socket (ISO 12098) on towing vehicle to two 7-pin sockets (ISO 1185 + ISO 3731) on trailer, with 15-pin plastic connector and molded-on 7-pin plastic connectors 100% waterproof! (Protection class: IPX9K for the cable outlet)	max. 3.5 m	<b>8JA 005 952-101</b>	1
	Cable diameter: 8.8 mm Outside filament: Ø 48.0 mm Jacket: Polyurethane  Folding box	Max. 4.0 m	<b>8JA 005 952-081</b>	1



## 2.11 Test plug 12 V / 24 V



### Application

- Test plug for 7-pin sockets (ISO 1724) and 13-pin sockets (ISO 11446)
- Test plugs for helical cables (ISO 1185)
- Test plugs for testing ABS sockets

## 2.11 Test plug 12 V / 24 V

	Description	Length in mm	Part number	Order unit in pieces
<b>TEST PLUG</b>				
	For testing 7-pin sockets 12 V (ISO 1724), function display with LEDs, 7-pin  In folding box		<b>8PD 004 508-001</b>	1
	For testing 13-pin sockets 12 V (ISO 11446), function display with LEDs, 13-pin  In folding box		<b>8PD 007 216-001</b>	1
	For testing 7-pin sockets in accordance with ISO 1185, standard version  In folding box	81.0	<b>8PD 004 508-011</b>	1
	For testing filament connection cables in accordance with ISO 1185, standard version  In folding box	89.0	<b>8PD 004 508-021</b>	1
	For testing ABS sockets  In folding box	110.0	<b>8PD 004 508-031</b>	1

## 3. Cables

### 3.1 Helical cables



#### Application

Helical cables are used for the electrical connection between traction vehicles and semi-trailers in the commercial vehicles field.

#### Range advantages

- Wide range of products for all common applications
- Cable jacket made from polyurethane or Hytrel
- Extremely resistant to cold, heat and influence of the weather
- High resistance to oils and chemicals
- Very good reversed bending properties
- Excellent reset behaviour
- 7-pole connector in a choice of metal or plastic

### 3.1 Helical cables

3

Description	ISO	Cable cross-section in mm <sup>2</sup>	Material	Part number	Order unit in pieces
-------------	-----	--	----------	-------------	----------------------

**HELICAL CONNECTION CABLE**



12 V, 7-pin, max. working length 4.0 m, with 2 screwed-on metal connectors

1724, 6722

6 x 1.0 + 1 x 1.5

Polyurethane

**8KA 004 797-021**

1



Description	Length in m	Part number	Order unit in pieces
-------------	-------------	-------------	----------------------

**CONNECTING CABLE**

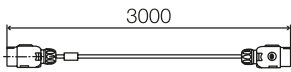


12 V "N", 7-pin, (ISO 1724), jacket: PVC, cable cross sections: 6 x 1.0 mm<sup>2</sup> + 1 x 1.5 mm<sup>2</sup>, with 2 screwed-on plastic connectors

3.0

**8KA 002 185-061**

1



In PE bag

Description	ISO	Cable cross-section in mm <sup>2</sup>	Material	Part number	Order unit in pieces
-------------	-----	--	----------	-------------	----------------------

**HELICAL CONNECTION CABLE**



24 V, 7-pin, with 2 screwed-on plastic connectors

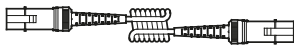
1185 „N“, 6722

6 x 1.0 + 1 x 1.5

Polyurethane

**8KA 004 797-041**

1



With anti-kink sleeves, 4.0 m

1185 „N“, 6722

6 x 1.0 + 1 x 1.5

Polyurethane

**8KA 004 797-141**

1

With anti-kink sleeves, 4.0 m

3731 „S“, 6722

6 x 1.0 + 1 x 1.5

Polyurethane

**8KA 004 797-051**

1

With anti-kink sleeves, 3.5 m

3731 „S“, 6722

6 x 1.0 + 1 x 1.5

Polyurethane

**8KA 004 797-151**

1



24 V, 7-pin, max. working length 4.0 m, with 2 molded-on plastic connectors and anti-kink guard, cable outlet waterproof (IP X9K)

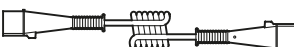
1185 „N“, 6722

6 x 1.0 + 1 x 1.5

Polyurethane

**8KA 004 797-031**

1



With anti-kink sleeves, 3.5 m

3731 „S“, 6722

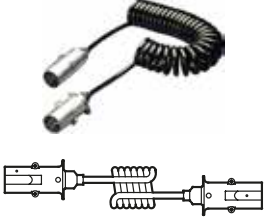
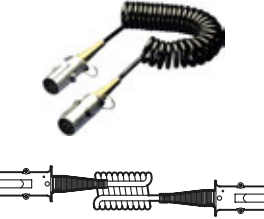
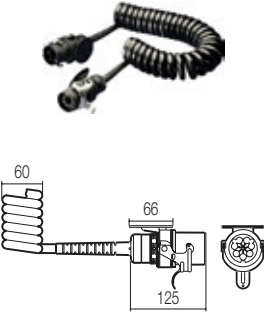
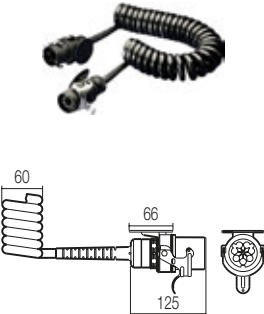
6 x 1.0 + 1 x 1.5

Polyurethane

**8KA 007 965-011**


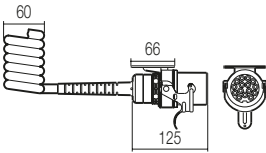

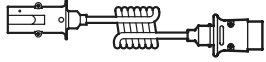
1

### 3.1 Helical cables

	Description	ISO	Cable cross-section in mm <sup>2</sup>	Material	Part number	Order unit in pieces	
<b>HELICAL CONNECTION CABLE</b>							
	24 V 7-pin, max. working length 4.0 m, with 2 molded-on metal connectors	1185 „N“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-071</b>	1	
		3731 „S“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-081</b>	1	
	7-pin, max. working length 4.0 m, with 2 molded-on metal connectors, anti-kink guard in metal and suspension bracket	1185 „N“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-101</b>	1	
		3731 „S“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-111</b>	1	
<b>ABS HELICAL CONNECTION CABLE</b>							
	24 V, 5-pin, with 2 mounted ABS connectors and anti-kink sleeves						
		20,000 bending cycles guaranteed!* 4.0 m	7638-1	3 x 1.5 + 2 x 4.0	Hytrel	<b>8KA 007 648-001</b>	1
			7638-1	3 x 1.5 + 2 x 4.0	Polyurethane	<b>8KA 007 648-011</b>	1
	20,000 reversed bending operations guaranteed!* 3.5 m	7638-1	3 x 1.5 + 2 x 4.0	Polyurethan	<b>8KA 007 648-071</b>	1	
<b>EBS HELICAL CONNECTION CABLE</b>							
	7-pin, with 2 mounted EBS connectors and anti-kink sleeves						
		20,000 bending cycles guaranteed!* 4.0 m	7638-1	5 x 1.5 + 2 x 4.0	Hytrel	<b>8KA 007 648-021</b>	1
			7638-1	5 x 1.5 + 2 x 4.0	Polyurethane	<b>8KA 007 648-031</b>	1
	20,000 reversed bending operations guaranteed!* 3.5 m	7638-1	5 x 1.5 + 2 x 4.0	Polyurethane	<b>8KA 007 648-081</b>	1	

\* In accordance with ISO 4141, at least 10,000 bending cycles are required.

### 3.1 Helical cables

	Description	ISO	Cable cross-section in mm <sup>2</sup>	Material	Part number	Order unit in pieces
<b>HELICAL CONNECTION CABLE</b>						
 	24 V, 15-pin, with 2 mounted plastic connectors with blue anti-kink sleeves					
	20,000 bending cycles guaranteed!* 4.0 m	12098	12 x 1.5 + 3 x 2.5	Hytrel	<b>8KA 007 648-041</b>	1
	20,000 reversed bending operations guaranteed!* 3.5 m	12098	12 x 1.5 + 3 x 2.5	Polyurethane	<b>8KA 007 648-051</b>	1
	20,000 reversed bending operations guaranteed!* 3.5 m	12098	12 x 1.5 + 3 x 2.5	Polyurethane	<b>8KA 007 648-091</b>	1
<b>HELICAL CONNECTION CABLE</b>						
 	12/24 V "N", 7-pin					
	Standard version for German road traffic regulation functions, with 2 screwed-on metal connectors	1185 „N“, 1724, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 007 648-061</b>	1
	Cable diameter: 8.8 mm filament outer diameter: 48.0 mm					

\* In accordance with ISO 4141, at least 10,000 bending cycles are required.

### 3.1 Helical cables

Description	Length in m	Part number	Order unit in pieces
<b>ADAPTER CABLE</b>			
	<p>From 15-pin socket (ISO 12098) on towing vehicle to two 7-pin sockets (ISO 1185 + ISO 3731) on trailer, with 15-pin plastic connector and molded-on 7-pin plastic connectors 100% waterproof! (Protection class: IPX9K for the cable outlet)</p>	<p>Max. 3.5</p>	<p><b>8JA 005 952-101</b></p> <p>1</p>
 <p>Cable diameter: 8.8 mm Coil outer diameter: 48.0 mm Jacket: Polyurethane</p> <p>In folding box</p>	<p>Max. 4.0</p>	<p><b>8JA 005 952-081</b></p>	<p>1</p>
	<p>From 15-pin socket (ISO 12098) on towing vehicle to two 7-pin sockets (ISO 1185 + ISO 3731) on trailer, with 15-pin plastic connector and 7-pin metal connectors</p>	<p>Max. 3.5</p>	<p><b>8JA 005 952-111</b></p> <p>1</p>
 <p>Cable diameter: 8.7 mm Filament outer diameter: 50.0 mm Jacket: Polyurethane</p> <p>In folding box</p>	<p>Max. 4.0</p>	<p><b>8JA 005 952-041</b></p>	<p>1</p>

## 3.2 Cables (running meter)



### Application

Wherever in a vehicle electrical current has to flow from A to B you will need cables. Their precise design, size, material and implementation will depend on the voltage, current and frequency required and the environmental conditions to which the cable will be exposed.

### Range advantages

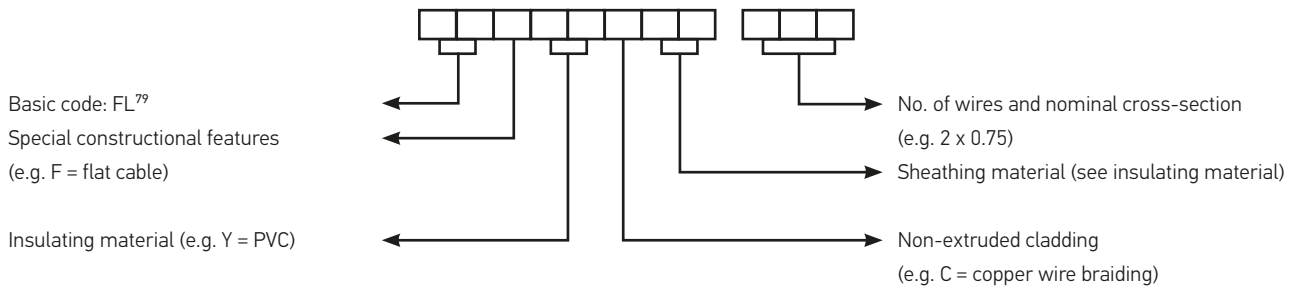
- Vehicle cables compliant with ISO 6722
- Wide assortment of products for numerous applications



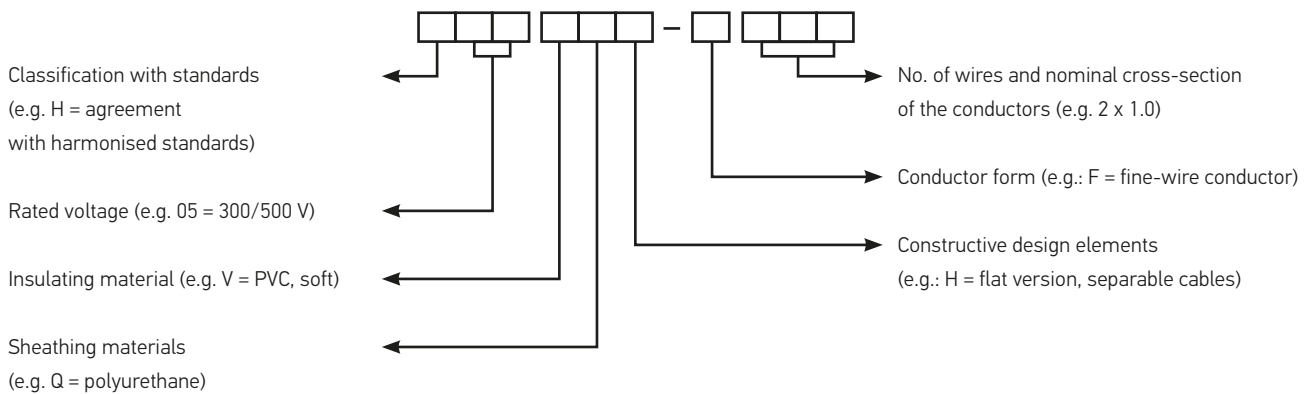
## 3.2 Cables (running meter)

### Codes for vehicle cables

Representation of the code structure compliant with DIN 7672278:





1st block (basic code)		2nd block (constructional features)		3rd block (insulating material and sheathing material)	
FL	Vehicle cable	F	Flat cable	Y	PVC
		R	Reduced wall thickness	X	PVC-X (X = cross-linked)
		Z	Multi-wire separable cable	11Y	PUR



1st block (standard assignment)		2nd block (rated voltage)		3rd block (insulating material and sheathing material)		4th block (type of conductor)	
H	harmonised	1	100/100 V	V	PVC, soft	F	Fine-wire conductor of a flexible cable (flexibility in accordance with EN 60228 class 5)
A	non-harmonised, national	3	300/300 V	R	Ethylene propylene rubber or equivalent synthetic elastomer		
		5	300/500 V				
		7	450/750 V	N2	Special polychloroprene rubber mixture for jackets of weld cables i.a.w. HD 22.6	D	Fine-wire conductor for weld cables i.a.w. HD 22.6

### 3.2.1 Single-wire PVC vehicle cables

Description	Cable cross-section in mm <sup>2</sup>	Wire colour	Metres per coil	Part number	Metres per ring	Part number
						
<b>SINGLE-WIRE PVC VEHICLE CABLES</b>						
FLY	0.75	■	100	8KL 054 001-002	50	8KL 712 929-001
		□	100	8KL 054 002-002	50	8KL 712 930-001
		■	100	8KL 054 003-002	50	8KL 712 931-001
		■			50	8KL 712 929-011
		■	100	8KL 054 004-002	50	8KL 712 932-001
		■	100	8KL 054 005-002	50	8KL 712 933-001
		■	100	8KL 054 006-002	50	8KL 712 934-001
		■	100	8KL 054 007-002	50	8KL 712 935-001
		■	100	8KL 054 008-002	50	8KL 712 936-001
		□	100	8KL 054 009-002	50	8KL 712 937-001
FLY	1.0	■	100	8KL 054 010-002	50	8KL 712 938-001
		■	100	8KL 054 011-002	50	8KL 712 939-001
		■	100	8KL 054 012-002	50	8KL 712 940-001
		■	100	8KL 054 013-002	50	8KL 712 941-001
		■	100	8KL 054 014-002	50	8KL 712 942-001
		■	100	8KL 712 943-002	50	8KL 712 943-001
		□	100	8KL 712 944-002	50	8KL 712 944-001
		■	100	8KL 712 945-002	50	8KL 712 945-001
FLY	1.5	■	100	8KL 712 946-002	50	8KL 712 946-001
		■	100	8KL 712 947-002	50	8KL 712 947-001
		■	100	8KL 712 948-002	50	8KL 712 948-001
		■	100	8KL 712 949-002	50	8KL 712 949-001
		■	100	8KL 712 950-002	50	8KL 712 950-001
		■/■			50	8KL 717 460-001
		■/■			50	8KL 717 461-001
		■/□			50	8KL 717 462-001
		■/■			50	8KL 717 463-001
		■/■			50	8KL 717 464-001
		■	50	8KL 712 952-002	50	8KL 712 952-001
		□	50	8KL 712 953-002	50	8KL 712 953-001
		■	50	8KL 712 954-002		
		■	50	8KL 712 955-002	50	8KL 712 955-001
■	50	8KL 712 956-002				
■	50	8KL 712 957-002	50	8KL 712 957-001		
■	50	8KL 712 958-002	50	8KL 712 958-001		
■	50	8KL 712 959-002	50	8KL 712 959-001		
FLY	4.0	■	25	8KL 712 960-002	50	8KL 712 960-001
		■	25	8KL 712 962-002	50	8KL 712 962-001
FLY	6.0	■			50	8KL 712 964-001
		■			50	8KL 712 965-001
		■			50	8KL 712 966-001
FLY	10.0	■			50	8KL 712 967-001
		■			50	8KL 712 968-001
FLY	16.0	■			50	8KL 712 969-001
FLY	25.0	■			50	8KL 712 970-001
FLY	35.0	■			50	8KL 712 971-001
FLY	50.0	■			50	8KL 712 972-001




### 3.2.2 Multi-wire PVC vehicle cables

Description	Cable cross-section in mm <sup>2</sup>	Wire colour	Jacket colour	Metres per coil	Part number	Metres per ring	Part number
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#### MULTI-WIRE PVC VEHICLE CABLES

	FLYY	1.0 x 1.5	■	■	50	8KL 712 975-002	50	8KL 712 975-001
		1.0 x 2.5	■	■			50	8KL 712 976-001
		2.0 x 0.75	2x ■	■	50	8KL 735 190-002	100	8KL 735 190-001
		2.0 x 0.75	■/■	■			200	8KL 712 986-001
		2.0 x 1.0	■/■	■			50	8KL 712 991-001
		2.0 x 1.5	2x ■	■	25	8KL 712 977-002	50	8KL 712 977-001
		2.0 x 1.5	■/■	■			50	8KL 712 992-001
		2.0 x 2.5	2x ■	■			50	8KL 712 978-001
		3.0 x 1.5	■/■/■	■			50	8KL 712 993-001



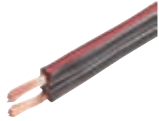

Description	Cable cross-section in mm <sup>2</sup>	Wire colour	Jacket colour	Metres per ring	Part number
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#### MULTI-WIRE PVC VEHICLE CABLES

	FLYY	4.0 x 0.75	■/□/■/■	■	200	8KL 712 987-001
		4.0 x 0.75	■/□/■/■	■	200	8KL 712 988-001
		4.0 x 1.0	■/□/■/■	■	50	8KL 712 994-001
		4.0 x 1.5	■/□/■/■	■	50	8KL 712 995-001
		5.0 x 1.0	■/■/□/■/■	■	50	8KL 712 996-001
		5.0 x 1.5	■/■/□/■/■	■	50	8KL 715 434-001
		6.0 x 0.75	■/■/□/■/■/■	■	200	8KL 712 989-001
		7.0 x 0.75	■/■/□/■/■/■/■	■	200	8KL 712 990-001
		7.0 x 1.0	■/■/□/■/■/■/■	■	50	8KL 715 435-001
		7.0 x 1.5	■/■/□/■/■/■/■	■	50	8KL 712 997-001
		8.0 x 0.75	■/■/□/■/■/■/■/■	■	100	8KL 198 465-001
		8.0 x 1.5	■/■/□/■/■/■/■/■	■	50	8KL 713 735-001
		6.0 x 1.5 + 1.0 x 2.5	(1.5) ■/■/□/■/■/■/■/■/ (2.5) □	■	50	8KL 199 936-001
		7.0 x 1.5 + 5.0 x 2.5	(1.5) ■/■/□/■/■/■/■/■/ (2.5) □/■/□/■/■/■/■/■/■	■	50	8KL 199 937-001
		9.0 x 1.5 + 4.0 x 2.5	(1.5) 7x ■/■/□/■/■/■/■/ (2.5) 2x ■/■/■/■	■	25	8KL 719 852-001
		12.0 x 1.5 + 3.0 x 2.5	(1.5) ■/■/□/■/■/■/■/■/■/■/ □/■/□/■/■/■/■/■/■/ (2.5) 3x ■/■/□/■/■	■	50	8KL 742 810-001



### 3.2.3 PVC flat cables

Description	Cable cross-section in mm <sup>2</sup>	Wire colour	Sheath colour	Metres per coil	Part number	Metres per ring	Part number
 							
<b>FLAT CONDUCTOR FOR LOUDSPEAKER AND STEREOS</b>							
	XYFAZ	2.0 x 0.5	■/■			100	8KL 054 017-001
	XYFAZ	2.0 x 0.75	■/■-■/■		100	8KL 712 980-002	8KL 712 980-001
	XYFAZ	2.0 x 0.75	■/■		100	8KL 712 980-032	
	XYFAZ	2.0 x 1.5	■/■-■			50	8KL 712 981-001
<b>VEHICLE FLAT CONDUCTOR</b>							
	FLFYY	2.0 x 0.75	■/■	■		50	8KL 177 729-002
	FLFYY	2.0 x 1.5	■/■	■		50	8KL 177 729-012
	FLFYY	2.0 x 1.5	■/□	■		50	8KL 177 729-112
	FLFYY	2.0 x 2.5	■/■	■		50	8KL 177 729-022

### 3.2.4 Cables

Description	Cable cross-section in mm <sup>2</sup>	Wire colour	Jacket colour	Metres per ring	Part number	
						
<b>RUBBER ELECTRIC CABLE</b>						
	H05 RR-F	2.0 x 0.75	■/■	■	100	8KL 713 740-042
	H05 RR-F	2.0 x 1.0	■/■	■	50	8KL 713 740-032
	H05 RR-F	2.0 x 1.5	■/■	■	50	8KL 713 740-001
	A05 RR-F	3.0 x 0.75	■/■/■	■	50	8KL 713 737-001
	A05 RR-F	3.0 x 1.0	■/■/■	■	50	8KL 713 741-001
	A05 RR-F	3.0 x 1.5	■/■/■	■	50	8KL 713 742-001
	05 RR-F	4.0 x 1.5	■/■/□/■/■/■	■	50	8KL 713 744-001
	05 RR-F	5.0 x 1.5	■/■/□/■/■/■	■	50	8KL 715 436-001
	05 RR-F	7.0 x 1.5	■/■/■/□/■/■/■/■	■	50	8KL 715 437-001

### 3.2.5 Weld cables

Description	Cable cross-section in mm <sup>2</sup>	Wire colour	Jacket colour	Metres per ring	Part number	
						
<b>SPECIAL WELD CABLES FOR CONNECTING MECHANISED AND HAND-HELD WELDERS</b>						
	H01N2-D	16.0	■	■	50	8KL 713 750-001
	H01N2-D	25.0	■	■	50	8KL 713 751-001
	H01N2-D	35.0	■	■	50	8KL 713 752-001
	H01N2-D	50.0	■	■	50	8KL 713 753-001
	H01N2-D	70.0	■	■	25	8KL 713 753-011
	H01N2-D	95.0	■	■	25	8KL 713 753-021

## 4. Cable connectors

### 4.1 Crimp connector

#### 4.1.1 Uninsulated crimp connectors



#### Application

Uninsulated crimp connectors are typically used in splash water-protected areas of a vehicle and serve primarily as detachable system elements for electrical and mechanical connections/branches of cables. As the years have gone by, a number of different contact systems have become established, depending on the application area and vehicle age.

#### Range advantages

- OEM quality
- Wide assortment of products for numerous applications


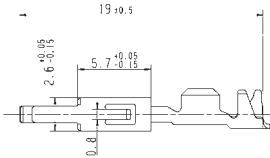
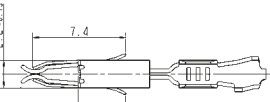
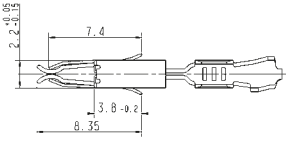

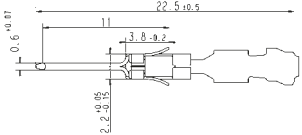
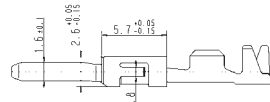
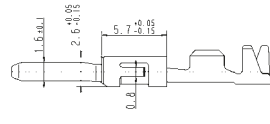
## 4.1.1 Uninsulated crimp connectors

### Materials and surface finishes





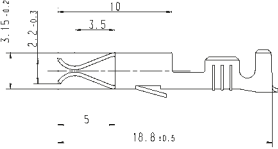
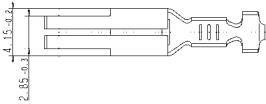

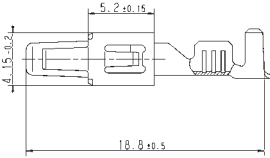
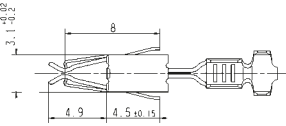
Short designation	Material	Corrosion resistance (in air)	Electrical conductivity
<b>MATERIAL OVERVIEW</b>			
CuZn	Brass	good, better with surface treatment	medium
CuSn	Tin bronze	good, better with surface treatment	low
CuFe	Copper-iron	good, better with surface treatment	good
CuNi	Copper-nickel	good	low

Short designation	Material	Remark
<b>SURFACE TREATMENT</b>		
bk	(bright)	no surface coating, no special protection
Sn	Tin	corrosion protection, easy to solder, provides electrical contact
frSn	Galvanised tin-plated	lead-free corrosion protection, easy to solder, provides electrical contact
Ag	Silver	high conductivity, provides good electrical contact
Au	Gold	resistant to tarnishing, best contact making at low current

## 4.1.1 Uninsulated crimp connectors

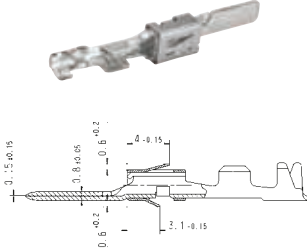
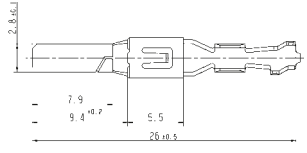
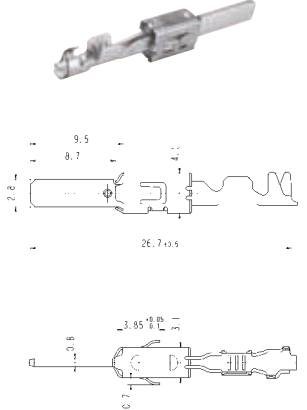


	Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>MICRO TIMER II</b>							
 	Flat receptacle	0.5 - 1.0	1.6 x 0.8	CuFe/Sn	B 192	<b>8KW 863 933-003</b>	50
 	For individual conductor seal	0.5 - 1.0	1.6 x 0.8	CuFe/Sn	B 193	<b>8KW 863 933-013</b>	50
 	Blade terminals	0.5 - 1.0	1.6 x 0.8	CuFe/Sn	B 190	<b>8KW 863 932-003</b>	50
 	For individual conductor seal	0.5 - 1.0	1.6 x 0.8	CuSn/Sn	B 191	<b>8KW 863 932-013</b>	50

## 4.1.1 Uninsulated crimp connectors


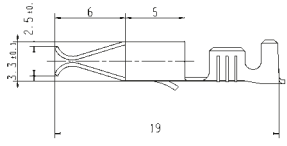
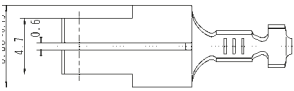

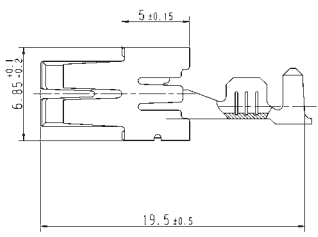
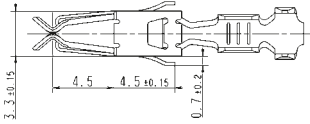
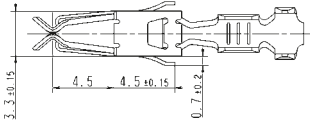

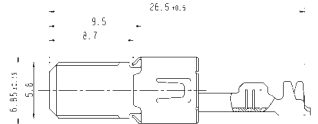
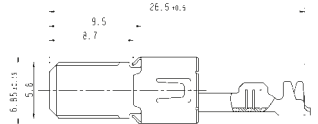
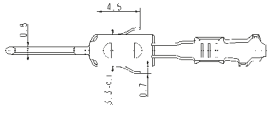
	Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>MICRO TIMER II</b>							
	Strand insulation	0.35 - 0.5		Silicone red		<b>9GD 863 952-022</b>	50
	Strand insulation	0.75		Silicone grey	B 201	<b>9GD 863 952-012</b>	50
	Dummy plug			Silicone white	B 202	<b>9GD 863 952-002</b>	50
<b>JUNIOR TIMER</b>							
	Flat receptacle with a catch spring	0.5 - 1.0	2.8 x 0.8	CuZn/Sn	B 175	<b>8KW 863 926-003</b>	50
		1.0 - 2.5	2.8 x 0.8	CuZn/Sn	B 176	<b>8KW 863 926-013</b>	50
							
<b>JUNIOR POWER TIMER</b>							
	Flat receptacle	0.5 - 1.0	2.8 x 0.8	CuSn/Sn	B 194	<b>8KW 863 934-003</b>	50
	For individual conductor seal	0.5 - 1.0	2.8 x 0.8	CuSn/Sn	B 195	<b>8KW 863 934-013</b>	50
	Flat receptacle	1.0 - 2.5	2.8 x 0.8	CuSn/Sn	B 216	<b>8KW 863 934-023</b>	50






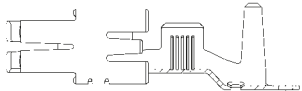
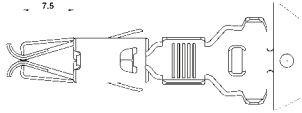


## 4.1.1 Uninsulated crimp connectors

	Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>JUNIOR POWER TIMER</b>							
	Blade terminal with asymmetrical steel overspring	0.5 - 1.0	2.8 x 0.8	CuSn/Sn	B 189	<b>8KW 863 931-003</b>	50
	With symmetrical steel overspring	0.5 - 1.0	2.8 x 0.8	CuSn/Sn	B 187	<b>8KW 863 930-003</b>	50
	With symmetrical steel overspring for strand insulation	0.5 - 1.0	2.8 x 0.8	CuSn/Sn	B 188	<b>8KW 863 930-013</b>	50
	Strand insulation	1.2 - 2.1 mm		Silicone blue	B 204	<b>9GD 863 953-012</b>	50
	Dummy plug			Silicone natural	B 203	<b>9GD 863 953-002</b>	50

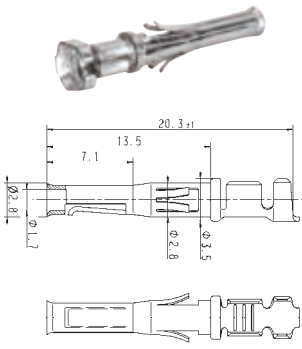
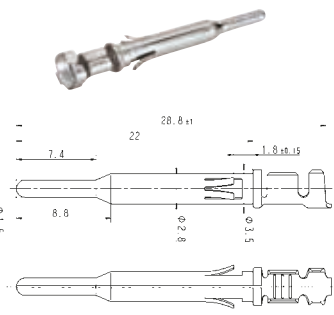
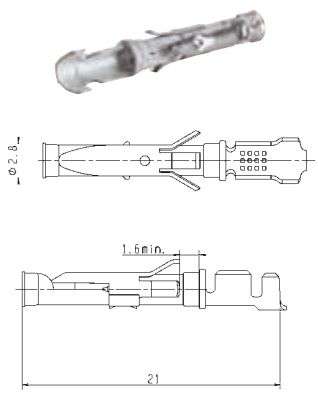
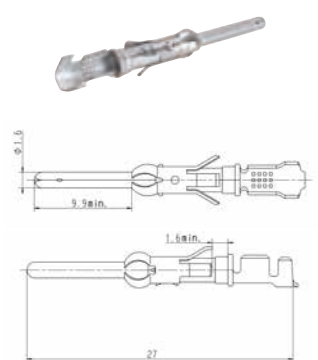
## 4.1.1 Uninsulated crimp connectors

	Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>STANDARD TIMER</b>							
	Flat receptacle with a catch spring	0.5 - 1.0	4.8/5.8/ 6.8 x 0.8	CuZn/Sn	B 173	<b>8KW 863 925-003</b>	50
		1.0 - 2.5	4.8/5.8/ 6.8 x 0.8	CuSn/Sn	B 174	<b>8KW 863 925-013</b>	50
							
<b>STANDARD POWER TIMER</b>							
	Flat receptacle	0.5 - 1.0	4.8/5.8/ 6.8 x 0.8	CuFe/Sn	B 177	<b>8KW 863 927-003</b>	50
		1.5 - 2.5	4.8/5.8/ 6.8 x 0.8	CuFe/Sn	B 178	<b>8KW 863 927-013</b>	50
	2.5 - 4.0	4.8/5.8/ 6.8 x 0.8	CuFe/Sn	B 179	<b>8KW 863 927-023</b>	50	
	For individual conductor seal	1.5 - 2.5	4.8/5.8/ 6.8 x 0.8	CuFe/Sn	B 180	<b>8KW 863 927-033</b>	50
	Blade terminal with symmetrical steel overspring	0.5 - 1	5.8 x 0.8	CuFe/Sn	B 181	<b>8KW 863 928-003</b>	50
		1.5 - 2.5	5.8 x 0.8	CuFe/Sn	B 182	<b>8KW 863 928-013</b>	50
		2.5 - 4	5.8 x 0.8	CuFe/Sn	B 183	<b>8KW 863 928-023</b>	50
	With symmetrical steel overspring for strand insulation	1.5 - 2.5	5.8 x 0.8	CuFe/Sn	B 184	<b>8KW 863 928-033</b>	50

### 4.1.1 Uninsulated crimp connectors

	Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>STANDARD POWER TIMER</b>							
	Strand insulation	2.2 - 3.0		Silicone white	B 205	<b>9GD 863 954-012</b>	50
	Dummy plug			Silicone black	B 206	<b>9GD 863 954-002</b>	50
<b>MAXI POWER TIMER</b>							
		2.5 - 4.0	9.5 x 1.2	CuNi/Sn	B 198	<b>8KW 863 951-003</b>	10
	Flat receptacle for strand insulation	4.0 - 6.0	9.5 x 1.2	CuNi/Sn	B 199	<b>8KW 863 951-013</b>	10
		6.0 - 10.0	9.5 x 1.2	CuNi/Sn	B 200	<b>8KW 863 951-023</b>	10
<b>MAXI POWER TIMER</b>							
	Strand insulation	4.7 - 5.3 mm		Silicone blue	B 208	<b>9GD 863 961-012</b>	10
	Strand insulation	5.8 - 6.6 mm		Silicone light blue	B 209	<b>9GD 863 961-022</b>	10

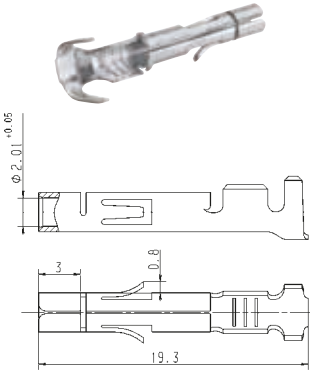
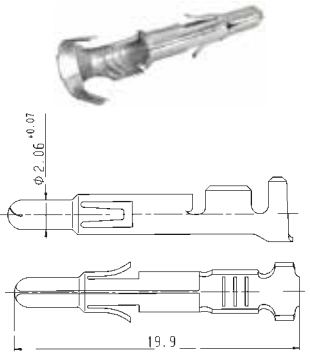
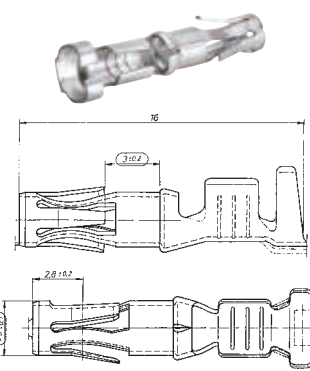
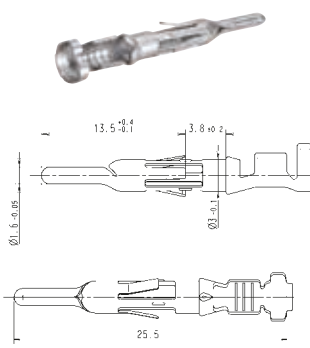
### 4.1.1 Uninsulated crimp connectors

Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>MALE CONNECTOR-TYPE CONNECTION CIC</b>						
 <p>Female contact</p>	0.5 - 1.5	1.6	CuZn/Sn	B 159	<b>8KW 863 918-003</b>	50
	1.0- 2.5	1.6	CuSn/Sn	B 160	<b>8KW 863 918-013</b>	50
 <p>Male pin contact</p>	0.5 - 1.5	1.6	CuZn/Sn	B 161	<b>8KW 863 919-003</b>	50
	1.0- 2.5	1.6	CuZn/Sn	B 162	<b>8KW 863 919-013</b>	50
<b>PLUG CONNECTION, TYPE III FOR M SERIES</b>						
 <p>Female contact</p>	0.75 - 1.5	1.6	CuZn/Sn	B 196	<b>8KW 863 945-003</b>	50
	0.2 - 0.56	1.6	CuSn/Sn	B 197	<b>8KW 863 945-013</b>	50
 <p>Male pin contact</p>	0.75 - 1.5	1.6	CuZn/Sn	B 185	<b>8KW 863 929-003</b>	50
	0.2 - 0.56	1.6	CuSn/Sn	B 186	<b>8KW 863 929-013</b>	50


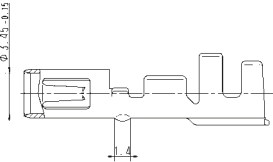
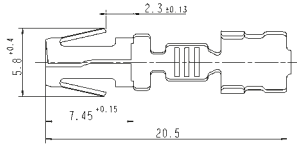

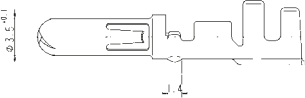
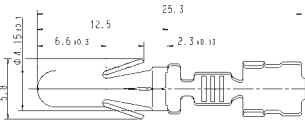

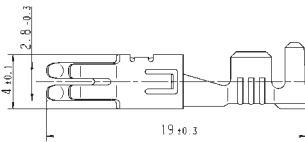
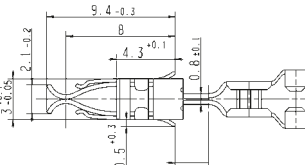
## 4.1.1 Uninsulated crimp connectors

	Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>MALE CONNECTOR-TYPE CONNECTION CI 2</b>							
	Female contact	0.5 - 1.0	1.6	CuSn/Sn	B 157	<b>8KW 863 917-013</b>	50
	Male pin contact	0.5 - 1.5	1.6	CuZn/Sn	B 171	<b>8KW 863 924-003</b>	50
<b>PLUG CONNECTION, MATE N LOCK</b>							
	Female contact	0.5 - 1.0	2.1	CuZn/Sn	B 155	<b>8KW 863 916-003</b>	50
	Male pin contact	0.5 - 1.0	2.1	CuZn/Sn	B 207	<b>8KW 863 915-013</b>	50

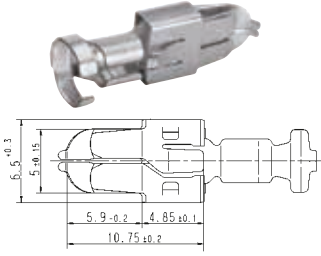
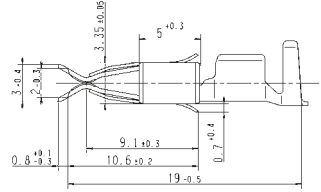
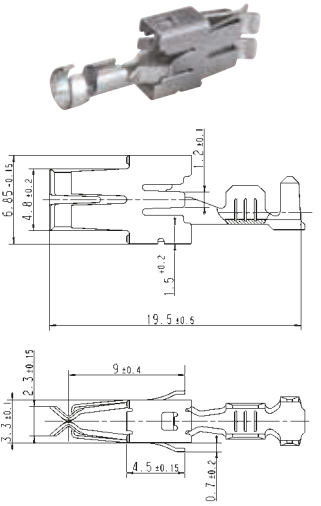
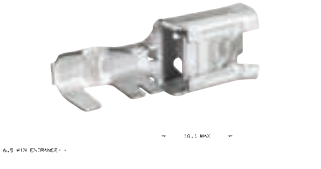
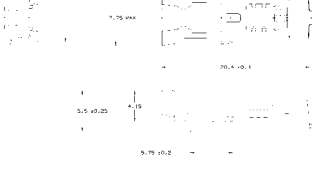
### 4.1.1 Uninsulated crimp connectors

Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>PLUG CONNECTION, UNIVERSAL, MATE N LOCK</b>						
 <p>Female contact</p>	0.5 - 2.1	2.1	CuSn/Sn	B 169	<b>8KW 863 923-003</b>	50
	1.5 - 2.5	2.1	CuZn/Sn	B 170	<b>8KW 863 923-013</b>	50
 <p>Male pin contact</p>	0.5 - 1.5	2.1	CuZn/Sn	B 167	<b>8KW 863 922-003</b>	50
	1.5 - 2.5	2.1	CuZn/Sn	B 168	<b>8KW 863 922-013</b>	50
<b>CABLE LUG FOR CONI ROUND MALE CONNECTOR SYSTEM</b>						
 <p>Sleeve</p>	0.75 - 1.5	Ø 1.6	CuZn/frSn	B 70	<b>8KW 054 946-003</b>	50
	1.5 - 2.5	Ø 1.6	CuZn/frSn	B 116	<b>8KW 744 864-003</b>	50
 <p>Male connector</p>	0.75 - 1.5	Ø 1.6	CuSn/frSn	B 71	<b>8KW 054 945-003</b>	50
	1.5 - 2.5	Ø 1.6	CuZn/frSn	B 117	<b>8KW 744 866-003</b>	50

### 4.1.1 Uninsulated crimp connectors

Description		Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>RAM ROUND MALE CONNECTOR SYSTEM</b>							
	Sleeve	1.5 - 2.5	Ø 3.5	CuZn/frSn	B 72	<b>8KW 054 948-003</b>	50
							
		4.0 - 6.0	Ø 3.5	CuSn/frSn	B 215	<b>8KW 054 948-013</b>	50
	Male connector	1.5 - 2.5	Ø 3.5	CuSn/frSn	B 73	<b>8KW 054 947-003</b>	50
							
		4.0 - 6.0	Ø 3.5	CuSn/frSn	B 214	<b>8KW 054 947-013</b>	50
<b>MDK5 FLAT RECEPTACLE</b>							
	Sleeve	0.5 - 1.0	2.8/4.8 x 0.8	CuSn/frSn	B 76	<b>8KW 054 942-003</b>	50
							
		1.5 - 2.5	2.8/4.8 x 0.8	CuSn/frSn	B 77	<b>8KW 054 941-003</b>	50

### 4.1.1 Uninsulated crimp connectors

Description	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>DFK 2 FLAT RECEPTACLE</b>						
 <p>Sleeve</p>	1.5 - 2.5	4.8 6.3 x 0.8	CuSn/frSn	B 78	<b>8KW 054 944-003</b>	50
 <p>Sleeve</p>	2.5 - 4.0	4.8 6.3 x 0.8	CuSn/frSn	B 79	<b>8KW 054 943-003</b>	50
<b>AFK 4.8 FLAT RECEPTACLE (CLAW ROTATED 90° TO DFK)</b>						
 <p>Sleeve</p>	0.5-1.0	4.8 6.3 x 0.8	CuFe/frSn	B 217	<b>8KW 172 971-002</b>	50
<b>METRI PACK FLAT RECEPTACLE</b>						
 <p>Sleeve</p>	1.0 - 2.0	6.3 x 0.8	CuZn/Sn	B 241	<b>8KW 863 904-003</b>	50
 <p>Sleeve</p>	2.5 - 4.0	6.3 x 0.8	CuZn/Sn	B 242	<b>8KW 863 904-013</b>	50









## 4.1.1 Uninsulated crimp connectors

	Cable cross section in mm <sup>2</sup>	Eyelet hole Ø mm	Nominal size acc. to DIN	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>SOLDER-FREE TUBE CABLE LUGS, DIN 46234</b>							
> 1.0 - 2.5	3.2 (M3)	3 - 2.5	100	B 118	<b>8KW 744 708-003</b>	100	
	4.3 (M4)	4 - 2.5	100	B 119	<b>8KW 744 709-003</b>	100	
	5.3 (M5)	5 - 2.5	100	B 120	<b>8KW 744 710-003</b>	100	
	6.5 (M6)	6 - 2.5	100	B 121	<b>8KW 744 711-003</b>	100	
> 2.5 - 6.0	4.3 (M4)	4 - 6	100	B 122	<b>8KW 744 712-003</b>	100	
	5.3 (M5)	5 - 6	100	B 123	<b>8KW 744 713-003</b>	100	
	6.5 (M6)	6 - 6	100	B 124	<b>8KW 744 714-003</b>	100	
	8.4 (M8)	8 - 6	50	B 125	<b>8KW 744 715-003</b>	50	
> 6.0 - 10.0	5.3 (M5)	5 - 10	50	B 126	<b>8KW 744 716-003</b>	50	
	6.5 (M6)	6 - 10	50	B 127	<b>8KW 744 717-003</b>	50	
	8.4 (M8)	8 - 10	50	B 128	<b>8KW 744 718-003</b>	50	
	10.5 (M10)	10 - 10	50	B 129	<b>8KW 744 719-003</b>	50	
> 10.0 - 16.0	5.3 (M5)	5 - 16	50	B 130	<b>8KW 744 720-003</b>	50	
	6.5 (M6)	6 - 16	50	B 131	<b>8KW 744 721-003</b>	50	
	8.4 (M8)	8 - 16	50	B 132	<b>8KW 744 722-003</b>	50	
	10.5 (M10)	10 - 16	50	B 133	<b>8KW 744 723-003</b>	50	
> 16.0 - 25.0	6.5 (M6)	6 - 25	25	B 134	<b>8KW 744 724-003</b>	25	
	8.4 (M8)	8 - 25	25	B 135	<b>8KW 744 725-003</b>	25	
	10.5 (M10)	10 - 25	25	B 136	<b>8KW 744 726-003</b>	25	
> 25.0 - 35.0	6.5 (M6)	6 - 35	25	B 137	<b>8KW 744 727-003</b>	25	
	8.4 (M8)	8 - 35	25	B 138	<b>8KW 744 728-003</b>	25	
	10.5 (M10)	10 - 35	25	B 139	<b>8KW 744 729-003</b>	25	
> 35.0 - 50.0	8.4 (M8)	8 - 50	10	B 140	<b>8KW 744 730-003</b>	10	
	10.5 (M10)	10 - 50	10	B 141	<b>8KW 744 731-003</b>	10	
	13.0 (M12)	12 - 50	10	B 142	<b>8KW 744 732-003</b>	10	
> 50.0 - 70.0	8.4 (M8)	8 - 70	10	B 148	<b>8KW 746 778-003</b>	10	
	10.5 (M10)	10 - 70	10	B 149	<b>8KW 746 779-003</b>	10	
	13 (M12)	12 - 70	10	B 153	<b>8KW 746 783-003</b>	10	
> 70.0 - 95.0	10.5 (M10)	10 - 95	2	B 150	<b>8KW 746 780-003</b>	2	
	13 (M12)	12 - 95	2	B 151	<b>8KW 746 781-003</b>	2	
> 95.0 - 120.0	13 (M12)	12 - 120	2	B 152	<b>8KW 746 782-003</b>	2	







## 4.1.1 Uninsulated crimp connectors


	Cable cross section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>FLAT RECEPTACLE</b>							
	0.5 - 1.0	4.8 x 0.8	CuZn/bk	100	B 94	<b>8KW 744 828-003</b>	100
	0.75 - 1.5	6.3 x 0.8	CuZn/bk	100	B 51	<b>8KW 043 629-013</b>	100
	1.5 - 2.5	6.3 x 0.8	CuZn/Ag	100	B 92	<b>8KW 744 825-003</b>	100
	1.5 - 2.5	6.3 x 0.8	CuZn/bk	100	B 52	<b>8KW 043 630-013</b>	100
	1.5 - 2.5	6.3 x 0.8	CuZn/bk	1500		<b>8KW 043 630-014</b>	1,500
4.0 - 6.0	9.5 x 1.2	CuZn/bk	50	B 95	<b>8KW 744 787-003</b>	50	
	0.5 - 1.5	6.3 x 0.8	CuSn/Sn	100	B 93	<b>8KW 744 827-003</b>	100

	Cable cross section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>FLAT RECEPTACLE, WITH LOCK</b>						
	0.5 - 1.0	2.8 x 0.8	CuSn/Sn	B 100	<b>8KW 744 817-003</b>	100
		4.8 x 0.8	CuZn/Sn	B 64	<b>8KW 733 815-003</b>	100
		6.3 x 0.8	CuZn/bk	B 103	<b>8KW 744 819-003</b>	100
	1.5 - 2.5	6.3 x 0.8	CuZn/Ag	B 243	<b>8KW 744 882-003</b>	100
		6.3 x 0.8	CuZn/Sn	B 54	<b>8KW 701 235-033</b>	100
		6.3 x 0.8	CuZn/Sn		<b>8KW 701 235-034</b>	1,500
	6.3 x 0.8	CuZn/Ag	B 104	<b>8KW 744 820-003</b>	100	
	Solder pin	6.3 x 0.8	CuSn/frSn		<b>8KW 719 874-007</b>	2,500
	1.5 - 2.5	6.3 x 0.8	CuSn/Ag	B 105	<b>8KW 744 821-003</b>	100
<b>BLADE TERMINALS</b>						
	0.5 - 1.0	2.8 x 0.8	CuZn/bk	B 85	<b>8KW 744 752-003</b>	100
	0.5 - 1.0	6.3 x 0.8	CuZn/Sn	B 56	<b>8KW 043 635-013</b>	100
	1.5 - 2.5	6.3 x 0.8	CuZn/bk	B 86	<b>8KW 744 823-003</b>	100

## 4.1.1 Uninsulated crimp connectors

	Cable cross section in mm <sup>2</sup>	Connector dimensions in mm	Material/surface finish	Short designation	Part number	Order unit in pieces
<b>BLADE TERMINAL, WITH LOCK</b>						
	0.5 - 1.0	2.8 x 0.8	CuZn/Sn	B 90	<b>8KW 744 834-003</b>	100
		6.3 x 0.8	CuZn/frSn	B 88	<b>8KW 744 832-003</b>	100
	1.5 - 2.5	6.3 x 0.8	CuZn/frSn	B 57	<b>8KW 048 056-033</b>	100
		6.3 x 0.8	CuZn/Ag	B 89	<b>8KW 744 833-003</b>	100
<b>PIGGY BACK SPADE CONNECTOR</b>						
	0.5 - 1.0	6.3 x 0.8	CuZn/bk	B 58	<b>8KW 701 671-003</b>	100
	1.5 - 2.5	6.3 x 0.8	CuZn/Sn	B 82	<b>8KW 744 885-003</b>	100
<b>MALE CONNECTOR DISTRIBUTOR, DOUBLE</b>						
		6.3 x 0.8	CuZn/bk	B 59	<b>8KW 043 636-003</b>	100
<b>MALE CONNECTOR DISTRIBUTOR, TRIPLE</b>						
		6.3 x 0.8	CuZn/Sn	B 60	<b>8KW 700 144-003</b>	50
<b>COUPLING 45°</b>						
		6.3 x 0.8 Ø 4.2	CuZn/Sn	B 213	<b>8KW 044 285-023</b>	100

## 4.1.1 Uninsulated crimp connectors

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, CRIMP CONNECTOR PRODUCT RANGE, UNINSULATED</b>		
 <p>Comprising: Different uninsulated connectors</p> <p>(quantity in reorder does not correspond with the number in the set; not all articles can be replenished)</p>	<b>8KW 009 255-801</b>	1

Description	Cable cross section in mm <sup>2</sup>	Male connector dimensions mm	Quantity in the assortment
<b>CONTENT, PRODUCT RANGE CASE UNINSULATED CRIMP CONNECTORS</b>			
Flat receptacle with locking tag	0.5 - 1.0	2.8 x 0.8	50
		4.8 x 0.8	50
		6.3 x 0.8	50
	1.5 - 2.5	6.3 x 0.8	50
Female spade connector with locking tag, claw across	1.5 - 2.5	6.3 x 0.8	20
Blade terminal with lock	0.5 - 1.0	2.8 x 0.8	50
		6.3 x 0.8	50
	1.5 - 2.5	6.3 x 0.8	50
		6.3 x 0.8	50
Flat receptacle	0.5 - 1.0	4.8 x 0.8	50
		6.3 x 0.8	50
Flat receptacle, transverse claw	0.5 - 1.5	6.3 x 0.8	20
Flat receptacle	1.5 - 2.5	6.3 x 0.8	50
		6.3 x 0.8	50
Blade terminals	4.0 - 6.0	9.5 x 1.2	50
Blade terminals	1.5 - 2.5	6.3 x 0.8	50
Male connector distributor, double		6.3 x 0.8	20
Male connector distributor, triple		6.3 x 0.8	20
Piggy back spade connector	1.5 - 2.5	6.3 x 0.8	20
Coupling, 2x		6.3 x 0.8	20
Male spade connector, 45°		6.3 x 0.8	20
Blade terminal, Ø 5.3 mm		6.3 x 0.8	20

Short designation	Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>		
B 100	<b>8KW 744 817-003</b>	100
B 64	<b>8KW 733 815-003</b>	100
B 103	<b>8KW 744 819-003</b>	100
B 54	<b>8KW 701 235-033</b>	100
B 105	<b>8KW 744 821-003</b>	100
B 90	<b>8KW 744 834-003</b>	100
B 88	<b>8KW 744 832-003</b>	100
B 57	<b>8KW 048 056-033</b>	100
B 94	<b>8KW 744 828-003</b>	100
B 51	<b>8KW 043 629-013</b>	100
B 93	<b>8KW 744 827-003</b>	100
B 52	<b>8KW 043 630-013</b>	100
B 95	<b>8KW 744 787-003</b>	50
B 86	<b>8KW 744 823-003</b>	100
B 59	<b>8KW 043 636-003</b>	100
B 60	<b>8KW 700 144-003</b>	50
B 82	<b>8KW 744 885-003</b>	100

#### 4.1.2 Insulated crimp connectors with shrink-on insulation (Duraseal)



##### Application

The insulated "Duraseal" crimp connectors have a shrinkable nylon cap with adhesive that can be used to make a waterproof connection between the cable and contact. To this end, the nylon cap is heated using a hot-air gun (or other heat source) to approx. 135 °C. At this temperature, the cap material encompasses the cable with fixed handle. Other insulation solutions (e.g. heat-shrinkable plastic tubing or insulating tape) are therefore not required.

Identification colour red:

Crimp connector for cable cross section 0.5 - 1 mm<sup>2</sup>

Identification colour blue:

Crimp connector for cable cross section 1.5 - 2.5 mm<sup>2</sup>










Identification colour yellow:

Crimp connector for cable cross section 4 - 6 mm<sup>2</sup>


##### Range advantages

- Cable connection and sealed insulation in a single integrated product
- Diverse product range with all common contact versions

## 4.1.2 Insulated crimp connectors with shrink-on insulation (Duraseal)

	Colour	Cable cross section in mm <sup>2</sup>	Connector dimensions in mm/eyelet hole	Insulation material	Short designation	Part number	Order unit in pieces
<b>FLAT RECEPTACLE, FULLY INSULATED</b>							
	■	0.5 - 1.0	2.8 x 0.5	Nylon	A 161	8KW 744 761-003	25
			4.8 x 0.5	Nylon	A 162	8KW 744 762-003	25
			6.3 x 0.8	Nylon	A 100	8KW 732 566-003	25
	■	1.5 - 2.5	6.3 x 0.8	Nylon	A 101	8KW 732 567-003	25
	■	4.0 - 6.0	6.3 x 0.8	Nylon	A 163	8KW 744 763-003	25
<b>BLADE TERMINALS</b>							
	■	0.5 - 1.0	6.3 x 0.8	Nylon	A 102	8KW 732 568-003	25
	■	1.5 - 2.5	6.3 x 0.8	Nylon	A 103	8KW 732 569-003	25
<b>RING CONNECTOR</b>							
	■	0.5 - 1.0	4.3 (M4)	Nylon	A 104	8KW 732 570-003	25
			5.3 (M5)	Nylon	A 106	8KW 732 572-003	25
	■	1.5 - 2.5	4.3 (M4)	Nylon	A 105	8KW 732 571-003	25
			5.3 (M5)	Nylon	A 107	8KW 732 573-003	25
			6.5 (M6)	Nylon	A 109	8KW 732 575-003	25
			8.4 (M8)	Nylon	A 111	8KW 732 577-003	25
			10.5 (M10)	Nylon	A 154	8KW 744 754-003	25
	■	4.0 - 6.0	5.3 (M5)	Nylon	A 108	8KW 732 574-003	25
			6.5 (M6)	Nylon	A 110	8KW 732 576-003	25
			8.4 (M8)	Nylon	A 112	8KW 732 578-003	25
			10.5 (M10)	Nylon	A 155	8KW 744 755-003	25
<b>FORK CONNECTOR</b>							
	■	1.5 - 2.5	4.3 (M4)	Nylon	A 157	8KW 744 757-003	25
			5.3 (M5)	Nylon	A 158	8KW 744 758-003	25
<b>MALE BULLET CONNECTOR</b>							
	■	0.5 - 1.0	Ø 4	Nylon	A 165	8KW 744 765-003	25
	■	1.5 - 2.5	Ø 5	Nylon	A 166	8KW 744 766-003	25
<b>ROUND RECEPTACLES, FULLY INSULATED</b>							
	■	0.5 - 1.0	Ø 4	Nylon	A 167	8KW 744 767-003	25
	■	1.5 - 2.5	Ø 5	Nylon	A 168	8KW 744 768-003	25
<b>INSULATING SPLICE</b>							
	■	0.5 - 1.0		Nylon	A 113	8KW 732 579-003	25
	■	1.5 - 2.5		Nylon	A 114	8KW 732 580-003	25
	■	4.0 - 6.0		Nylon	A 115	8KW 732 581-003	25

## 4.1.2 Insulated crimp connectors with shrink-on insulation (Duraseal)

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, CRIMP CONNECTOR PRODUCT RANGE (DURASEAL)</b>		
 <p>Comprising: Different Duraseal crimp connectors</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	<b>8KW 009 253-801</b>	1

Description	Cable cross section in mm <sup>2</sup>	Insertion width in mm/ eyelet hole	Quantity in the assortment
<b>CONTENTS OF ASSORTMENT CASE</b>			
<b>ASSORTMENT OF DURASEAL CRIMP CONNECTORS</b>			
Insulating splice	0.5 - 1.0		15
	1.5 - 2.5		15
	4.0 - 6.0		15
Flat receptacle	0.5 - 1.0	6.3 x 0.8	15
	1.5 - 2.5	6.3 x 0.8	15
Blade terminals	0.5 - 1.0	6.3 x 0.8	15
	1.5 - 2.5	6.3 x 0.8	15
Female bullet connector	1.5 - 2.5	Ø 5.0	15
Male bullet connector	1.5 - 2.5	Ø 5.0	15
Ring connector	1.5 - 2.5	M5	15
		M6	15
		M8	15
	4.0 - 6.0	M5	15
		M6	15
Fork connector	1.5 - 2.5	M4	15
		M5	15

Short designation	Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>		
A 113	<b>8KW 732 579-003</b>	25
A 114	<b>8KW 732 580-003</b>	25
A 115	<b>8KW 732 581-003</b>	25
A 100	<b>8KW 732 566-003</b>	25
A 101	<b>8KW 732 567-003</b>	25
A 102	<b>8KW 732 568-003</b>	25
A 103	<b>8KW 732 569-003</b>	25
A 168	<b>8KW 744 768-003</b>	25
A 166	<b>8KW 744 766-003</b>	25
A 107	<b>8KW 732 573-003</b>	25
A 109	<b>8KW 732 575-003</b>	25
A 111	<b>8KW 732 577-003</b>	25
A 108	<b>8KW 732 574-003</b>	25
A 110	<b>8KW 732 576-003</b>	25
A 157	<b>8KW 744 757-003</b>	25
A 158	<b>8KW 744 758-003</b>	25

### 4.1.3 Insulated crimp connectors



#### Application

Insulated crimp connectors are crimped using a corresponding tool at the colored end to create a safe, rigid contact to the cable. The insulation material comprises either PVC (max. temperature resistance of 80 °C) or nylon (max. 105 °C). The insulating sleeve has a special "easy-entry" funnel shape to ensure better guidance of the cable.

Identification colour red:

Crimp connector for cable cross section 0.5 - 1.0 mm<sup>2</sup>

Identification colour blue:

Crimp connector for cable cross section 1.5 - 2.5 mm<sup>2</sup>

Identification colour yellow:










Crimp connector for cable cross section 4.0 - 6.0 mm<sup>2</sup>

#### Range advantages










- Cable connection and insulation in a single integrated product
- Diverse product range with all common contact versions






### 4.1.3 Insulated crimp connectors

	Colour	Cable cross section in mm <sup>2</sup>	Connector dimensions in mm	Insulating material	Contents in pieces	Short designation	Part number	Order unit in pieces			
<b>FLAT RECEPTACLES</b>											
	■	0.5 - 1.0	2.8 x 0.5	PVC	10	A 01	8KW 705 393-812	1			
			2.8 x 0.5	PVC	100	A 50	8KW 705 393-003	100			
			4.8 x 0.5	PVC	100	A 51	8KW 705 392-003	100			
			6.3 x 0.8	PVC	15	A 03	8KW 044 036-812	1			
			6.3 x 0.8	PVC	100	A 52	8KW 044 036-003	100			
	■	1.5 - 2.5	6.3 x 0.8	PVC	1000		8KW 044 036-004	1000			
			4.8 x 0.5	PVC	100	A 136	8KW 744 697-003	100			
			4.8 x 0.8	PVC	100	A 137	8KW 744 698-003	100			
			6.3 x 0.8	PVC	15	A 04	8KW 044 022-822	1			
			6.3 x 0.8	PVC	100	A 53	8KW 044 022-003	100			
	■	4.0 - 6.0	6.3 x 0.8	PVC	1000		8KW 044 022-004	1000			
			6.3 x 0.8	PVC	50	A 55	8KW 044 024-003	50			
			6.3 x 0.8	PVC	50	A 54	8KW 044 023-003	50			
			6.3 x 0.8	PVC	1000		8KW 044 023-004	1000			
			9.5 x 1.2	PVC	50	A 56	8KW 700 142-003	50			
			<b>FLAT RECEPTACLES, FULLY INSULATED</b>								
	■	0.5 - 1.0	6.3 x 0.8	PVC	50	A 82	8KW 708 373-003	50			
			6.3 x 0.8	PVC	1000		8KW 708 373-004	1000			
			6.3 x 0.8	PVC	8	A 19	8KW 708 374-812	1			
	■	1.5 - 2.5	6.3 x 0.8	PVC	50	A 83	8KW 708 374-003	50			
			6.3 x 0.8	PVC	1000		8KW 708 374-004	1000			
			6.3 x 0.8	PVC	50	A 173	8KW 744 799-003	50			
	■	4.0 - 6.0	6.3 x 0.8	PVC	50	A 173	8KW 744 799-003	50			
			<b>BLADE TERMINALS</b>								
				■	0.5 - 1.0	2.8 x 0.8	PVC	100	A 138	8KW 744 699-003	100
6.3 x 0.8	PVC	100				A 59	8KW 702 796-003	100			
6.3 x 0.8	PVC	15				A 07	8KW 044 288-812	1			
6.3 x 0.8	PVC	100				A 60	8KW 044 288-003	100			
6.3 x 0.8	PVC	50				A 139	8KW 744 700-003	50			
	■	1.5 - 2.5	6.3 x 0.8	PVC	100	A 60	8KW 044 288-003	100			
			6.3 x 0.8	PVC	50	A 139	8KW 744 700-003	50			
			<b>BLADE TERMINALS, FULLY INSULATED</b>								
				■	0.5 - 1.5	6.3 x 0.8	PVC	50	A 140	8KW 744 703-003	50
						6.3 x 0.8	PVC	50	A 141	8KW 744 704-003	50
6.3 x 0.8	PVC	25				A 142	8KW 744 705-003	25			
	■	4.0 - 6.0	6.3 x 0.8	PVC	25	A 142	8KW 744 705-003	25			
			For 8KV 744 858-003 to 8KV 744 860-003 (page 130)								
			<b>PIGGY BACK SPADE CONNECTOR</b>								
	■	0.5 - 1.0	6.3 x 0.8	PVC	50	A 57	8KW 700 143-003	50			
			6.3 x 0.8	PVC	50	A 58	8KW 044 032-003	50			
<b>MALE BULLET CONNECTOR</b>											
	■	0.5 - 1.0	Ø 4.0	PVC	100	A 61	8KW 044 040-003	100			
			Ø 4.0	PVC	1000		8KW 044 040-004	1000			
			Ø 5.0	PVC	100	A 62	8KW 044 025-003	100			
			Ø 5.0	PVC	50	A 143	8KW 744 733-003	50			
<b>FEMALE BULLET CONNECTORS</b>											
	■	0.5 - 1.0	Ø 4.0	PVC	10	A 10	8KW 045 145-812	1			
			Ø 4.0	PVC	50	A 63	8KW 045 145-003	50			
			Ø 5.0	PVC	50	A 64	8KW 044 026-003	50			
			Ø 5.0	PVC	50	A 144	8KW 744 734-003	50			


### 4.1.3 Insulated crimp connectors


	Colour	Cable cross section in mm <sup>2</sup>	Eyelet in mm	Insulating material	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>RING CONNECTOR</b>								
	■	0.5 - 1.0	3.2 (M3)	PVC	100	A 65	8KW 044 275-003	100
			4.3 (M4)	PVC	100	A 67	8KW 044 276-003	100
			5.3 (M5)	PVC	100	A 69	8KW 044 291-003	100
			6.5 (M6)	PVC	100	A 116	8KW 744 772-003	100
			8.4 (M8)	PVC	50	A 117	8KW 744 773-003	50
	■	1.5 - 2.5	10.5 (M10)	PVC	50	A 118	8KW 744 774-003	50
			3.7	PVC	100	A 66	8KW 044 041-003	100
			4.3 (M4)	PVC	100	A 68	8KW 044 028-003	100
			5.3 (M5)	PVC	100	A 70	8KW 044 027-003	100
			6.5 (M6)	PVC	12	A 15	8KW 044 039-812	1
	■	4.0 - 6.0	6.5 (M6)	PVC	100	A 72	8KW 044 039-003	100
			8.4 (M8)	PVC	50	A 74	8KW 044 277-003	50
			10.5 (M10)	PVC	50	A 119	8KW 744 775-003	50
			4.3 (M4)	PVC	50	A 120	8KW 744 776-003	50
			5.3 (M5)	PVC	50	A 71	8KW 044 029-003	50
			6.5 (M6)	PVC	50	A 73	8KW 044 030-003	50
			8.4 (M8)	PVC	50	A 75	8KW 044 031-003	50
			10.5 (M10)	PVC	50	A 76	8KW 044 038-003	50
<b>OPEN CONNECTOR</b>								
	■	0.5 - 1.0	3.2 (M3)	PVC	100	A 121	8KW 744 777-003	100
			4.3 (M4)	PVC	100	A 122	8KW 744 778-003	100
			5.3 (M5)	PVC	100	A 123	8KW 744 779-003	100
			6.5 (M6)	PVC	100	A 124	8KW 744 780-003	100
	■	1.2 - 2.5	4.3 (M4)	PVC	100	A 125	8KW 744 782-003	100
		1.5 - 2.5	5.3 (M5)	PVC	50	A 77	8KW 044 282-003	50
	■	4.0 - 6.0	6.5 (M6)	PVC	100	A 126	8KW 744 783-003	100
			5.3 (M5)	PVC	50	A 127	8KW 744 784-003	50
			6.5 (M6)	PVC	50	A 128	8KW 744 785-003	50
	■	1.5 - 2.5	8.4 (M8)	PVC	50	A 129	8KW 744 786-003	50
			5.3 (M5)	PVC	100	A 78	8KW 044 037-003	100
<b>INSULATING SPLICE</b>								
	■	0.5 - 1.0		PVC	100	A 79	8KW 044 280-003	100
				PVC	1000		8KW 044 280-004	1,000
				PVC	12	A 17	8KW 044 033-812	1
	■	1.5 - 2.5		PVC	100	A 80	8KW 044 033-002	100
				PVC	1000		8KW 044 033-004	1,000
	■	4.0 - 6.0		PVC	50	A 81	8KW 044 034-003	50
<b>CABLE CONNECTOR PRODUCT RANGE</b>								
	Comprising: 5 x branch cable connectors 8KV 744 859-003 (page 130) and 5 x blade terminals, fully insulated 8KW 744 704-003 (page 119)							
	■	1.0 - 2.5	6.3 x 0.8	PVC	10	I 11	8KV 713 222-812	1

### 4.1.3 Insulated crimp connectors


	Colour	Cable cross section in mm <sup>2</sup>	Eyelet in mm	Insulating material	Contents in pieces	Short designation	Part number	Order unit in pieces
	■	0.5 - 1.0	3.2 (M3)	Nylon	100	A178	<b>8KW 178 042-002</b>	100
			4.3 (M4)	Nylon	100	A179	<b>8KW 178 042-012</b>	100
			5.3 (M5)	Nylon	100	A180	<b>8KW 178 042-022</b>	100
			6.5 (M6)	Nylon	100	A181	<b>8KW 178 042-032</b>	100
			8.4 (M8)	Nylon	50	A182	<b>8KW 178 042-042</b>	100
			10.5 (M10)	Nylon	50	A183	<b>8KW 178 042-052</b>	50
	■	1.5 - 2.5	3.7	Nylon	100	A184	<b>8KW 178 042-102</b>	100
			4.3 (M4)	Nylon	100	A185	<b>8KW 178 042-112</b>	100
			5.3 (M5)	Nylon	100	A186	<b>8KW 178 042-122</b>	100
			6.5 (M6)	Nylon	100	A187	<b>8KW 178 042-132</b>	100
			8.4 (M8)	Nylon	50	A188	<b>8KW 178 042-142</b>	50
			10.5 (M10)	Nylon	50	A189	<b>8KW 178 042-152</b>	50
	■	4.0 - 6.0	4.3 (M4)	Nylon	50	A190	<b>8KW 178 042-202</b>	50
			5.3 (M5)	Nylon	50	A191	<b>8KW 178 042-212</b>	50
			6.5 (M6)	Nylon	50	A192	<b>8KW 178 042-222</b>	50
			8.4 (M8)	Nylon	50	A193	<b>8KW 178 042-232</b>	50
			10.5 (M10)	Nylon	50	A194	<b>8KW 178 042-242</b>	50

#### OPEN CONNECTOR


	■	0.5 - 1.0	3.2 (M3)	Nylon	100	A201	<b>8KW 178 045-002</b>	100
			5.3 (M5)	Nylon	100	A202	<b>8KW 178 045-012</b>	100
	■	1.5 - 2.5	5.3 (M5)	Nylon	50	A203	<b>8KW 178 045-102</b>	50
			6.5 (M6)	Nylon	50	A204	<b>8KW 178 045-112</b>	50
	■	4.0 - 6.0	5.3 (M5)	Nylon	50	A205	<b>8KW 178 045-202</b>	50
			6.5 (M6)	Nylon	50	A206	<b>8KW 178 045-212</b>	50
			8.4 (M8)	Nylon	50	A207	<b>8KW 178 045-222</b>	50

	Colour	Cable cross section in mm <sup>2</sup>	Connector dimensions in mm	Insulating material	Contents in pieces	Short designation	Part number	Order unit in pieces
	■	0.5 - 1.0	Ø 1.9	Nylon	100	A198	<b>8KW 178 044-002</b>	100
	■	1.5 - 2.5	Ø 1.9	Nylon	100	A199	<b>8KW 178 044-012</b>	100
	■	4.0 - 6.0	Ø 2.7	Nylon	50	A200	<b>8KW 178 044-022</b>	50

#### INSULATING SPLICE

	■	0.5 - 1.0		Nylon	100	A195	<b>8KW 178 043-002</b>	100
	■	1.5 - 2.5		Nylon	50	A196	<b>8KW 178 043-012</b>	50
	■	4.0 - 6.0		Nylon	50	A197	<b>8KW 178 043-022</b>	50

### 4.1.3 Insulated crimp connectors

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, INSULATED CRIMP CONNECTORS</b>		
 <p>Comprising: Different crimp connectors, one branch connector, one coupling and one pair of crimping pliers</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	<b>8KW 009 254-801</b>	1

Description	Cable cross section in mm <sup>2</sup>	Insertion width in mm/ eyelet hole	Quantity in product range
<b>CONTENTS OF ASSORTMENT CASE OF INSULATED CRIMP CONNECTORS</b>			
Female bullet connector	0.5 - 1.0	Ø 4.0	20
Male bullet connector	0.5 - 1.0	Ø 4.0	20
Flat receptacle	0.5 - 1.0	2.8 x 0.5	20
	0.5 - 1.0	6.3 x 0.8	20
Flat receptacle, fully insulated	0.5 - 1.0	6.3 x 0.8	20
Flat receptacle	1.5 - 2.5	6.3 x 0.8	20
Blade terminals	0.5 - 1.0	6.3 x 0.8	20
	1.5 - 2.5	6.3 x 0.8	20
Ring connector	0.5 - 1.0	M4	20
	0.5 - 1.0	M5	20
	1.5 - 2.5	M4	20
	1.5 - 2.5	M5	20
Ring connector	1.5 - 2.5	M6	20
	4.0 - 6.0	M5	20
Ring connector	4.0 - 6.0	M6	20
	1.5 - 2.5		20
Insulating splice	1.5 - 2.5		20
Open connector	1.5 - 2.5	M5	20
Piggy back spade connector	1.5 - 2.5	2.8 x 0.5	20
Branch cable connector			20
Clutch		6.3 x 0.8	20
Crimping pliers			1

Short designation	Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>		
A 63	<b>8KW 045 145-003</b>	50
A 61	<b>8KW 044 040-003</b>	100
A 50	<b>8KW 705 393-003</b>	100
A 52	<b>8KW 044 036-003</b>	100
A 82	<b>8KW 708 373-003</b>	50
A 53	<b>8KW 044 022-003</b>	100
A 59	<b>8KW 702 796-003</b>	100
A 60	<b>8KW 044 288-003</b>	100
A 67	<b>8KW 044 276-003</b>	100
A 69	<b>8KW 044 291-003</b>	100
A 68	<b>8KW 044 028-003</b>	100
A 70	<b>8KW 044 027-003</b>	100
A 72	<b>8KW 044 039-003</b>	100
A 71	<b>8KW 044 029-003</b>	50
A 73	<b>8KW 044 030-003</b>	50
A 80	<b>8KW 044 033-002</b>	100
A 78	<b>8KW 044 037-003</b>	100
A 58	<b>8KW 044 032-003</b>	50
I 50	<b>8KW 705 123-002</b>	25
A 84	<b>8KW 044 035-003</b>	25
	<b>8PE 002 006-001</b>	1

#### 4.1.4 Cable end ferrules



##### **Application**

Cable end sleeves avoid the need to fan out single strands of multi-wired copper cables and facilitate the process of guiding them into terminals. For this purpose, the end sleeve is pressed onto the stripped part of the cable. Depending on the tool, the pressed-on sleeve can take many different shapes.

The range corresponds with DIN 46228-4 in terms of design and dimensions. The material comprises copper with a nickel-plated surface and a plastic sleeve.

##### **Range advantages**

- Precise and well-fitting bundling of wire ends
- With insulating insertion guide
- Covers all standard cross-sections

#### 4.1.4 Cable end ferrules

	Colour	Cable cross section in mm <sup>2</sup>	Entire length/length of metal sleeve	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>CABLE END FERRULES</b>							
	■	0.5	14.0/8.0 mm	100	A 145	<b>8KW 744 839-003</b>	100
	■	0.75	14.0/8.0 mm	100	A 146	<b>8KW 744 840-003</b>	100
	■	1.0	14.6/8.2 mm	100	A 147	<b>8KW 744 841-003</b>	100
	■	1.5	14.6/8.2 mm	100	A 148	<b>8KW 744 842-003</b>	100
	■	2.5	15.2/8.2 mm	100	A 149	<b>8KW 744 843-003</b>	100
	■	4.0	16.5/9.0 mm	50	A 150	<b>8KW 744 844-003</b>	50
	■	6.0	20.0/12.0 mm	100	A 151	<b>8KW 744 845-003</b>	100
	□	10.0	21.5/12.0 mm	100	A 152	<b>8KW 744 846-003</b>	100
	■	16.0	22.2/12.0 mm	50	A 153	<b>8KW 744 847-003</b>	50

## 4.2 Solder connectors

### 4.2.1 CWT solder connectors



#### Application


In addition to the crimp connections, the solder connectors present an additional option for connecting cables. To this end, the stripped cable end is guided into the connector and then treated with preheated solder fluid. After the soldering material has cooled down, a secure, positive material connection is established.

For temperature-sensitive applications for which traditional soldering does not represent an alternative, a shrink solder connector can be the answer. This can be heated using a hot-air gun, whereby the integrated tin solder ring melts and two lateral sealing rings coated with adhesive shrink. The connection is soldered, fully insulated and relieved from mechanical strain after the heat exposure. Suitable as a high-quality connection for individual cables or to ground coaxial cable shields.


#### Range advantages

- Broad range of products for all common cable cross sections
- Reliable connection solutions for temperature-sensitive applications as well

## 4.2.1 CWT solder connectors

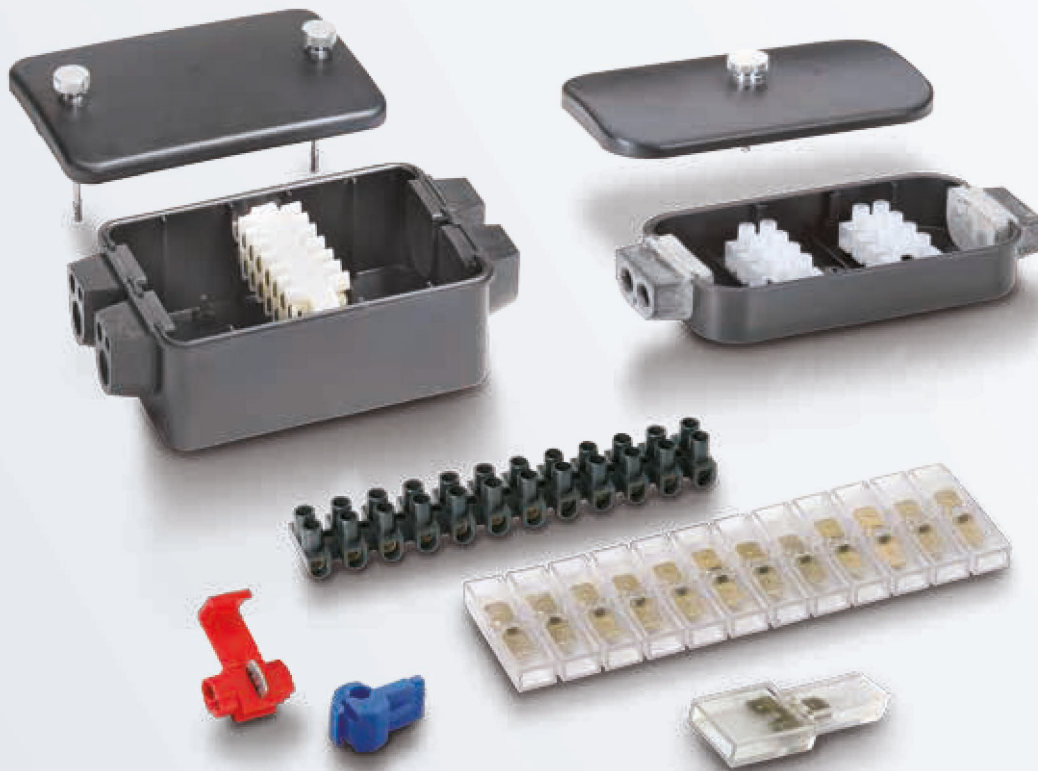
	Colour	Cable cross section in mm <sup>2</sup>	Ø max. insulation in mm	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>CWT SOLDER CONNECTORS</b>							
	Trans-parent	2 x 0.3 - 0.8	1.7	50	A 177	<b>8KW 744 890-013</b>	50
	■	2 x 0.8 - 2.0	2.7	50	A 174	<b>8KW 744 887-013</b>	50
	■	2 x 2.0 - 4.0	4.5	50	A 175	<b>8KW 744 888-013</b>	50
	■	2 x 4.0 - 6.0	6.0	50	A 176	<b>8KW 744 889-013</b>	50

## 4.2.2 Solder connectors i.a.w. DIN 46211

	Cable cross section in mm <sup>2</sup>	Eyelet Ø in mm	Nominal size i.a.w. DIN	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>SOLDER CONNECTORS I.A.W. DIN 46211</b>							
	> 1.0 - 2.5	5.3 (M5)	5 - 2.5	100	B 219	<b>8KW 177 784-002</b>	100
		6.5 (M6)	6 - 2.5	100	B 220	<b>8KW 177 784-012</b>	100
	> 2.5 - 6.0	6.5 (M6)	6 - 6	50	B 221	<b>8KW 177 784-102</b>	50
		8.4 (M8)	8 - 6	50	B 222	<b>8KW 177 784-112</b>	50
		10.5 (M10)	10 - 6	50	B 223	<b>8KW 177 784-122</b>	50
	> 6.0 - 10.0	6.5 (M6)	6 - 10	25	B 224	<b>8KW 177 784-202</b>	25
		8.4 (M8)	8 - 10	25	B 225	<b>8KW 177 784-212</b>	25
		10.5 (M10)	10 - 10	25	B 226	<b>8KW 177 784-222</b>	25
	> 10.0 - 16.0	6.5 (M6)	6 - 16	20	B 227	<b>8KW 177 784-302</b>	20
		8.4 (M8)	8 - 16	20	B 228	<b>8KW 177 784-312</b>	20
10.5 (M10)		10 - 16	20	B 229	<b>8KW 177 784-322</b>	20	
13.0 (M12)		12 - 16	20	B 230	<b>8KW 177 784-332</b>	20	
> 16.0 - 25.0	8.4 (M8)	8 - 25	10	B 231	<b>8KW 177 784-402</b>	10	
	10.5 (M10)	10 - 25	10	B 232	<b>8KW 177 784-412</b>	10	
	13.0 (M12)	12 - 25	10	B 233	<b>8KW 177 784-422</b>	10	
> 25.0 - 35.0	8.4 (M8)	8 - 35	10	B 234	<b>8KW 177 784-502</b>	10	
	10.5 (M10)	10 - 35	10	B 235	<b>8KW 177 784-512</b>	10	
	13.0 (M12)	12 - 35	10	B 236	<b>8KW 177 784-522</b>	10	
> 35.0 - 50.0	10.5 (M10)	10 - 50	5	B 237	<b>8KW 177 784-602</b>	5	
	13.0 (M12)	12 - 50	5	B 238	<b>8KW 177 784-612</b>	5	
> 50.0 - 70.0	10.5 (M10)	10 - 70	5	B 239	<b>8KW 177 784-702</b>	5	
	13.0 (M12)	12 - 70	5	B 240	<b>8KW 177 784-712</b>	5	



## 4.3 Cable junction boxes



### Application

When you have to join up a number of different multi-wire cables it is all too easy to lose track of them. In situations like this, HELLA's cable junction boxes offer a secure and easy bundling solution to keep them tidy. Its lockable fireproof design gives the individual wires the necessary protection.

### Range advantages

- Compact design
- Easy and reliable to use
- Various sizes and contact solutions



## 4.3 Cable junction boxes


	Description	Protective class	Dimensions in mm	Pins	Contents in pieces	Part number	Order unit in pieces
<b>CABLE JUNCTION BOXES</b>							
	Cable junction box with screw connection for cables up to 6 mm <sup>2</sup> = Ø 4.3 mm	IP 52	125.0 x 73.0 x 43.0	6-pin	1	<b>8KV 002 142-031</b>	1
	Cable junction box with screw connection for cables up to 6 mm <sup>2</sup> = Ø 3.5 mm	IP 52	125.0 x 73.0 x 43.0	8-pin	1	<b>8KV 002 143-031</b>	1
	Cable junction box with 8 x 2 blade terminal connections (6.3 x 0.8 mm)	IP 52	125.0 x 73.0 x 43.0	8-pin	1	<b>8KV 002 144-031</b>	1
	Cable junction box with 8 x 4 blade terminal connections (6.3 x 0.8 mm)	IP 52	125.0 x 73.0 x 43.0	8-pin	1	<b>8KV 002 145-031</b>	1





## 4.3 Cable junction boxes


	Description	Protective class	Dimensions in mm	Pins	Contents in pieces	Part number	Order unit in pieces
<b>CABLE JUNCTION BOXES</b>							
	Cable junction box with screw connection for cables up to 6 mm <sup>2</sup> = Ø 3.5 mm	IP 52	140.0 x 90.0 x 58.0	16-pole	1	<b>8KV 004 258-031</b>	1
	Cable junction box with 8 x 4 blade terminal connections (6.3 x 0.8 mm)	IP 52	140.0 x 90.0 x 58.0	8-pin	1	<b>8KV 004 259-031</b>	1
<b>ADR CABLE JUNCTION BOXES</b>							
	Cable junction box ADR-suitable with 6 x 8 and 8 x 4 blade terminal connections (6.3 x 0.8 mm) with 12 metric connections 1 x M25, 3 x M20 and 8 x M16	IP 69K	158 x 99 x 63	16-pole	20	<b>8KV 177 785-007</b>	20
	ADR-suitable cable junction box with 6 x 8 and 8 x 4 blade terminal connections (6.3 x 0.8 mm) with 4 metric threaded connections 4 x M20	IP 69K	158 x 99 x 63	8-pin	30	<b>8KV 177 785-017</b>	30

## 4.4 Other cable connectors

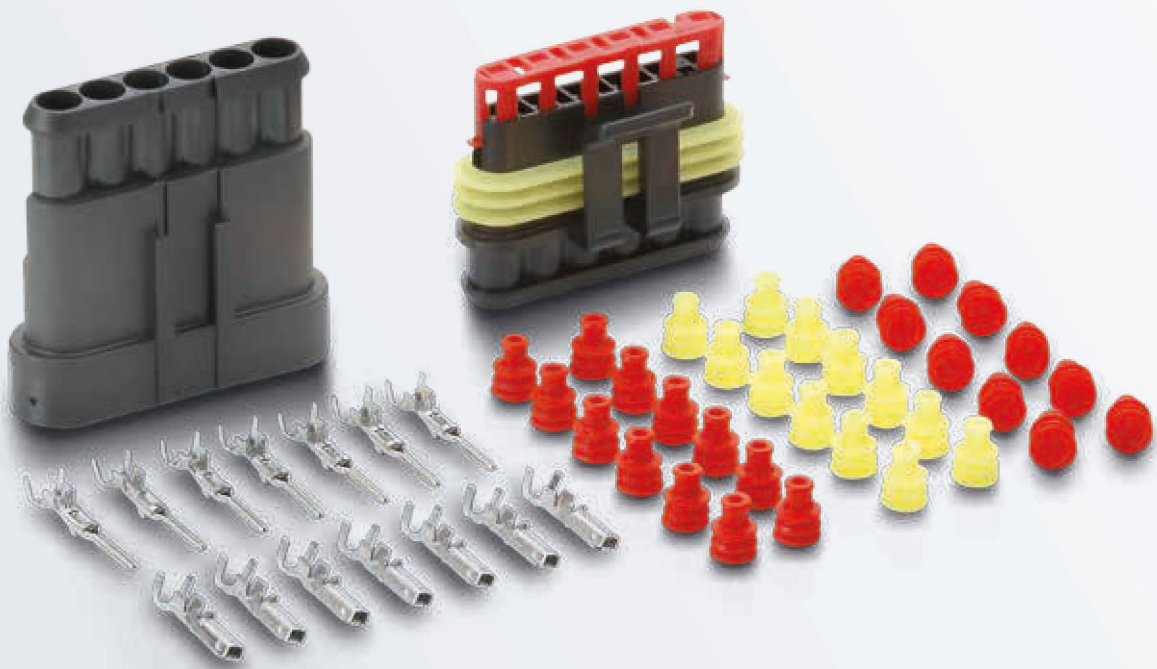
	Colour	Cable cross-section in mm <sup>2</sup>	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>BRANCH CABLE CONNECTOR</b>						
	■	0.3 - 0.75	25	1 52	8KV 715 923-003	25
			5	1 01	8KV 705 123-813	1
	■	0.8 - 2.0	25	1 50	8KV 705 123-002	25
			1000		8KV 705 123-004	1,000
	■	0.5 - 1.0	50	1 61	8KV 744 858-003	50
	■	1.5 - 2.5	50	1 62	8KV 744 859-003	50
	■	4.0 - 6.0	25	1 63	8KV 744 860-003	25

	Description/ color	Dimensions	Connector dimensions in mm	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>PVC MALE SPADE BRANCH CONNECTOR</b>								
	Transparent	54 x 21 x 7	6.3 x 0.8		10	1 57	8KV 002 135-821	1

<b>CABLE CONNECTORS</b>								
	Transparent	28 x 11.5 x 7.3	6.3 x 0.8	1-pole	25	A 84	8KW 044 035-003	25
	Transparent	50 x 20 x 6.4	6.3 x 0.8	2-pin	10	56	8KW 003 124-811	1
	Transparent	147.8 x 28 x 7	6.3 x 0.8	12-pin	10		8KV 002 132-001	10
		142 x 42 x 7	6.3 x 0.8	12-pin	10		8KV 002 133-001	10
	With 8 x 4 blade terminal connections (6.3 x 0.8 mm)	68 x 40 x 22	6.3 x 0.8		1		8KV 003 284-001	1

	Description	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>INSULATING SCREW JOINTS, WITH SOLID BRASS TERMINALS</b>						
	For cables up to 2.5 mm <sup>2</sup>	12-pin	10		8KV 002 137-001	10
	For cables up to 4 mm <sup>2</sup>	12-pin	10		8KV 002 139-001	10
	For cables up to 10 mm <sup>2</sup>	12-pin	10		8KV 002 140-001	10
	For cables up to 16 mm <sup>2</sup>	12-pin	10		8KV 002 141-001	10

## 4.5 "SUPERSEAL" plug connectors



### Application





"SUPERSEAL" plug connectors comply with IEC 529 and DIN ISO 40050 regulations and come with IP class 67, which offers the maximum level of water and dust proofing protection. The quality of the "SUPERSEALS" has made them popular wherever other interconnection systems reach their limits due to adverse pressure or humidity conditions.

The appropriate tool for "SUPERSEAL" plug connectors can be found on page 195.

### Range advantages

- OEM quality
- Reliable electrical connection
- Maximum protection against outside influences

## 4.5 "SUPERSEAL" plug connectors

	Description	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>"SUPERSEAL" PLUG HOUSING SETS</b>						
	2 pin contacts each 1.0 - 1.5 mm <sup>2</sup> , socket contacts 1.0 - 1.5 mm <sup>2</sup> , 2 strand insulations each	1-pole	10	B 03	<b>8KW 744 805-801</b>	1
	3 pin contacts each 1.0 - 1.5 mm <sup>2</sup> , socket contacts 1.0 - 1.5 mm <sup>2</sup> , 4 strand insulations each, 2 blind plugs	2-pin	18	B 04	<b>8KW 744 806-801</b>	1
	4 pin contacts each 1.0 - 1.5 mm <sup>2</sup> , socket contacts 1.0 - 1.5 mm <sup>2</sup> , 6 strand insulations each, 4 blind plugs	3-pin	26	B 05	<b>8KW 744 807-801</b>	1
	5 pin contacts each 1.0 - 1.5 mm <sup>2</sup> , socket contacts 1.0 - 1.5 mm <sup>2</sup> , 8 strand insulations each, 6 blind plugs	4-pin	34	B 06	<b>8KW 744 808-801</b>	1

## 4.5 "SUPERSEAL" plug connectors




	Description	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>"SUPERSEAL" PLUG HOUSING SETS</b>						
	6 pin contacts each 1.0 - 1.5 mm <sup>2</sup> , socket contacts 1.0 - 1.5 mm <sup>2</sup> , 10 strand insulations each, 8 blind plugs	5-pole	42	B 07	<b>8KW 744 809-801</b>	1
	7 pin contacts each 1.0 - 1.5 mm <sup>2</sup> , socket contacts 1.0 - 1.5 mm <sup>2</sup> , 12 strand insulations each, 10 blind plugs	6-pin	50	B 08	<b>8KW 744 810-801</b>	1
<b>"SUPERSEAL" PLUG HOUSING</b>						
	Male pin housing	1-pole	10		<b>8JA 746 183-012</b>	10
	Female connector housing	1-pole	10		<b>8JA 746 184-012</b>	10
	Male pin housing	2-pin	10		<b>8JA 746 183-022</b>	10
	Female connector housing	2-pin	10		<b>8JA 746 184-022</b>	10

## 4.5 "SUPERSEAL" plug connectors


	Description	Pins	Contents in pieces	Short designation	Part number	Order unit in pieces
	Male pin housing	3-pin	10		8JA 746 183-032	10
	Female connector housing	3-pin	10		8JA 746 184-032	10
	Male pin housing	4-pin	10		8JA 746 183-042	10
	Female connector housing	4-pin	10		8JA 746 184-042	10
	Male pin housing	5-pole	10		8JA 746 183-052	10
	Female connector housing	5-pole	10		8JA 746 184-052	10
	Male pin housing	6-pin	10		8JA 746 183-062	10
	Female connector housing	6-pin	10		8JA 746 184-062	10



## 4.5 "SUPERSEAL" plug connectors

	Cable cross-section in mm <sup>2</sup>	Connector dimensions in mm	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>MALE PIN CONTACT</b>						
	0.75 - 1.5		50	B 143	<b>8KW 744 836-002</b>	50
<b>FEMALE CONTACT</b>						
	0.75 - 1.5		50	B 144	<b>8KW 744 837-002</b>	50
<b>STRAND INSULATION</b>						
		Ø 1.8 - 2.4	50	B 145	<b>9GD 746 185-002</b>	50
		Ø 2.6 - 3.3	50	B 146	<b>9GD 746 186-002</b>	50
<b>DUMMY PLUG</b>						
			50	B 147	<b>9GD 746 187-002</b>	50

## 4.5 "SUPERSEAL" plug connectors

Description	Part number for Case	Order unit in pieces
<b>PLUG HOUSING PRODUCT RANGE CASE, "SUPERSEAL" PRODUCT RANGE</b>		
 <p>Comprising: Various "SUPERSEAL" plug housings, pin/socket contacts, strand insulations and blind plugs</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	<b>8JA 009 256-801</b>	1

Description	Cable cross-section in mm <sup>2</sup>	Quantity in the assortment	Short designation	Part number	Order unit in pieces
<b>CONTENTS OF ASSORTMENT CASE SUPERSEAL PLUG HOUSING ASSORTMENT</b>			<b>SPARE PARTS FOR REFILLING</b>		
Individual wire seal	1.8 - 2.4	100	B 145	<b>9GD 746 185-002</b>	50
Dummy plug		100	B 147	<b>9GD 746 187-002</b>	50
Male pin contact	1.0 - 1.5	100	B 143	<b>8KW 744 836-002</b>	50
Female contact	1.0 - 1.5	100	B 144	<b>8KW 744 837-002</b>	50
Pin housing, 1-pin		5		<b>8JA 746 183-012</b>	10
Female socket housing, 1-pole		5		<b>8JA 746 184-012</b>	10
Pin housing, 2-pin		5		<b>8JA 746 183-022</b>	10
Female socket housing, 2-pole		5		<b>8JA 746 184-022</b>	10
Pin housing, 3-pin		5		<b>8JA 746 183-032</b>	10
Female socket housing, 3-pole		5		<b>8JA 746 184-032</b>	10
Pin housing, 4-pin		5		<b>8JA 746 183-042</b>	10
Female socket housing, 4-pole		5		<b>8JA 746 184-042</b>	10
Pin housing, 5-pin		5		<b>8JA 746 183-052</b>	10
Female socket housing, 5-pole		5		<b>8JA 746 184-052</b>	10
Pin housing, 6-pin		5		<b>8JA 746 183-062</b>	10
Female socket housing, 6-pole		5		<b>8JA 746 184-062</b>	10

## 4.6 DEUTSCH "DT series" plug connectors









### Application

The concept of the DEUTSCH "DT series" plug connectors combines high quality materials with a connecting system characterised by both reliability and easy handling. Thanks to these properties, the product range is particularly suited to applications where maximum performance is required with a minimum number of disruptions, despite tough environmental conditions.







### Range advantages

- Environmental sealing – maximum protection from external influences
- High impact and vibration resistance
- High flexibility, even under extreme temperatures
- Compatible with a range of cable cross-sections
- Housing locking mechanism with integrated click-in function
















## 4.6 DEUTSCH "DT series" plug connectors

	Description/colour	Pins	Contents in pieces	Part number	Order unit in pieces
<b>DEUTSCH "DT" PLUG HOUSING SETS</b>					
	1 DT housing each, 2-pin, DT "wedgelock" for housing, 2-pin 3 contact pins, 0.5 - 1.5 mm <sup>2</sup> 1 blind plug	2-pin	6	<b>8JA 201 021-801</b>	1
	1 DT connector each, 2-pin, DT "wedgelock" for connector, 2-pin 3 contact sleeves, 0.5 - 1.5 mm <sup>2</sup> 1 blind plug	2-pin	6	<b>8JA 201 022-801</b>	1
	1 DT housing each, 3-pin, DT "wedgelock" for housing, 3-pin 4 contact pins, 0.5 - 1.5 mm <sup>2</sup> , 2 blind plugs	3-pin	8	<b>8JA 201 021-811</b>	1
	1 DT connector each, 3-pin, DT "wedgelock" for connector, 3-pin 4 contact sleeves, 0.5 - 1.5 mm <sup>2</sup> , 2 blind plugs	3-pin	8	<b>8JA 201 022-811</b>	1
	1 DT housing each, 4-pin, DT "wedgelock" for housing, 4-pin; 5 contact pins, 0.5 - 1.5 mm <sup>2</sup> , 3 blind plugs	4-pin	10	<b>8JA 201 021-821</b>	1
	1 DT connector each, 4-pin, DT "wedgelock" for connector, 4-pin 5 contact sleeves, 0.5 - 1.5 mm <sup>2</sup> , 3 blind plugs	4-pin	10	<b>8JA 201 022-821</b>	1










## 4.6 DEUTSCH "DT series" plug connectors






	Description/colour	Pins	Contents in pieces	Part number	Order unit in pieces
<b>DEUTSCH "DT" PLUG HOUSING SETS</b>					
	1 DT housing each, 6-pin, DT "wedgeloek" for housing, 6-pin, 7 contact pins, 0.5 - 1.5 mm <sup>2</sup> , 5 blind plugs	6-pin	14	8JA 201 021-831	1
	1 DT connector each, 6-pin, DT "wedgeloek" for connector, 6-pin 7 contact sleeves, 0.5 - 1.5 mm <sup>2</sup> 5 blind plugs	6-pin	14	8JA 201 022-831	1
	1 DT housing each, 8-pin, coding "A", DT "wedgeloek" for housing, 8-pin, 9 contact pins, 0.5 - 1.5 mm <sup>2</sup> , 7 blind plugs	8-pin	18	8JA 201 021-841	1
	1 DT connector each, 8 pin, coding "A", DT "wedgeloek" for connector, 8-pin, 9 contact sleeves, 0.5 - 1.5 mm <sup>2</sup> , 7 blind plugs	8-pin	18	8JA 201 022-841	1
	1 DT housing each, 12-pin, coding "A", DT "wedgeloek" for housing, 12-pin, 13 contact pins, 0.5 - 1.5 mm <sup>2</sup> , 11 blind plugs	12-pin	26	8JA 201 021-851	1
	1 DT connector each, 12-pin, coding "A", DT "wedgeloek" for connector, 12-pin, 13 contact sleeves, 0.5 - 1.5 mm <sup>2</sup> , 11 blind plugs	12-pin	26	8JA 201 022-851	1

## 4.6 DEUTSCH "DT series" plug connectors

	Description/colour	Pins	Contents in pieces	Part number	Order unit in pieces
<b>DEUTSCH "DT" CONNECTORS AND HOUSINGS</b>					
	DT housing	2-pin	10	8JA 201 021-022	10
	DT connector	2-pin	10	8JA 201 022-022	10
	DT "wedgelock" for housing	2-pin	10	9NB 201 023-022	10
	DT "wedgelock" for plug	2-pin	10	9NB 201 024-022	10
	DT housing	3-pin	10	8JA 201 021-032	10
	DT connector	3-pin	10	8JA 201 022-032	10
	DT "wedgelock" for housing	3-pin	10	9NB 201 023-032	10
	DT "wedgelock" for plug	3-pin	10	9NB 201 024-032	10
	DT housing	4-pin	10	8JA 201 021-042	10
	DT connector	4-pin	10	8JA 201 022-042	10
	DT "wedgelock" for housing	4-pin	10	9NB 201 023-042	10
	DT "wedgelock" for plug	4-pin	10	9NB 201 024-042	10
	DT housing	6-pin	10	8JA 201 021-062	10
	DT connector	6-pin	10	8JA 201 022-062	10
	DT "wedgelock" for housing	6-pin	10	9NB 201 023-062	10

## 4.6 DEUTSCH "DT series" plug connectors

	Description/colour	Pins	Contents in pieces	Part number	Order unit in pieces
	DT "wedgelock" for plug	6-pin	10	9NB 201 024-062	10
	DT housing	8-pin, coding: "A"	10	8JA 201 021-082	10
	DT connector	8-pin, coding: "A"	10	8JA 201 022-082	10
	DT "wedgelock" for housing	8-pin	10	9NB 201 023-082	10
	DT "wedgelock" for plug	8-pin	10	9NB 201 024-082	10
	DT housing	12-pin, coding: "A"	10	8JA 201 021-122	10
	DT connector	12-pin, coding: "A"	10	8JA 201 022-122	10
	DT "wedgelock" for housing	12-pin	10	9NB 201 023-122	10
	DT "wedgelock" for plug	12-pin	10	9NB 201 024-122	10

	Description/colour	Cable cross section	Contents in pieces	Part number	Order unit in pieces
	Contact sleeve	2 mm <sup>2</sup>	50	8KW 201 025-012	50
	Contact pin	2 mm <sup>2</sup>	50	8KW 201 025-022	50
	Contact sleeve	0.5 – 1.5 mm <sup>2</sup>	50	8KW 201 025-112	50
	Contact pin	0.5 – 1.5 mm <sup>2</sup>	50	8KW 201 025-122	50
	Dummy plug	0.5 mm <sup>2</sup> - 2 mm <sup>2</sup>	50	9NB 201 026-012	50

## 4.7 Female and male connector housings



### Application

Socket and connector housings offer an easy way to protect uninsulated cable connectors from external influences. The product range encompasses housings for standardised, uninsulated crimp connectors with interlock and for the CONI and Mate N lock round male connector systems.

### Range advantages






- Simple protection solution for contact systems
- Easy and reliable to use











## 4.7 Female and male connector housings

	Connection	Pins	Contents in pieces	Part number	Order unit in pieces
<b>FEMALE CONNECTOR HOUSING FOR HOLDING FLAT RECEPTACLES</b>					
	1 Flat receptacle 6.3 mm	1-pole	10	<b>8JD 008 151-001</b>	10
	2 female spade connectors 6.3 mm	2-pin	10	<b>8JD 008 151-011</b>	10
	2 female spade connectors 6.3 mm	2-pin	10	<b>8JD 008 151-021</b>	10
<b>FEMALE CONNECTOR HOUSING FOR HOLDING FLAT RECEPTACLES</b>					
	3 flat receptacles 6.3 mm	3-pin	10	<b>8JD 008 151-031</b>	10
	4 flat receptacles 6.3 mm	4-pin	10	<b>8JD 008 151-041</b>	10
	6 flat receptacles 6.3 mm	6-pin	10	<b>8JD 008 151-051</b>	10
	8 flat receptacles 6.3 mm	8-pin	10	<b>8JD 008 151-061</b>	10
<b>CONNECTOR HOUSING FOR HOLDING BLADE TERMINALS</b>					
	1 male spade connector 6.3 mm	1-pole	10	<b>8JD 008 152-001</b>	10
	2 male spade connectors 6.3 mm	2-pin	10	<b>8JD 008 152-011</b>	10
	2 male spade connectors 6.3 mm	2-pin	10	<b>8JD 008 152-021</b>	10





## 4.7 Female and male connector housings

	Connection	Pins	Contents in pieces	Part number	Order unit in pieces
<b>CONNECTOR HOUSING FOR HOLDING BLADE TERMINALS</b>					
	3 male spade connectors 6.3 mm	3-pin	10	8JD 008 152-031	10
	4 male spade connectors 6.3 mm	4-pin	10	8JD 008 152-041	10
	6 male spade connectors 6.3 mm	6-pin	10	8JD 008 152-051	10
	8 male spade connectors 6.3 mm	8-pin	10	8JD 008 152-061	10
<b>CONI ROUND MALE CONNECTOR SYSTEMS, PIN HOUSINGS</b>					
		3-pin	10	8KW 744 851-003	10
		6-pin	10	8KW 744 852-003	10
		12-pin	10	8KW 744 853-003	10
		15-pole	10	8KW 744 886-003	10

## 4.7 Female and male connector housings

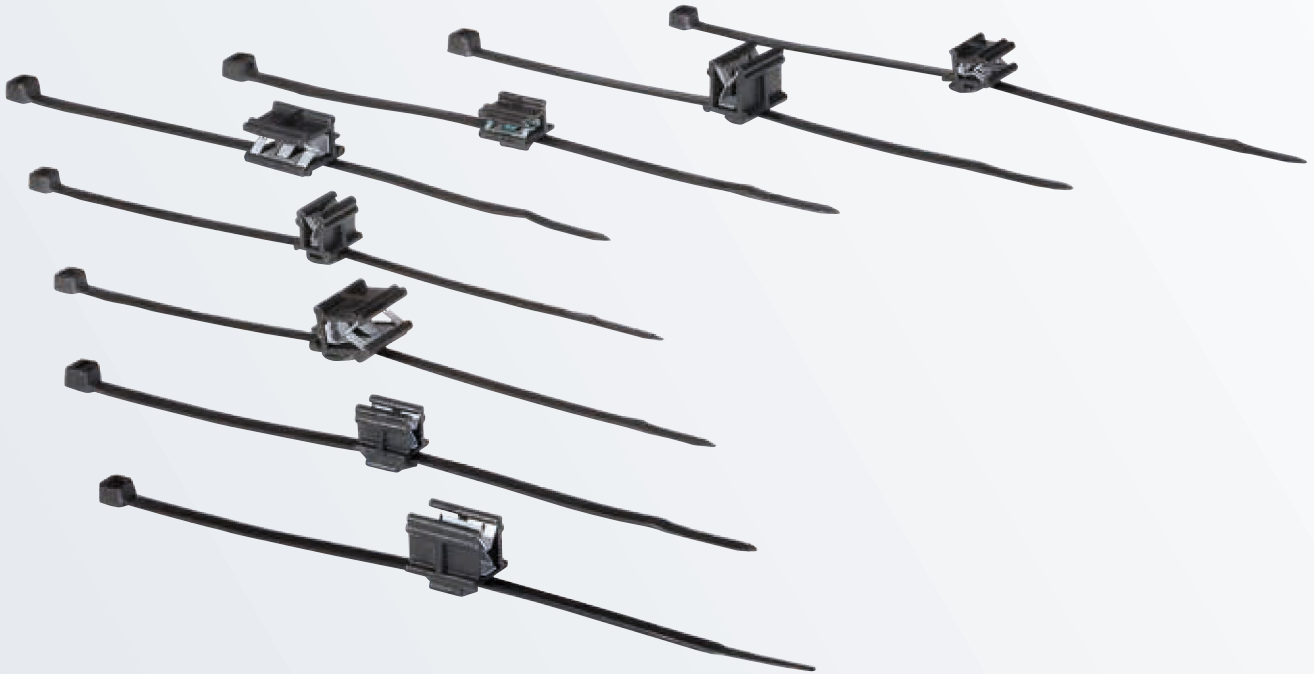
	Connection	Pins	Contents in pieces	Part number	Order unit in pieces
<b>CONI ROUND MALE CONNECTOR SYSTEMS, SOCKET HOUSINGS</b>					
		3-pin	10	8KW 744 854-003	10
		6-pin	10	8KW 744 855-003	10
		12-pin	10	8KW 744 857-003	10
		15-pole	10	8KW 744 856-003	10
<b>MATE N LOCK CONNECTOR SYSTEMS, PIN HOUSINGS</b>					
		3-pin	10	8JA 180 663-002	10
		6-pin	10	8JA 180 663-012	10
		12-pin	10	8JA 180 663-022	10
		15-pole	10	8JA 180 663-032	10

## 4.7 Female and male connector housings

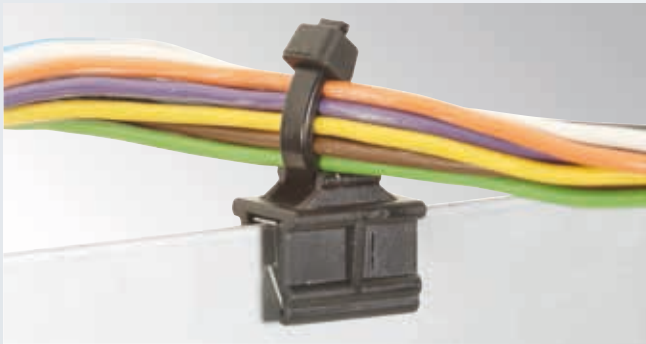
	Connection	Pins	Contents in pieces	Part number	Order unit in pieces
<b>MATE N LOCK CONNECTOR SYSTEMS, SOCKET HOUSINGS</b>					
		3-pin	10	8JA 180 664-002	10
		6-pin	10	8JA 180 664-012	10
		12-pin	10	8JA 180 664-022	10
		15-pole	10	8JA 180 664-032	10

## 5. Insulation/bundling

### 5.1 Cable straps with edge clips



#### Sample applications:



#### Application






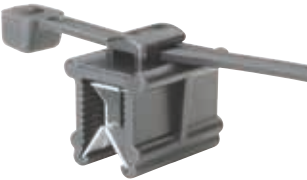


Oftentimes more than one cable tie is required to properly fasten a bundled subharness. Our cable ties with integrated edge clips offer a quick and easy complete solution that provide a strong holding force.

They are weatherproof, flame-resistant and resistant to diluted organic acids, oils, gasoline, salt water, solvents and greases. They even offer perfect support for extremely small bundled diameters meaning that no cable lining or other attachment aids are required.

#### Range advantages

- Complete fastening in a single product
- Suitable for numerous positionings and edge thicknesses
- Powerful specification with OEM references

## 5.1 Cable straps with edge clips

	L x W in mm	Profile thicknesses in mm	Colour	Capacity in mm	Contents in pieces	Part number	Order unit in pieces
	200.0 x 4.8	0.7 - 3.0	■	Ø 48.0	100	8HL 185 549-001	100
	200.0 x 4.8	0.7 - 3.0	■	Ø 48.0	100	8HL 185 549-011	100
	200.0 x 4.8	0.7 - 3.0	■	Ø 48.0	100	8HL 185 549-021	100
	200.0 x 4.8	0.7 - 3.0	■	Ø 48.0	100	8HL 185 549-031	100
	200.0 x 4.8	3.0 - 6.0	■	Ø 48.0	100	8HL 185 549-041	100
	200.0 x 4.8	3.0 - 6.0	■	Ø 48.0	100	8HL 185 549-051	100
	200.0 x 4.8	3.0 - 6.0	■	Ø 48.0	100	8HL 185 549-061	100
	200.0 x 4.8	3.0 - 6.0	■	Ø 48.0	100	8HL 185 549-071	100

## 5.2 Cable Ties










### Application

Cable ties make it possible to quickly fasten and bundle cables, wiring harnesses and a large number of other component parts. The system, which has been around for decades and undergone little change, is just as simple as it is affordable and cost effective.

### Range advantages

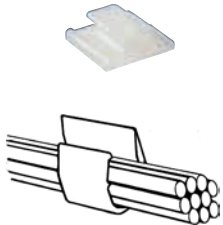
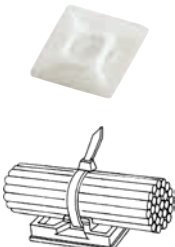


- Comprehensive assortment including numerous lengths and widths
- In each case choose between either black or natural
- Additional fastening elements round off the application range

## 5.2 Cable Ties

	L x W in mm	Colour	Capacity in mm	Contents in pieces	Short designation	Part number	Order unit in pieces
<b>CABLE TIES</b>							
	100.0 x 2.5	□	Ø 22.0	100	E 01	8HL 707 877-002	100
		■	Ø 22.0	100	E 02	8HL 717 962-001	100
	160.0 x 4.8	□	Ø 36.0	100	E 03	8HL 707 877-081	100
		■	Ø 36.0	100	E 04	8HL 717 962-161	100
	140.0 x 3.6	□	Ø 33.0	100	E 05	8HL 707 877-012	100
		■	Ø 33.0	100	E 06	8HL 717 962-011	100
	200.0 x 4.8	□	Ø 48.0	100	E 07	8HL 707 877-022	100
		■	Ø 48.0	100	E 08	8HL 717 962-021	100
	200.0 x 2.5	□	Ø 49.0	100	E 09	8HL 707 877-121	100
		■	Ø 49.0	100	E 10	8HL 717 962-131	100
	200.0 x 7.6	■	Ø 50.0	100	E 11	8HL 717 962-061	100
		□	Ø 55.0	100	E 12	8HL 707 877-091	100
	200.0 x 3.6	■	Ø 55.0	100	E 13	8HL 717 962-171	100
		■	Ø 77.0	100	E 14	8HL 717 962-111	100
	292.0 x 7.6	□	Ø 75.0	100	E 15	8HL 707 877-101	100
		■	Ø 75.0	100	E 16	8HL 717 962-141	100
	280.0 x 4.8	□	Ø 76.0	100	E 17	8HL 707 877-041	100
		■	Ø 76.0	100	E 18	8HL 717 962-031	100
	368.0 x 4.8	□	Ø 100.0	100	E 19	8HL 707 877-032	100
		■	Ø 100.0	100	E 20	8HL 717 962-041	100
	368.0 x 7.6	□	Ø 102.0	100	E 21	8HL 707 877-051	100
		■	Ø 102.0	100	E 22	8HL 717 962-051	100
	430.0 x 4.8	□	Ø 120.0	100	E 23	8HL 707 877-141	100
		■	Ø 120.0	100	E 24	8HL 717 962-181	100
	580.0 x 13.0	□	Ø 152.0	50	E 25	8HL 707 877-131	50
	612.0 x 9.0	■	Ø 194.0	50	E 26	8HL 717 962-121	50




## 5.2 Cable Ties

	Description	Contents in pieces	Short designation	Part number	Order unit in pieces
 <p data-bbox="193 629 416 741">A small, light-colored plastic cable clip with a rectangular shape and a central notch. Below it is a line drawing of the clip being used to secure a bundle of four cables.</p>	<p data-bbox="501 607 788 651">Cable clip for cables up to <math>\varnothing</math> 7.1 mm, size 25.4 x 25.4 x 10.4 mm</p>	<p data-bbox="927 618 963 640">100</p>	<p data-bbox="1015 618 1053 640">E 27</p>	<p data-bbox="1123 618 1270 640"><b>8HL 717 964-001</b></p>	<p data-bbox="1358 618 1394 640">100</p>
 <p data-bbox="217 920 392 1043">A square, light-colored adhesive pad with a central square hole. Below it is a line drawing of the pad being used to secure a bundle of cables to a surface with an M5 bolt.</p>	<p data-bbox="501 864 884 976">Natural colour adhesive pad for sticking wiring harnesses to level, smooth, grease-free body parts and walls; for additional fixing you can use an M5 bolt; (without cable ties), size 27.7 x 27.7 x 5.7 mm</p>	<p data-bbox="927 909 963 931">100</p>	<p data-bbox="1015 909 1053 931">E 29</p>	<p data-bbox="1123 909 1270 931"><b>8HL 707 879-012</b></p>	<p data-bbox="1358 909 1394 931">100</p>
 <p data-bbox="233 1111 376 1267">A black plastic expansion anchor with a wide, flat top and a narrow base.</p>	<p data-bbox="501 1155 855 1223">Expansion anchor for cable ties up to 4.8 mm, hole diameter 6.5 mm, sheet thickness 0.7 - 2.5 mm</p>	<p data-bbox="927 1178 963 1200">100</p>	<p data-bbox="1015 1178 1053 1200">E 52</p>	<p data-bbox="1123 1178 1270 1200"><b>8HL 707 878-012</b></p>	<p data-bbox="1358 1178 1394 1200">100</p>
 <p data-bbox="233 1352 376 1509">A black plastic expansion anchor with a wide, flat top and a narrow base, similar to E 52 but with a different base shape.</p>	<p data-bbox="501 1397 855 1464">Expansion anchor for cable ties up to 4.8 mm, hole diameter 6.5 mm, sheet thickness 2.5 - 4.0 mm</p>	<p data-bbox="927 1420 963 1442">100</p>	<p data-bbox="1015 1420 1053 1442">E 53</p>	<p data-bbox="1123 1420 1270 1442"><b>8HL 707 878-022</b></p>	<p data-bbox="1358 1420 1394 1442">100</p>



## 5.3 Driller

Probably the fastest way to bundle and fasten cables.

	Max. diameter	Contents in pieces	Part number	Order unit in pieces
<b>DRILLER</b>				
	10.2	100	8HL 177 884-002	100
	14.0	100	8HL 177 884-012	100
	19.0	100	8HL 177 884-022	100

## 5.4 Chassis cable clips



For frame thicknesses of 3 to 6 mm, length of clamping foot: 21 mm, chrome-6 free

	Description	Contents in pieces	Part number	Order unit in pieces
<b>CHASSIS CABLE CLIPS</b>				
	Cable clip, 43 mm long	100	8HS 071 414-001	100
	Cable clip, 52.5 mm long	100	8HS 071 415-001	100

## 5.5 Corrugated pipes


Corrugated pipes are used to bundle cables and protect them from dynamic loads and other external influences. The slotted variant makes it easier to thread in the cable, while the closed variant offers better protection. The polyamide variant also meets ADR requirements.

- Usage temperature: -40°C to +140°C (briefly +160°C)
- Flame-resistant
- Halogen-free
- UV-resistant

	Nominal diameter in mm	Inner diameter in mm	Outer diameter in mm	Material	Length in m	Part number	Order unit in pieces
<b>CORRUGATED PIPES, SLOTTED</b>							
	7.5	6.7	10.0	PP	50.0	8JR 177 882-002	50
	10.0	9.9	13.0	PP	50.0	8JR 177 882-012	50
	13.0	12.7	15.8	PP	50.0	8JR 177 882-022	50
	17.0	16.6	21.2	PP	50.0	8JR 177 882-032	50
	22.0	21.3	25.4	PP	50.0	8JR 177 882-042	50
	26.0	25.8	31.2	PP	50.0	8JR 177 882-052	50
	37.0	36.0	42.4	PP	25.0	8JR 177 882-062	25
<b>CORRUGATED PIPES, UNSLOTTED</b>							
	7.5	6.7	10.0	PP	50.0	8JR 177 883-002	50
	10.0	9.9	13.0	PP	50.0	8JR 177 883-012	50
	13.0	12.7	15.8	PP	50.0	8JR 177 883-022	50
	17.0	16.6	21.2	PP	50.0	8JR 177 883-032	50
	22.0	21.3	25.4	PP	50.0	8JR 177 883-042	50
	26.0	25.8	31.2	PP	50.0	8JR 177 883-052	50
	37.0	36.0	42.4	PP	25.0	8JR 177 883-062	25
<b>CORRUGATED PIPES, UNSLOTTED, ADR-SUITABLE</b>							
	7.5	6.7	10.0	PA	50.0	8JR 178 252-002	50
	10.0	9.9	13.0	PA	50.0	8JR 178 252-012	50
	13.0	12.7	15.8	PA	50.0	8JR 178 252-022	50
	17.0	16.6	21.2	PA	50.0	8JR 178 252-032	50
	22.0	21.3	25.4	PA	50.0	8JR 178 252-042	50
	37.0	36.0	42.4	PA	25.0	8JR 178 252-052	25

## 5.6 Spiral bands

Spiral strips are used for the bundling of cables, wires or hoses. The advantage over corrugated pipes is their greater flexibility, allowing cables to be routed in and out of anywhere with no difficulty.

	Bundle area in mm	Inner diameter in mm	Outer diameter in mm	Filament width in mm	Length in m	Part number	Order unit in pieces
<b>SPIRAL BANDS</b>							
	10,0 - 50,0	4,0	5,0	7,0	10,0	8JR 178 587-002	10
	20,0 - 65,0	9,0	10,5	13,9	10,0	8JR 178 587-012	10
	25,0 - 100,0	15,0	17,0	18,2	10,0	8JR 178 587-022	10
	30,0 - 130,0	20,0	23,0	19,6	10,0	8JR 178 587-032	10

## 5.7 Insulating tapes



5










### Application

Electrically insulating adhesive tape comprises non-conducting material and is compatible with a wide range of vehicle repair applications without negatively impacting the on-board electronics. Be it bundling, fastening, temporarily insulating or colour coding – the tried-and-true all-purpose system always provides reliable results. Now, numerous special variants are available that target a very specific application area by design.

### Range advantages

- Diverse product range of various lengths, widths and materials
- Robust and reliable
- For numerous applications

## 5.7 Insulating tapes

	Description/ Material	Colour	Length in m	Width in mm	Thickness in mm	Temperature range in °C	Contents in pieces	Part number	Order unit in pieces
<b>INSULATING TAPES</b>									
	PVC	■	10.0	15.0	0.15	-10 to +105	2	9MJ 707 869-852	1
		■	10.0	15.0	0.15	-10 to +105	10	9MJ 707 869-013	10
		□	10.0	15.0	0.15	-10 to +105	10	9MJ 707 870-013	10
		■	10.0	15.0	0.15	-10 to +105	10	9MJ 707 871-013	10
		■	10.0	15.0	0.15	-10 to +105	10	9MJ 707 873-013	10
		■	10.0	15.0	0.15	-10 to +105	10	9MJ 707 874-013	10
		■	10.0	15.0	0.15	-10 to +105	10	9MJ 707 875-013	10
	PVC	■	4.5	15.0	0.15	-10 to +105	10	9MJ 707 869-003	10
		■	4.5	15.0	0.15	-10 to +105	10	9MJ 707 872-003	10
		■	4.5	15.0	0.15	-10 to +105	10	9MJ 707 875-003	10
	PVC	■	25.0	15.0	0.15	-10 to +105	10	9MJ 186 375-003	10
	Self-adhering adhesive tape, tearing resistance: > 20.0 N/cm; for repairing damaged cable sheathings	■	5.0	19.0	1	-40 to +105	1	9MJ 735 430-001	1
	Thread sealing strip (Teflon tape)	□	12.0	12.0	0.1	-20 to +125	10	9XX 734 570-001	10
	Dirt-repellent, good resistance to substances  Polyester fabric	■	25.0	19.0	0.17	-40 to +125	1	9MJ 176 267-001	1
	Rattle/chafing protection for bandaging wiring harnesses  Polyester fleece	■	25.0	19.0	0.3	-40 to +105	1	9MJ 176 269-001	1
	Especially well-suited for repair and insulation work under unfavorable weather conditions  PVC	■	20.0	19.0	0.2	-20 to +105	1	9MJ 176 270-001	1
	High-quality, all-purpose adhesive fitting tape for masking off, fastening and sealing  PE fabric	■	50.0	19.0	0.18	-40 to +80	1	9MJ 186 375-011	1

## 5.8 Heat shrink hoses



5

### Application

Heat-shrinkable tubing are an excellent way of sealing and insulating connections and crimp contacts or repairing damaged cable harnesses. Their wide range of colours means that they are also suitable for bundling and marking purposes. A variety of shrinkage factors are available, with or without adhesive pre-applied to the inner surface.

### Range advantages

- Different lengths, diameters and shrink ratios
- Wide range of applications
- Self-extinguishing

## 5.8 Heat shrink hoses

Shrink rate	Colour	Length in m	Diameter in mm	Minimum shrinkage temperature in °C	Temperature range in °C	Contents in pieces	Part number	Order unit in pieces
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### HEAT-SHRINKABLE PLASTIC TUBING, ON ROLL



2 : 1

		4.0	Ø 25.4	120	-55 to +125	1	9MJ 007 825-071	1
		5.0	Ø 19.1	120	-55 to +125	1	9MJ 007 825-041	1
		6.5	Ø 9.5	120	-55 to +125	1	9MJ 007 825-021	1
	■	6.5	Ø 12.7	120	-55 to +125	1	9MJ 007 825-051	1
		7.5	Ø 6.4	120	-55 to +125	1	9MJ 007 825-031	1
		9.5	Ø 4.8	120	-55 to +125	1	9MJ 007 825-001	1
		11.5	Ø 3.2	120	-55 to +125	1	9MJ 007 825-011	1
		12.5	Ø 2.4	120	-55 to +125	1	9MJ 007 825-061	1

### HEAT-SHRINKABLE PLASTIC TUBING SECTIONS, WITH INSIDE ADHESIVE



3 : 1

		0.3	Ø 3.0	135	-55 to +85	20	9MJ 008 039-001	20
		0.3	Ø 4.8	135	-55 to +85	16	9MJ 008 039-011	16
		0.3	Ø 6.0	135	-55 to +85	13	9MJ 008 039-021	13
	■	0.3	Ø 9.0	135	-55 to +85	11	9MJ 008 039-031	11
		0.3	Ø 12.0	135	-55 to +85	9	9MJ 008 039-041	9
		0.3	Ø 19.0	135	-55 to +85	7	9MJ 008 039-051	7
		0.3	Ø 24.0	135	-55 to +85	5	9MJ 008 039-061	5


Colour	Length in mm	Diameter in mm	Temperature range in °C	Contents in pieces	Part number	Order unit in pieces
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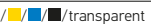




### HEAT-SHRINKABLE PLASTIC TUBING SETS, SHRINK RATE 2 : 1



20x each ■/■/■	50.0	2.4	-55 to +125	60	9MJ 178 458-002	1
30x each ■/transparent	50.0	2.4	-55 to +125	60	9MJ 178 458-012	1
20x each ■/■/■	50.0	3.2	-55 to +125	60	9MJ 178 458-022	1
30x each ■/transparent	50.0	3.2	-55 to +125	60	9MJ 178 458-032	1
20x each ■/■/■	50.0	4.8	-55 to +125	60	9MJ 178 458-042	1
30x each ■/transparent	50.0	4.8	-55 to +125	60	9MJ 178 458-052	1
20x each ■/■/■	50.0	6.4	-55 to +125	60	9MJ 178 458-062	1
30x each ■/transparent	50.0	6.4	-55 to +125	60	9MJ 178 458-072	1
4x each ■/■/■/■/transparent	100.0	9.5	-55 to +125	20	9MJ 178 458-082	1
4x each ■/■/■/■/transparent	100.0	12.5	-55 to +125	20	9MJ 178 458-092	1
10x each ■/transparent	100.0	19.1	-55 to +125	20	9MJ 178 458-102	1
5x each ■/■/■/■/transparent	200.0	9.5	-55 to +125	25	9MJ 178 458-112	1
10x ■	200.0	5x each, 19.1, 25.4	-55 to +125	10	9MJ 178 458-122	1

## 5.8 Heat shrink hoses

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, HEAT-SHRINKABLE PLASTIC TUBING</b>		
 <p>Comprising: Various heat-shrinkable plastic tubes, shrink rate 2 : 1, operating temperature -55 °C to +125 °C, flame-retardant and self-extinguishing, UL224, shrinkage temperature min. 70 °C</p>	<b>9MJ 178 458-801</b>	1

Colour	Length in mm	Diameter in mm	Quantity in the assortment
<b>CONTENTS OF PRODUCT RANGE CASE FOR HEAT-SHRINKABLE PLASTIC TUBING</b>			
20x each 	50.0	2.4	60
30x each 	50.0	2.4	60
20x each 	50.0	3.2	60
30x each 	50.0	3.2	60
20x each 	50.0	4.8	60
30x each 	50.0	4.8	60
20x each 	50.0	6.4	60
30x each 	50.0	6.4	60
4x each 	100.0	9.5	20
4x each 	100.0	12.5	20
10x each 	100.0	19.1	20
5x each 	200.0	9.5	25
10 x 	200.0	5x each, 19.1, 25.4	10

Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>	
<b>9MJ 178 458-002</b>	1
<b>9MJ 178 458-012</b>	1
<b>9MJ 178 458-022</b>	1
<b>9MJ 178 458-032</b>	1
<b>9MJ 178 458-042</b>	1
<b>9MJ 178 458-052</b>	1
<b>9MJ 178 458-062</b>	1
<b>9MJ 178 458-072</b>	1
<b>9MJ 178 458-082</b>	1
<b>9MJ 178 458-092</b>	1
<b>9MJ 178 458-102</b>	1
<b>9MJ 178 458-112</b>	1
<b>9MJ 178 458-122</b>	1



## 6 Installation accessories

### 6.1 Battery terminals



#### Application

Whether as a replacement or an OEM original component - the high material hardness and corrosion resistance of HELLA's universal terminals will give you optimum service. The programme is strictly geared to the agreed standards for battery terminals.





#### Range advantages

- Assortment closely based on DIN 72331
- Wide variety of variants permit them to be used in almost any installation space

## 6.1 Battery terminals

	Description	+/-	DIN	Contents in pieces	Part number	Order unit in pieces
<b>BATTERY TERMINALS</b>						
	Form A, for cables up to 70.0 mm <sup>2</sup> , pin Ø 17.5 mm	+ left	Based on DIN 72331	1	<b>8KX 091 450-031</b>	1
				25	<b>8KX 091 450-032</b>	25
	Form B, for cables up to 70.0 mm <sup>2</sup> , pin Ø 15.9 mm	- right	Based on DIN 72331	1	<b>8KX 043 021-031</b>	1
				25	<b>8KX 043 021-032</b>	25
	Form C, for cables up to 70.0 mm <sup>2</sup> , pin Ø 17.5 mm	+ right	Based on DIN 72331	1	<b>8KX 091 451-031</b>	1
				25	<b>8KX 091 451-032</b>	25
	Form D, for cables up to 70.0 mm <sup>2</sup> , pin Ø 15.9 mm	- left	Based on DIN 72331	1	<b>8KX 091 452-031</b>	1
				25	<b>8KX 091 452-032</b>	25
	Form E, for cables from 50.0 - 120.0 mm <sup>2</sup> with light cable connection, pin Ø 17.5 mm	+ left	DIN 72331	10	<b>8KX 091 453-001</b>	10
	Form E, for cables from 50.0 - 120.0 mm <sup>2</sup> without light cable connection, pin Ø 17.5 mm	+ left	DIN 72331	10	<b>8KX 707 911-001</b>	10
	Form F, for cables from 50.0 - 120.0 mm <sup>2</sup> without light cable connection, pin Ø 15.9 mm	- right	DIN 72331	10	<b>8KX 707 911-011</b>	10
	For cables from 10.0 - 70.0 mm <sup>2</sup>					
	Pole Ø 17.5 mm	+ terminal		10	<b>8KX 716 405-001</b>	10
	Pole Ø 15.9 mm	- terminal		10	<b>8KX 716 405-011</b>	10
	For cables from 50.0 - 120.0 mm <sup>2</sup>					
	Pin Ø 17.5 mm with light cable connection	+ terminal		10	<b>8KX 707 912-001</b>	10
	Pin Ø 15.9 mm without light cable connection	- terminal		10	<b>8KX 707 912-011</b>	10
	For cables from 50.0 - 120.0 mm <sup>2</sup>					
	With screw M 12 x 1.75, pin Ø 17.5 mm	+ terminal		10	<b>8KX 707 913-011</b>	10
	With screw M 10 x 1.5, pin Ø 15.9 mm	- terminal		10	<b>8KX 707 913-001</b>	10

## 6.1 Battery terminals

Description	+/-	DIN	Contents in pieces	Part number	Order unit in pieces
<b>FORD BATTERY TERMINAL</b>					
	+ terminal		10	8KX 742 695-032	10
	- terminal		10	8KX 742 695-022	10
<b>QUICKLOCK BATTERY POLE CLAMP</b>					
	- terminal		10	8KX 174 396-012	10
<b>STARTER CABLE WITH BATTERY TERMINAL AND M8 RING TONGUE</b>					
	Cable cross section: 25.0 mm <sup>2</sup> , 900.0 mm long, pin Ø 17.5 mm + terminal		5	8KX 707 919-021	5

## 6.2 Grounding straps







### Application

The highly flexible electrical conductors have already been used for decades in a range of electrical vehicle applications. As the name implies, applications such as terminating/grounding EMC disturbances or static charges are involved. In this context, the ground strap must reliably withstand high amperages such as those that can occur between the starter and battery. If the electrical system is malfunctioning, a defective or nonexistent ground strap can be the cause.

### Range advantages

- Designs optimised for the respective application area
- Dense woven structure enables reliable discharging of currents
- Sustainable specification with lead-free dip soldering process

## 6.2 Grounding straps

	Description	Cable cross-section in mm <sup>2</sup>	Load-carrying capacity	Length in mm	Contents in pieces	Part number	Order unit in pieces
<b>ENGINE EARTHING STRAPS</b>							
	Made from highly flexible copper braiding, punch Ø 10.5 mm	16.0	65 A	150	5	8KX 707 916-001	5
				200	5	8KX 707 916-011	5
				250	5	8KX 707 916-021	5
		21.0	80 A	200	5	8KX 707 917-011	5
				250	5	8KX 707 917-021	5
				300	5	8KX 707 917-031	5
<b>SUPPRESSOR EARTHING STRAPS</b>							
	Made from highly flexible copper braiding, punch Ø 8.5 mm	10.0	48 A	180	5	8KX 707 918-001	5
				210	5	8KX 707 918-011	5
				280	5	8KX 707 918-021	5
				400	5	8KX 707 918-031	5
<b>BATTERY EARTHING STRAPS</b>							
 	Made from highly flexible copper braiding, punch Ø 11.0 mm, terminal post 15.9 mm	21.0	80 A	180	10	8KX 091 391-001	10
				250	10	8KX 091 392-001	10
				300	10	8KX 091 394-001	10
				320	10	8KX 091 395-001	10
				350	10	8KX 719 756-001	10
				400	10	8KX 719 757-001	10
				500	10	8KX 719 757-012	10

## 6.3 Hose/pipe clamps



### Application

Hose and pipe clamps are typical fastening elements for liquid line mechanisms. Our universal hose clamps are particularly well suited for applications that involve high mechanical loads due to their high tensile strength, high breaking torque and uniform force distribution. All configurations are available in different alloy variants.




### Range advantages

- Strong, durable attachment solution for fluid systems
- Wide ranging assortment including all the usual sizes for automobiles
- Hose clamps compliant with DIN 3017

## 6.3 Hose/pipe clamps

	Description	Clamping range for Ø in mm	Band width in mm	Contents in pieces	Part number	Order unit in pieces		
<b>HOSE CLAMPS</b>								
	In insert magazine, band and housing in stainless steel, zinc-coated steel screw  The insert magazine system is a flexible and compact storage solution. The individual elements can be combined as required.	8.0 - 16.0	9.0	50	8HK 710 701-111	50		
		12.0 - 20.0	9.0	50	8HK 710 701-121	50		
		16.0 - 25.0	9.0	50	8HK 710 701-131	50		
		20.0 - 32.0	9.0	50	8HK 710 701-141	50		
		25.0 - 40.0	9.0	25	8HK 710 701-151	25		
		32.0 - 50.0	9.0	25	8HK 710 701-161	25		
	For gasoline lines, band and housing in stainless steel, zinc-coated steel screw	7.0 - 11.0	5	100	8HK 713 394-001	100		
	Band and housing in stainless steel, zinc-coated steel screw	8.0 - 16.0	9.0	100	8HK 713 820-001	100		
		12.0 - 20.0	9.0	100	8HK 713 820-011	100		
		16.0 - 25.0	9.0	100	8HK 713 820-021	100		
		20.0 - 32.0	9.0	100	8HK 713 820-031	100		
		25.0 - 40.0	9.0	100	8HK 713 820-041	100		
		32.0 - 50.0	9.0	50	8HK 713 820-051	50		
		40.0 - 60.0	9.0	50	8HK 713 820-061	50		
		50.0 - 70.0	9.0	25	8HK 713 820-071	25		
		60.0 - 80.0	9.0	25	8HK 713 820-081	25		
		70.0 - 90.0	9.0	25	8HK 713 820-091	25		
	All parts in zinc-coated steel	8.0 - 12.0	9.0	100	8HK 748 452-002	100		
		10.0 - 16.0	9.0	100	8HK 748 452-012	100		
		12.0 - 22.0	9.0	100	8HK 748 452-022	100		
		16.0 - 27.0	9.0	100	8HK 748 452-032	100		
		20.0 - 32.0	9.0	100	8HK 748 452-042	100		
		25.0 - 40.0	9.0	100	8HK 748 452-052	100		
		35.0 - 50.0	9.0	50	8HK 748 452-062	50		
		50.0 - 70.0	9.0	25	8HK 748 452-072	25		
		60.0 - 80.0	9.0	25	8HK 748 452-082	25		
		70.0 - 90.0	9.0	25	8HK 748 452-092	25		
		80.0 - 100.0	9.0	25	8HK 748 452-102	25		
			Band and housing in stainless steel, zinc-coated steel screw	16.0 - 27.0	12.0	25	8HK 748 453-102	25
				20.0 - 32.0	12.0	25	8HK 748 453-112	25
35.0 - 50.0	12.0			10	8HK 748 453-132	10		
40.0 - 60.0	12.0			10	8HK 748 453-142	10		
50.0 - 70.0	12.0			10	8HK 748 453-152	10		
60.0 - 80.0	12.0			10	8HK 748 453-162	10		
	All parts in zinc-coated steel	90.0 - 110.0	12.0	10	8HK 748 453-192	10		
		16.0 - 27.0	12.0	20	8HK 710 702-101	20		
		20.0 - 32.0	12.0	20	8HK 710 702-111	20		
		35.0 - 50.0	12.0	10	8HK 710 702-131	10		
		40.0 - 60.0	12.0	10	8HK 710 702-141	10		
		50.0 - 70.0	12.0	10	8HK 710 702-151	10		
		60.0 - 80.0	12.0	10	8HK 710 702-161	10		
90.0 - 110.0	12.0	10	8HK 710 702-191	10				

## 6.3 Hose/pipe clamps

Description		Inner diameter for Ø in mm	Band width in mm	Surface finish	Contents in pieces	Part number	Order unit in pieces
<b>PIPE CLAMPS</b>							
	12 W1	6.0	12.0	galvanised	100	<b>8HS 749 192-002</b>	100
		8.0	12.0	galvanised	100	<b>8HS 749 192-012</b>	100
		10.0	12.0	galvanised	100	<b>8HS 749 192-022</b>	100
		12.0	12.0	galvanised	100	<b>8HS 749 192-032</b>	100
		13.0	12.0	galvanised	100	<b>8HS 749 192-042</b>	100
		14.0	12.0	galvanised	100	<b>8HS 749 192-052</b>	100
		16.0	12.0	galvanised	100	<b>8HS 749 192-062</b>	100
		18.0	12.0	galvanised	100	<b>8HS 749 192-072</b>	100
		19.0	12.0	galvanised	100	<b>8HS 749 192-082</b>	100
		20.0	12.0	galvanised	100	<b>8HS 749 192-092</b>	100
	15 W1	6.0	15.0	galvanised	100	<b>8HS 749 193-002</b>	100
		8.0	15.0	galvanised	100	<b>8HS 749 193-012</b>	100
		10.0	15.0	galvanised	100	<b>8HS 749 193-022</b>	100
		12.0	15.0	galvanised	100	<b>8HS 749 193-032</b>	100
		15.0	15.0	galvanised	100	<b>8HS 749 193-042</b>	100
		18.0	15.0	galvanised	100	<b>8HS 749 193-052</b>	100
		20.0	15.0	galvanised	100	<b>8HS 749 193-062</b>	100
		23.0	15.0	galvanised	50	<b>8HS 749 193-072</b>	50
		25.0	15.0	galvanised	50	<b>8HS 749 193-082</b>	50
26.0	15.0	galvanised	50	<b>8HS 749 193-092</b>	50		
	20 W1	18.0	20.0	galvanised	50	<b>8HS 749 194-002</b>	50
		20.0	20.0	galvanised	25	<b>8HS 749 194-012</b>	25
		25.0	20.0	galvanised	25	<b>8HS 749 194-022</b>	25



## 6.4 Spring band clamps



### Application

Unlike standard hose clamps, spring bracket clamps (SBCs) have a flexible holding mechanism. This greatly increases their service life for frequent temperature fluctuations in the application area (e.g. for air or fuel circuits). When the fluid system expands in diameter as a result of elevated temperatures, the SBCs adapt accordingly as they also do for a temperature-induced reduction in cross-section diameter. This, in turn, ensures optimal fixation.

### Range advantages

- Strong, durable attachment solution for fluid systems
- Optimal support at all times thanks to dynamic spring properties
- Broad product range with all common vehicle dimensions
- as per DIN 3021

## 6.4 Spring band clamps

	Nominal diameter in mm	Band width in mm	Contents in pieces	Part number	Order unit in pieces
<b>SPRING BAND CLAMPS</b>					
	13	12	100	8HK 187 228-131	100
	14 R	12	100	8HK 187 228-141	100
	15	12	100	8HK 187 228-151	100
	16 R	12	100	8HK 187 228-161	100
	17	12	100	8HK 187 228-171	100
	18	12	100	8HK 187 228-181	100
	19 R	12	100	8HK 187 228-191	100
	20	12	50	8HK 187 228-201	50
	21	12	50	8HK 187 228-211	50
	22	12	50	8HK 187 228-221	50
	23	12	50	8HK 187 228-231	50
	24	12	50	8HK 187 228-241	50
	25	12	50	8HK 187 228-251	50
	26	12	50	8HK 187 228-261	50
	27	12	50	8HK 187 228-271	50
	28	12	50	8HK 187 228-281	50
	29	12	50	8HK 187 228-291	50
	30	12	25	8HK 187 228-301	25
	32 R	12	25	8HK 187 228-321	25
	35	12	25	8HK 187 228-351	25
	36	12	25	8HK 187 228-361	25
	38	12	25	8HK 187 228-381	25
	40 R	12	25	8HK 187 228-401	25
	42	12	25	8HK 187 228-421	25
	44	12	25	8HK 187 228-441	25
	46	12	25	8HK 187 228-461	25
	47	12	25	8HK 187 228-471	25
	50	12	10	8HK 187 228-501	10
	55	12	10	8HK 187 228-551	10

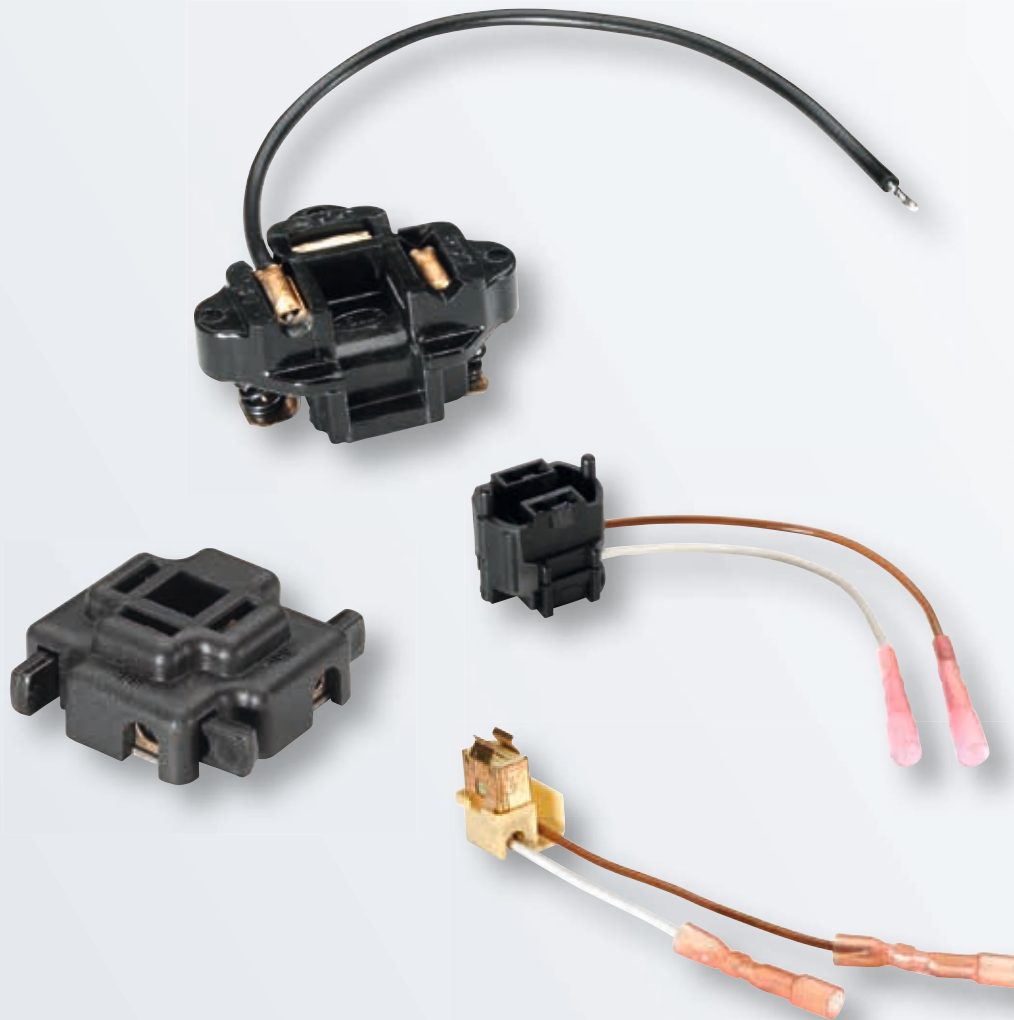


Depicted example spring band clamp, type "FBS"



Depicted example: spring band clamp, type "FBSR"

## 6.5 Connector /pin base for bulbs



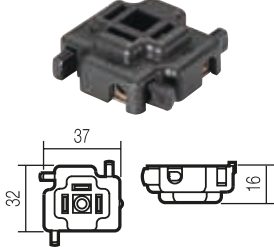
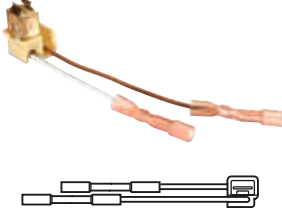
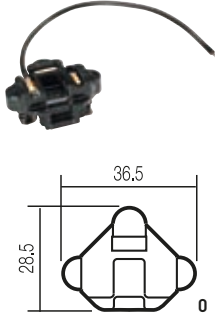
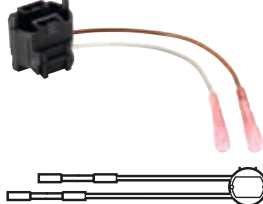
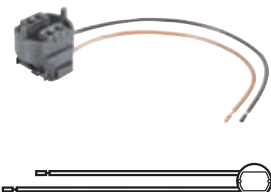
### Application

Pin bases for bulbs are used in special applications such as auxiliary lamps in agricultural and construction machinery. They are also employed to carry out fair-value repair work on headlamps whose base has fused with the bulb or for which corrosion has formed and led to contact resistance.

### Range advantages

- Time-saving repair for the workshop or the final consumer
- H1 and H7 pin bases with high-quality, prefabricated cables with butt-joint connectors

## 6.5 Connector/pin base for bulbs

	Description	Connection	Part number	Order unit in pieces
<b>MALE CONNECTOR</b>				
	For H4 or RL bulbs, 3-pin, cable connection clamp can be released via pushbuttons			
	without earth cable	up to max. 2.5	<b>8JA 001 909-001</b>	10
	with earth cable (130 mm)	up to max. 2.5	<b>8JA 001 909-011</b>	10
<b>PIN BASE FOR HEADLAMPS</b>				
	Connector with prefabricated cables and butt-joint connectors for H1 bulbs			
	Cable length, brown (ground): 60.0 mm Cable length, white: 40.0 mm Cable connection with crimp	up to max. 1.0	<b>8KB 863 949-001</b>	1
<b>MALE CONNECTOR</b>				
	For H4 or RL bulbs, 3-pin, can be released via pushbuttons, with ground cable (130.0 mm)	up to max. 2.5	<b>8JA 001 914-011</b>	10
<b>MALE CONNECTOR</b>				
	With prefabricated cables and butt-joint connectors for H7 bulbs			
	Cable length, brown (ground): 120.0 mm Cable length, white: 100 mm Cable connection with crimp	up to max. 1.0	<b>8KB 863 949-011</b>	1
<b>MALE CONNECTOR</b>				
	With prefabricated and incised cable ends	up to max. 1.0	<b>8KB 193 607-001</b>	1
	Cable length, black: 150.0 mm Cable length, brown (ground): 130.0 mm	up to max. 1.0	<b>8KB 193 607-002</b>	10

## 6.6 Trailer connection units/voltage transformers



### Application


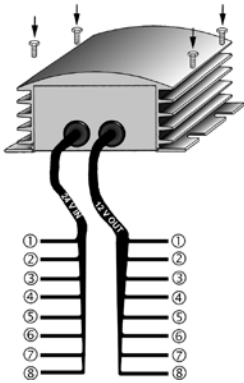
Trailer connection units allow the use of 12 V trailers on vehicles with 24 V operating voltage. The integrated voltage transformer permits operation without a separate charge compensation device. The trailer connection unit has 7 channels for the light function of the trailer. A 12 V trailer indicator lamp malfunction is indicated by the series C2 indicator lamp.

Known vehicle limitations: Not for Mercedes-Benz Atego model series MP2, not for DAF 75.360 CF

### Load-carrying capacity

- Rated voltage: 24 V/12 V
- Output per switch channel: 2 x 21 W
- Output per direction indicator: 1 x 21 W
- Operating temperature: -30 °C to +80 °C
- Polarity reversal protection: Continuously reverse-polarity protected
- Protection class: IP 5K9K in accordance with DIN 50021-55
- Type approvals: e1/CE

## 6.6 Trailer connection units/voltage transformers

	Cable colour	Part number	Order unit in pieces
<b>TRAILER CONNECTING UNITS</b>			
	<p><b>24 V towing vehicle, ISO 12098</b>            1 yellow = direction indicator, left            2 green = direction indicator, right            3 blue = rear fog light            4 white = ground            5 black = tail light, left            6 brown = tail light, right            7 red = stop light            8 grey = reverse light</p>		
	<p><b>12 V trailer, ISO 11446 or ISO 1724</b>            1 yellow = direction indicator, left            2 blue = rear fog light            3 white = ground            4 green = direction indicator, right            5 brown = tail light, right            6 red = stop light            7 black = tail light, left            8 grey = reverse light</p> <p>Voltage converter, 24 V/12 V</p>	<p><b>5DS 008 125-011</b></p>	<p><b>1</b></p>

## 6.6 Trailer connection units/voltage transformers



### Application


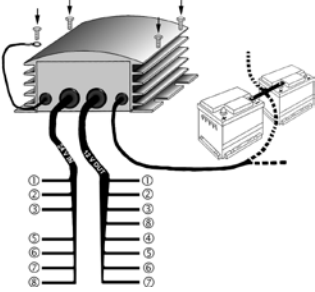
Trailer connection units allow the use of 12 V trailers on vehicles with 24 V operating voltage. The trailer connection unit requires a separate charge compensation device or a separate voltage transformer with 8 A/12 V.

The following devices can be used for this purpose:  
8ES 008 124-001.

### Load-carrying capacity

- Rated voltage: 24 V/12 V
- Quiescent current: 8 mA
- Control current of switch channels: 2.5 mA
- Output per switch channel: 2 x 21 W
- Output per direction indicator: 21 W
- Voltage drop of switch channels: 200 mV
- Operating temperature: -30 °C to +80 °C
- Polarity reversal protection: Continuously reverse-polarity protected
- Protection class: IP 5K9K in accordance with DIN 50021-55
- Type approvals: e1/CE

## 6.6 Trailer connection units/voltage transformers

	Cable colour	Part number	Order unit in pieces
<b>TRAILER CONNECTING UNITS</b>			
	<p><b>24 V towing vehicle, ISO 12098</b></p> <p>1 yellow = direction indicator, left                  2 green = direction indicator, right                  3 blue = rear fog light                  5 black = tail light, left                  6 brown = tail light, right                  7 red = stop light                  8 grey = reverse light</p>		
	<p><b>12 V trailer, ISO 11446 or ISO 1724</b></p> <p>1 yellow = direction indicator, left                  2 blue = rear fog light                  3 white = ground                  4 green = direction indicator, right                  5 brown = tail light, right                  6 red = stop light                  7 black = tail light, left                  8 grey = reverse light</p> <p>Voltage converter, 24 V/12 V</p>	5DS 008 125-001	1



## 6.7 Charge compensation device



### Application

The charge compensation device detects the voltages of the two 12 V batteries. Should the ground-side battery have less voltage, the charge compensation device provides a compensating current. An LED indicates when the device is working. 12 V consumers can therefore be connected to the ground-side battery.


The configuration of the charge compensation device depends on the average current drain of all 12 V consumers. For a conventional voltage transformer, the device configuration must correspond with the maximum current drain of all 12 V consumers.

Therefore add up the average current drain of all 12 V consumers.

### Load-carrying capacity

- Rated voltage: 24 V
- Equalizing current: 8 A
- Quiescent current: 15 mA
- Turn-on voltage: 27 V
- Turn-off differential voltage: 0.5 V
- Operating temperature: -25 °C to +65 °C
- Polarity reversal protection and short-circuit proof
- Protection class: IP 5K9K

## 6.7 Charge compensation device

Description	Part number	Order unit in pieces
<p><b>CHARGE COMPENSATION DEVICE</b></p>  <p>For vehicles with 24 V operating voltage</p> <p>The connection is made using 3 cables: One cable to 24 V, one to ground and one to the center tap of the batteries (see diagram).</p> <p>"Plus" charge compensation device</p>	<b>8ES 008 124-001</b>	1

## 7 Product range case/accessories

### 7.1 Assortment case




#### Application

HELLA product ranges include a selection of the most common products in a particular topic area – well laid out and compact in a high-quality, fully mobile concept. Four cases can be integrated in the practical Handy Box that offers not only a transport handle, but also many fastening options (further information: page 184).

#### Range advantages


- All important dimensions/amperages are well organised in a single location
- The modular case concept offers many options for expanding and resorting/reorganising (further information: page 184)

## 7.1 Assortment case

Description	Part number	Order unit in pieces
<b>FUSE ASSORTMENT CASE</b>		
 <p>Comprising: ATO (25 pcs. each per rated current), MINI blade terminal fuses (20 pcs. each per rated current) and a MINI/ATO blade terminal fuse tester/gripper.</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	<b>8JS 009 257-801</b>	1

Description	Ampere	Colour	Quantity in the assortment	Short designation	Part number for Fuses	Order unit in pieces
<b>CONTENT, PRODUCT RANGE CASE, FUSES</b>				<b>SPARE PARTS FOR REFILLING</b>		
ATO blade terminal fuse	2 A	■	25	D 129	<b>8JS 711 683-021</b>	50
	3 A	■	25	D 69	<b>8JS 711 683-002</b>	50
	4 A	■	25	D 188	<b>8JS 711 683-052</b>	50
	5 A	■	25	D 70	<b>8JS 711 684-002</b>	50
	7.5 A	■	25	D 71	<b>8JS 711 685-002</b>	50
	10 A	■	25	D 72	<b>8JS 711 686-002</b>	50
	15 A	■	25	D 73	<b>8JS 711 687-002</b>	50
	20 A	■	25	D 74	<b>8JS 711 688-002</b>	50
	25 A	□	25	D 75	<b>8JS 711 689-002</b>	50
	30 A	■	25	D 76	<b>8JS 711 690-002</b>	50
	40 A	■	25	D 130	<b>8JS 711 683-031</b>	50
MINI blade fuse	2 A	■	20	D 138	<b>8JS 728 596-081</b>	50
	3 A	■	20	D 139	<b>8JS 728 596-101</b>	50
	4 A	■	20	D 140	<b>8JS 728 596-121</b>	50
	5 A	■	20	D 141	<b>8JS 728 596-131</b>	50
	7.5 A	■	20	D 142	<b>8JS 728 596-111</b>	50
	10 A	■	20	D 143	<b>8JS 728 596-141</b>	50
	15 A	■	20	D 144	<b>8JS 728 596-151</b>	50
	20 A	■	20	D 145	<b>8JS 728 596-161</b>	50
	25 A	□	20	D 146	<b>8JS 728 596-091</b>	50
	30 A	■	20	D 147	<b>8JS 728 596-171</b>	50


## 7.1 Assortment case

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, CRIMP CONNECTOR PRODUCT RANGE, UNINSULATED</b>		
 <p>Comprising: Different uninsulated connectors</p> <p>(quantity in reorder does not correspond with the number in the set; not all articles can be replenished)</p>	<b>8KW 009 255-801</b>	1

Description	Cable cross section in mm <sup>2</sup>	Male connector dimensions mm	Quantity in the assortment
<b>CONTENT, PRODUCT RANGE CASE UNINSULATED CRIMP CONNECTORS</b>			
Flat receptacle with locking tag	0.5 - 1.0	2.8 x 0.8	50
		4.8 x 0.8	50
		6.3 x 0.8	50
	1.5 - 2.5	6.3 x 0.8	50
Female spade connector with locking tag, claw across	1.5 - 2.5	6.3 x 0.8	20
Blade terminal with lock	0.5 - 1.0	2.8 x 0.8	50
		6.3 x 0.8	50
		1.5 - 2.5	6.3 x 0.8
Flat receptacle	0.5 - 1.0	4.8 x 0.8	50
	0.75 - 1.5	6.3 x 0.8	50
Flat receptacle, transverse claw	0.5 - 1.5	6.3 x 0.8	20
Flat receptacle	1.5 - 2.5	6.3 x 0.8	50
	4.0 - 6.0	9.5 x 1.2	50
Blade terminals	1.5 - 2.5	6.3 x 0.8	50
Male connector distributor, double		6.3 x 0.8	20
Male connector distributor, triple		6.3 x 0.8	20
Piggy back spade connector	1.5 - 2.5	6.3 x 0.8	20
Coupling, 2x		6.3 x 0.8	20
Male spade connector, 45°		6.3 x 0.8	20
Blade terminal, Ø 5.3 mm		6.3 x 0.8	20

Short designation	Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>		
B 100	<b>8KW 744 817-003</b>	100
B 64	<b>8KW 733 815-003</b>	100
B 103	<b>8KW 744 819-003</b>	100
B 54	<b>8KW 701 235-033</b>	100
B 105	<b>8KW 744 821-003</b>	100
B 90	<b>8KW 744 834-003</b>	100
B 88	<b>8KW 744 832-003</b>	100
B 57	<b>8KW 048 056-033</b>	100
B 94	<b>8KW 744 828-003</b>	100
B 51	<b>8KW 043 629-013</b>	100
B 93	<b>8KW 744 827-003</b>	100
B 52	<b>8KW 043 630-013</b>	100
B 95	<b>8KW 744 787-003</b>	50
B 86	<b>8KW 744 823-003</b>	100
B 59	<b>8KW 043 636-003</b>	100
B 60	<b>8KW 700 144-003</b>	50
B 82	<b>8KW 744 885-003</b>	100


## 7.1 Assortment case

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, CRIMP CONNECTOR PRODUCT RANGE (DURASEAL)</b>		
 <p>Comprising: Different Duraseal crimp connectors</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	<b>8KW 009 253-801</b>	1

Description	Cable cross section in mm <sup>2</sup>	Insertion width in mm/ eyelet hole	Quantity in the assortment
<b>CONTENTS OF ASSORTMENT CASE</b>			
<b>ASSORTMENT OF DURASEAL CRIMP CONNECTORS</b>			
Insulating splice	0.5 - 1.0		15
	1.5 - 2.5		15
	4.0 - 6.0		15
Flat receptacle	0.5 - 1.0	6.3 x 0.8	15
	1.5 - 2.5	6.3 x 0.8	15
Blade terminals	0.5 - 1.0	6.3 x 0.8	15
	1.5 - 2.5	6.3 x 0.8	15
Female bullet connector	1.5 - 2.5	∅ 5.0	15
Male bullet connector	1.5 - 2.5	∅ 5.0	15
Ring connector	1.5 - 2.5	M5	15
		M6	15
		M8	15
	4.0 - 6.0	M5	15
		M6	15
Fork connector	1.5 - 2.5	M4	15
		M5	15

Short designation	Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>		
A 113	<b>8KW 732 579-003</b>	25
A 114	<b>8KW 732 580-003</b>	25
A 115	<b>8KW 732 581-003</b>	25
A 100	<b>8KW 732 566-003</b>	25
A 101	<b>8KW 732 567-003</b>	25
A 102	<b>8KW 732 568-003</b>	25
A 103	<b>8KW 732 569-003</b>	25
A 168	<b>8KW 744 768-003</b>	25
A 166	<b>8KW 744 766-003</b>	25
A 107	<b>8KW 732 573-003</b>	25
A 109	<b>8KW 732 575-003</b>	25
A 111	<b>8KW 732 577-003</b>	25
A 108	<b>8KW 732 574-003</b>	25
A 110	<b>8KW 732 576-003</b>	25
A 157	<b>8KW 744 757-003</b>	25
A 158	<b>8KW 744 758-003</b>	25


## 7.1 Assortment case

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, INSULATED CRIMP CONNECTORS</b>		
 <p>Comprising: Different crimp connectors, one branch connector, one coupling and one pair of crimping pliers</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	<b>8KW 009 254-801</b>	1

Description	Cable cross section in mm <sup>2</sup>	Insertion width in mm/ eyelet hole	Quantity in the assortment
<b>CONTENTS OF ASSORTMENT CASE OF INSULATED CRIMP CONNECTORS</b>			
Female bullet connector	0.5 - 1.0	Ø 4.0	20
Male bullet connector	0.5 - 1.0	Ø 4.0	20
Flat receptacle	0.5 - 1.0	2.8 x 0.5	20
	0.5 - 1.0	6.3 x 0.8	20
Flat receptacle, fully insulated	0.5 - 1.0	6.3 x 0.8	20
Flat receptacle	1.5 - 2.5	6.3 x 0.8	20
Blade terminals	0.5 - 1.0	6.3 x 0.8	20
	1.5 - 2.5	6.3 x 0.8	20
Ring connector	0.5 - 1.0	M4	20
	0.5 - 1.0	M5	20
	1.5 - 2.5	M4	20
	1.5 - 2.5	M5	20
	1.5 - 2.5	M6	20
Ring connector	4.0 - 6.0	M5	20
	4.0 - 6.0	M6	20
Insulating splice	1.5 - 2.5		20
Open connector	1.5 - 2.5	M5	20
Piggy back spade connector	1.5 - 2.5	2.8 x 0.5	20
Branch cable connector			20
Clutch		6.3 x 0.8	20
Crimping pliers			1

Short designation	Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>		
A 63	<b>8KW 045 145-003</b>	50
A 61	<b>8KW 044 040-003</b>	100
A 50	<b>8KW 705 393-003</b>	100
A 52	<b>8KW 044 036-003</b>	100
A 82	<b>8KW 708 373-003</b>	50
A 53	<b>8KW 044 022-003</b>	100
A 59	<b>8KW 702 796-003</b>	100
A 60	<b>8KW 044 288-003</b>	100
A 67	<b>8KW 044 276-003</b>	100
A 69	<b>8KW 044 291-003</b>	100
A 68	<b>8KW 044 028-003</b>	100
A 70	<b>8KW 044 027-003</b>	100
A 72	<b>8KW 044 039-003</b>	100
A 71	<b>8KW 044 029-003</b>	50
A 73	<b>8KW 044 030-003</b>	50
A 80	<b>8KW 044 033-002</b>	100
A 78	<b>8KW 044 037-003</b>	100
A 58	<b>8KW 044 032-003</b>	50
I 50	<b>8KW 705 123-002</b>	25
A 84	<b>8KW 044 035-003</b>	25
	<b>8PE 002 006-001</b>	1


## 7.1 Assortment case













Description	Part number for Case	Order unit in pieces
<b>PLUG HOUSING PRODUCT RANGE CASE, "SUPERSEAL" PRODUCT RANGE</b>		
 <p>Comprising: Various "SUPERSEAL" plug housings, pin/socket contacts, strand insulations and blind plugs</p> <p>(quantity in reorder does not correspond with the number in the set)</p>	<b>8JA 009 256-801</b>	1

Description	Cable cross-section in mm <sup>2</sup>	Quantity in the assortment	Short designation	Part number	Order unit in pieces
<b>CONTENTS OF ASSORTMENT CASE SUPERSEAL PLUG HOUSING ASSORTMENT</b>			<b>SPARE PARTS FOR REFILLING</b>		
Individual wire seal	1.8 - 2.4	100	B 145	<b>9GD 746 185-002</b>	50
Dummy plug		100	B 147	<b>9GD 746 187-002</b>	50
Male pin contact	1.0 - 1.5	100	B 143	<b>8KW 744 836-002</b>	50
Female contact	1.0 - 1.5	100	B 144	<b>8KW 744 837-002</b>	50
Pin housing, 1-pin		5		<b>8JA 746 183-012</b>	10
Female socket housing, 1-pole		5		<b>8JA 746 184-012</b>	10
Pin housing, 2-pin		5		<b>8JA 746 183-022</b>	10
Female socket housing, 2-pole		5		<b>8JA 746 184-022</b>	10
Pin housing, 3-pin		5		<b>8JA 746 183-032</b>	10
Female socket housing, 3-pole		5		<b>8JA 746 184-032</b>	10
Pin housing, 4-pin		5		<b>8JA 746 183-042</b>	10
Female socket housing, 4-pole		5		<b>8JA 746 184-042</b>	10
Pin housing, 5-pin		5		<b>8JA 746 183-052</b>	10
Female socket housing, 5-pole		5		<b>8JA 746 184-052</b>	10
Pin housing, 6-pin		5		<b>8JA 746 183-062</b>	10
Female socket housing, 6-pole		5		<b>8JA 746 184-062</b>	10



## 7.1 Assortment case

Description	Part number for Case	Order unit in pieces
<b>PRODUCT RANGE CASE, HEAT-SHRINKABLE PLASTIC TUBING</b>		
 <p>Comprising: Various heat-shrinkable plastic tubes, shrink rate 2 : 1, operating temperature -55 °C to +125 °C, flame-retardant and self-extinguishing, UL224, shrinkage temperature min. 70 °C</p>	<b>9MJ 178 458-801</b>	1

Colour	Length in mm	Diameter in mm	Quantity in product range
<b>CONTENTS OF PRODUCT RANGE CASE FOR HEAT-SHRINKABLE PLASTIC TUBING</b>			
20x each 	50.0	2.4	60
30x each 	50.0	2.4	60
20x each 	50.0	3.2	60
30x each 	50.0	3.2	60
20x each 	50.0	4.8	60
30x each 	50.0	4.8	60
20x each 	50.0	6.4	60
30x each 	50.0	6.4	60
4x each 	100.0	9.5	20
4x each 	100.0	12.5	20
10x each 	100.0	19.1	20
5x each 	200.0	9.5	25
10 x	200.0	5x each, 19.1, 25.4	10

Part number	Order unit in pieces
<b>SPARE PARTS FOR REFILLING</b>	
9MJ 178 458-002	1
9MJ 178 458-012	1
9MJ 178 458-022	1
9MJ 178 458-032	1
9MJ 178 458-042	1
9MJ 178 458-052	1
9MJ 178 458-062	1
9MJ 178 458-072	1
9MJ 178 458-082	1
9MJ 178 458-092	1
9MJ 178 458-102	1
9MJ 178 458-112	1
9MJ 178 458-122	1

## 7.2 Product range accessories



### Application

The HELLA Handy Box is a practical transport frame for up to 4 product range cases.



- Ergonomic handle
- Assortment case latches securely into the retaining system



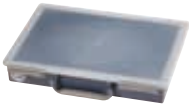



- Handy boxes can be combined together in a number of ways



- It can also be attached to walls (e.g. for arranging/fixing for vehicle equipment or workshop use).

## 7.2 Product range accessories

Description			
<b>ASSORTMENT CASE</b>			
	<p>The product range case can be subdivided individually with inserts in different sizes, including slide closures and an ergonomic handle; the grid system at the bottom prevents the contents from sliding around</p>		
Description		Part number	Order unit in pieces
<b>HANDY BOX</b>			
	<p>For product range case (without case)            Dimensions: (H x W x D in mm): 310.0 x 376.0 x 265.0</p>	<b>9XX 863 801-001</b>	1
<b>ASSORTMENT CASE</b>			
	<p>Empty, without inserts            Dimensions: (H x W x D, in mm): 57.0 x 338.0 x 261.0</p>	<b>9XX 863 802-001</b>	1
<b>INSERT FOR PRODUCT RANGE CASE</b>			
	<p><b>Insert 7-1</b>            Max. 8 inserts fit per case            Dimensions: (H x W x D, in mm): 47.0 x 79.0 x 109.0</p>	<b>9XX 863 800-021</b>	1
	<p><b>Insert 8-1</b>            Max. 16 inserts fit per case            Dimensions: (H x W x D, in mm): 47.0 x 45.0 x 79.0</p>	<b>9XX 863 800-011</b>	1
	<p><b>Insert 9-1</b>            Max. 32 inserts fit per case            Dimensions: (H x W x D, in mm): 47.0 x 39.0 x 55.0</p>	<b>9XX 863 800-001</b>	1

## 8. Tools

### 8.1 Basic crimping and release tool



#### Application


The "Basic" crimping tool set allows many different kinds of crimp connections to be created safely. The inserts can be changed quickly and easily and offer a time, space and cost-saving alternative to several individual tools.







The matching release set is here an appropriate counterpart for releasing existing connections.

#### Range advantages


- Strong basic solution
- Broad coverage with 6 different crimping tool heads, 9 release tools and 3 extension sleeves

## 8.1 Basic crimping and release tool

Description	Part number	Order unit in pieces
<b>BASIC CRIMPING TOOL SET</b>		
 <p data-bbox="501 622 743 667">Comprising: One pair of pliers and 6 inserts</p>	8PE 863 807-801	1

Description	Part number	Order unit in pieces
<b>BASIC CRIMPING TOOL SET INSERTS FOR REORDERING</b>		
 <p data-bbox="501 1025 919 1048">Insert A for insulated crimp connectors 0.5 – 6.0 mm<sup>2</sup></p>	8PE 863 807-411	1
 <p data-bbox="501 1176 948 1198">Insert B for uninsulated crimp connectors 1.5 – 10.0 mm<sup>2</sup></p>	8PE 863 807-421	1
 <p data-bbox="501 1326 919 1348">Insert C for uninsulated flat receptacles 0.5 – 6.0 mm<sup>2</sup></p>	8PE 863 807-431	1
 <p data-bbox="501 1476 871 1498">Insert D for wire nail receptacles, 0.5 – 4.0 mm<sup>2</sup></p>	8PE 863 807-441	1
 <p data-bbox="501 1626 852 1648">Insert F for cable end sleeves 6.0 - 16.0 mm<sup>2</sup></p>	8PE 863 807-451	1
 <p data-bbox="501 1776 810 1798">Insert H for pin contacts 0.5 – 10.0 mm<sup>2</sup></p>	8PE 863 807-461	1

## 8.1 Basic crimping and release tool

Description	Part number for Case	Order unit in pieces
<b>BASIC RELEASE SET</b>		
 <p>Comprising: 9 release tools and 3 extension sleeves</p>	<b>8PE 863 807-811</b>	1

Description	Vehicle manufacturer	Marking	Order unit in pieces
<b>CONTENTS OF BASIC RELEASE SET*</b>			
Release tool for contacts with a cable cross section of 1.5 mm <sup>2</sup> + extension sleeve	BMW, DaimlerChrysler, Fiat, MAN, Opel, Porsche, Seat, Skoda, VW/Audi	<b>HE01</b>	1
Release tool for contacts with a cable cross section of 3.5 mm <sup>2</sup> + extension sleeve	BMW, DaimlerChrysler, Fiat, MAN, Opel, Porsche, Seat, Skoda, VW/Audi	<b>HE02</b>	1
Release tool for contacts with a cable cross section of 3.5 mm <sup>2</sup> + extension sleeve	Ford, Opel, PSA, Renault	<b>HE05</b>	1
Release tool for connectors with a "release channel" of 2.8 and 5.8 mm <sup>2</sup>	BMW, DaimlerChrysler, Ford, MAN, Opel, Porsche, PSA, Renault, Seat, Skoda, VW/Audi	<b>HE53</b>	1
Release tool for Micro Timer II and III with a cable cross section of 1.6 mm <sup>2</sup>	DaimlerChrysler, VW/Audi	<b>HE56</b>	1
Release tool for Maxi-Power Timer with a cable cross section of 9.5 mm <sup>2</sup>	All vehicle makes/ specifications	<b>HE59</b>	1
Release tool for pit-pod contacts	Fiat, Ford, Mazda, Opel, PSA, Renault, Saab, VW/Audi	<b>HE62</b>	1
Release tool for Micro Timer I and ABS "plug-in housing" with a cable cross section of 1.6 mm <sup>2</sup>	Fiat, Ford, Mazda, Opel, PSA, Renault, Saab, VW/Audi	<b>HE53</b>	1
Release tool for connector with two "release channels" of 2.8 and 5.8 mm <sup>2</sup>	BMW, DaimlerChrysler, Fiat, Ford, MAN, Opel, PSA, Renault, Saab, VW/Audi	<b>HE91</b>	1

\* Content cannot be ordered separately

## 8.2 Professional crimping and release tool




### Application








Thanks to its special profile geometries, the professional crimping tool forms very precise radial contacts. The patented crimping tool set fixing concept ensures that the tool inserts are positioned perfectly. Furthermore, the pliers have an extra cutting and stripping unit in the handle which makes the tool set especially versatile. It is completed by a modular set of release blades on the back of the case.

### Range advantages

- High-quality all-in solution
- Broad application coverage with 5 different crimping tool heads, 4 release blades and the "Clip & Strip" cutting and stripping unit
- 3 different, individually expandable assembly variants
- Ergonomic, soft handle with slip guard
- Optimised mechanical power transmission facilitates long-term, unfatiguing use
- Made of hardened tool steel with special surface finish on elements subject to particularly high loads





## 8.2 Professional crimping and release tool

	Description	Part number for Case	Order unit in pieces
<b>CRIMPING TOOL AND RELEASE SET</b>			
	Crimping tool and release set "Profi type I"	8PE 863 807-821	1

	Description	Part number	Order unit in pieces
<b>CONTENTS OF PROFESSIONAL TYPE I CRIMPING TOOL AND RELEASE SET</b>			
	Basic pliers without inserts	8PE 863 807-021	1
	"Clip & Strip" stripping unit	8PE 863 807-201	1
	Insert 441 Cable cross section of 0.5 - 6.0 mm <sup>2</sup> for DIN cable lugs and insulated crimp connectors	8PE 863 807-211	1
	Insert red/yellow/blue Cable cross section of 0.35 - 6.0 mm <sup>2</sup> for fully insulated butt-joint connectors	8PE 863 807-221	1
	Insert JPT/TAB 2.8/MCP 2.8 Cable cross section of 0.35 - 2.5 mm <sup>2</sup>	8PE 863 807-231	1
	Universal insert Cable cross section of 0.25 - 6.0 mm <sup>2</sup> for uninsulated blade terminals and flat receptacles	8PE 863 807-251	1
	Basic grip for release	8PE 863 807-301	1



## 8.2 Professional crimping and release tool

	Description	Part number	Order unit in pieces
<b>CONTENTS OF PROFESSIONAL TYPE I CRIMPING TOOL AND RELEASE SET</b>			
	Blade MCP 2.8/FL 2.8/JPT/SPT	8PE 863 807-311	1
	Blade MDK 5, DFK 2, AFK	8PE 863 807-321	1
	Blade FSH 6.3	8PE 863 807-331	1
	Blade F2.8 FS/H 1.58	8PE 863 807-341	1






## 8.2 Professional crimping and release tool

Description	Part number for Case	Order unit in pieces
<b>CRIMPING TOOL AND RELEASE SET</b>		
 <p>Professional type II crimping tool and release set</p>	<b>8PE 863 807-831</b>	1




Description	Part number	Order unit in pieces
<b>CONTENTS OF PROFESSIONAL TYPE II CRIMPING TOOL AND RELEASE SET</b>		
 <p>Basic pliers without inserts</p>	<b>8PE 863 807-021</b>	1
 <p>"Clip &amp; Strip" stripping unit</p>	<b>8PE 863 807-201</b>	1
 <p>Insert 441 Cable cross section of 0.5 - 6.0 mm<sup>2</sup> for DIN cable lugs and insulated crimp connectors</p>	<b>8PE 863 807-211</b>	1
 <p>Insert red/yellow/blue Cable cross section of 0.35 - 6.0 mm<sup>2</sup> for fully insulated butt-joint connectors</p>	<b>8PE 863 807-221</b>	1
 <p>Insert AE 21 Cable cross section of 0.14 - 10 mm<sup>2</sup> for insulated and uninsulated wire end ferrules</p>	<b>8PE 863 807-241</b>	1

## 8.2 Professional crimping and release tool

Description	Part number for Case	Order unit in pieces
<b>CRIMPING TOOL AND RELEASE SET</b>		
 <p data-bbox="501 629 887 651">Professional type III crimping tool and release set</p>	<b>8PE 863 807-841</b>	1

Description	Part number	Order unit in pieces
<b>CONTENTS OF PROFESSIONAL TYPE III CRIMPING TOOL AND RELEASE SET</b>		
 <p data-bbox="501 1048 715 1070">Basic pliers without inserts</p>	<b>8PE 863 807-021</b>	1
 <p data-bbox="501 1240 708 1263">"Clip &amp; Strip" stripping unit</p>	<b>8PE 863 807-201</b>	1
 <p data-bbox="501 1415 1034 1478">Insert 441 Cable cross section of 0.5 - 6.0 mm<sup>2</sup> for DIN cable lugs and insulated crimp connectors</p>	<b>8PE 863 807-211</b>	1
 <p data-bbox="501 1608 1007 1671">Insert red/yellow/blue Cable cross section of 0.35 - 6.0 mm<sup>2</sup> for fully insulated butt-joint connectors</p>	<b>8PE 863 807-221</b>	1
 <p data-bbox="501 1800 1070 1863">Universal insert Cable cross section of 0.25 - 6.0 mm<sup>2</sup> for uninsulated blade terminals and flat receptacles</p>	<b>8PE 863 807-251</b>	1

## 8.2 Professional crimping and release tool

	Description	Part number	Order unit in pieces
<b>CONTENTS OF PROFESSIONAL TYPE III CRIMPING TOOL AND RELEASE SET</b>			
	Basic grip for release	8PE 863 807-301	1
	Blade MCP 2.8/FL 2.8/JPT/SPT	8PE 863 807-311	1
	Blade FSH 6.3	8PE 863 807-331	1

## 8.3 Heavy Duty tool system









### Application




The HELLA "Heavy Duty" tool system offers maximum machining precision thanks to its linear crimping technology. Unlike conventional radial pliers, this design is remarkable for the uniform distribution of force during the crimping process, which allows it to produce consistently high-quality work results. The system's modular design allows you to put together your own individual combinations and separately exchange basic handles and crimping or release tools.

### Range advantages

- High-quality, modular tool concept
- Linear/parallel crimping technology enables maximum machining precision
- Ergonomic, soft handle with slip guard
- Optimised mechanical power transmission facilitates long-term, unfatiguing use
- Made of hardened tool steel with special surface finish on elements subject to particularly high loads

## 8.3 Heavy Duty tool system

	Description	Part number	Order unit in pieces
<b>TOOL CASE</b>			
	<p>Heavy Duty Tool Case</p> <p>Front accommodates complete pliers and 4 tool heads Rear accommodates release handle and 12 blades</p>	<b>8PE 863 807-041</b>	1
	Tool handle for crimping pliers	<b>8PE 863 807-051</b>	1
	<p>SUPERSEAL tool</p> <p>The "SUPERSEAL" tool head offers all the advantages of the "Heavy Duty" system. It also has a built-in positioning aid on the rear, which makes it much easier to position the contact correctly within the tool.</p> <p>The specialised design concept allows crimping and insulation to be performed in one integrated work step. This saves valuable time.</p>	<b>8PE 863 807-401</b>	1
	Tool head Deutsch DT	<b>8PE 863 807-061</b>	1
	Tool head ABS-G	<b>8PE 863 807-071</b>	1
	Releasing tool handle	<b>8PE 863 807-301</b>	1

Description	Part number	Order unit in pieces
 <p>SUPERSEAL extraction blade</p>	8PE 863 807-351	1
 <p>Releasing blade, Deutsch DT</p>	8PE 863 807-371	1
 <p>Releasing blade ABS-G</p>	8PE 863 807-361	1

## 8.4 Squeezing and crimping pliers



### Application





Each of the application-specific hand-held tools is designed for a targeted application area. All models feature solid workmanship and ensure excellent work results.

### Range advantages

→ Specialised tool types for a range of applications



## 8.4 Squeezing and crimping pliers

	Description	Contents in pieces	Part number	Order unit in pieces
<b>PROFESSIONAL I SPECIAL CRIMPING PLIERS</b>				
	For insulated crimp connectors, cable cross section of 0.5 - 6.0 mm <sup>2</sup> (red/blue/yellow)	1	8PE 002 007-001	1
<b>PROFESSIONAL II SPECIAL CRIMPING PLIERS</b>				
	For uninsulated crimp connectors, cable cross section of 0.5 - 6.0 mm <sup>2</sup> . Not suited for crimping butt-joint connectors with insulation.	1	8PE 002 007-011	1
<b>EXPERT SPECIAL CRIMPING PLIERS</b>				
	For insulated crimp connectors, cable cross section of 0.5 - 6.0 mm <sup>2</sup> (red/blue/yellow) Suited for cutting bolts with threads in accordance with ISO of M2.6 - M3.5 and for shortening and stripping cables from 0.75 - 6.0 mm <sup>2</sup>	1	8PE 002 006-001	1
<b>QUICK LINK HAND GRIP PLIERS</b>				
	For the two-pin, "click-in" contact system (common e.g. in trailer and semi-truck trailer constructions)	1	8PE 008 932-001	1

# Part number overview

Part number	Content in pcs.	Type of packaging	Order unit in pcs.	Page
<b>2JS</b>				
218 228-011	1	Pro-fit packaging	1	14
218 228-021	1	Pro-fit packaging	1	14
218 228-031	1	Pro-fit packaging	1	14
218 228-041	1	Pro-fit packaging	1	14
218 228-051	1	Pro-fit packaging	1	14
218 228-061	1	Pro-fit packaging	1	14
218 228-071	1	Pro-fit packaging	1	14
<b>5DS</b>				
008 125-001		Folding box	1	174
008 125-011		Folding box	1	172
<b>8ES</b>				
007 589-121	1	PE bag	1	37
008 124-001		Folding box	1	176
<b>8EZ</b>				
008 021-001	1	Folding box	1	30
008 021-011	1	Folding box	1	30
008 021-021	1	Folding box	1	30
008 021-031	1	Folding box	1	30
008 021-041	1	Folding box	1	30
008 021-051	1	Folding box	1	30
008 022-001	1	Folding box	1	30
008 022-011	1	Folding box	1	30
<b>8HG</b>				
005 953-001	1	Folding box	1	62
007 647-001	1	Folding box	1	73, 76
<b>8HK</b>				
187 228-131	100	Folding box	100	168
187 228-141	100	Folding box	100	168
187 228-151	100	Folding box	100	168
187 228-161	100	Folding box	100	168
187 228-171	100	Folding box	100	168
187 228-181	100	Folding box	100	168
187 228-191	100	Folding box	100	168
187 228-201	50	Folding box	50	168
187 228-211	50	Folding box	50	168
187 228-221	50	Folding box	50	168
187 228-231	50	Folding box	50	168
187 228-241	50	Folding box	50	168
187 228-251	50	Folding box	50	168
187 228-261	50	Folding box	50	168
187 228-271	50	Folding box	50	168
187 228-281	50	Folding box	50	168
187 228-291	50	Folding box	50	168
187 228-301	25	Folding box	25	168
187 228-321	25	Folding box	25	168
187 228-351	25	Folding box	25	168
187 228-361	25	Folding box	25	168
187 228-381	25	Folding box	25	168
187 228-401	25	Folding box	25	168
187 228-421	25	Folding box	25	168
187 228-441	25	Folding box	25	168
187 228-461	25	Folding box	25	168
187 228-471	25	Folding box	25	168
187 228-501	10	Folding box	10	168

Part number	Content in pcs.	Type of packaging	Order unit in pcs.	Page
187 228-551	10	Folding box	10	168
710 701-111	50	Plastic insert magazine	50	165
710 701-121	50	Plastic insert magazine	50	165
710 701-131	50	Plastic insert magazine	50	165
710 701-141	50	Plastic insert magazine	50	165
710 701-151	25	Plastic insert magazine	25	165
710 701-161	25	Plastic insert magazine	25	165
710 702-101	20	Folding box	20	165
710 702-111	20	Folding box	20	165
710 702-131	10	Folding box	10	165
710 702-141	10	Folding box	10	165
710 702-151	10	Folding box	10	165
710 702-161	10	Folding box	10	165
710 702-191	10	Folding box	10	165
713 394-001	100	Folding box	100	165
713 820-001	100	Folding box	100	165
713 820-011	100	Folding box	100	165
713 820-021	100	Folding box	100	165
713 820-031	100	Folding box	100	165
713 820-041	100	Folding box	100	165
713 820-051	50	Folding box	50	165
713 820-061	50	Folding box	50	165
713 820-071	25	Folding box	25	165
713 820-081	25	Folding box	25	165
713 820-091	25	Folding box	25	165
713 820-101	25	Folding box	25	165
748 452-002	100	Folding box	100	165
748 452-012	100	Folding box	100	165
748 452-022	100	Folding box	100	165
748 452-032	100	Folding box	100	165
748 452-042	100	Folding box	100	165
748 452-052	100	Folding box	100	165
748 452-062	50	Folding box	50	165
748 452-072	25	Folding box	25	165
748 452-082	25	Folding box	25	165
748 452-092	25	Folding box	25	165
748 452-102	25	Folding box	25	165
748 453-102	25	Folding box	25	165
748 453-112	25	Folding box	25	165
748 453-132	10	Folding box	10	165
748 453-142	10	Folding box	10	165
748 453-152	10	Folding box	10	165
748 453-162	10	Folding box	10	165
748 453-192	10	Folding box	10	165
<b>8HL</b>				
177 884-012	100	PE bag, with Euro hole	100	152
177 884-022	100	PE bag, with Euro hole	100	152
185 549-001	100	PE bag	100	148
185 549-011	100	PE bag	100	148
185 549-021	100	PE bag	100	148
185 549-031	100	PE bag	100	148
185 549-041	100	PE bag	100	148
185 549-051	100	PE bag	100	148
185 549-061	100	PE bag	100	148
185 549-071	100	PE bag	100	148

Part number	Content in pcs.	Type of packaging	Order unit in pcs.	Page
707 877-002	100	PE bag, with Euro hole	100	150
707 877-012	100	PE bag, with Euro hole	100	150
707 877-022	100	PE bag, with Euro hole	100	150
707 877-032	100	PE bag, with Euro hole	100	150
707 877-041	100	PE bag, with Euro hole	100	150
707 877-051	50	PE bag, with Euro hole	100	150
707 877-081	100	PE bag, with Euro hole	100	150
707 877-091	100	PE bag, with Euro hole	100	150
707 877-101	100	PE bag, with Euro hole	100	150
707 877-121	100	PE bag, with Euro hole	100	150
707 877-131	50	PE bag, with Euro hole	50	150
707 877-141	100	PE bag, with Euro hole	100	150
707 878-012	100	PE bag, with Euro hole	100	151
707 878-022	100	PE bag, with Euro hole	100	151
707 879-012	100	PE bag, with Euro hole	100	151
717 962-001	100	PE bag, with Euro hole	100	150
717 962-011	100	PE bag, with Euro hole	100	150
717 962-021	100	PE bag, with Euro hole	100	150
717 962-031	100	PE bag, with Euro hole	100	150
717 962-041	100	PE bag, with Euro hole	100	150
717 962-051	100	PE bag, with Euro hole	100	150
717 962-061	100	PE bag, with Euro hole	100	150
717 962-111	100	PE bag, with Euro hole	100	150
717 962-121	50	PE bag, with Euro hole	50	150
717 962-131	100	PE bag, with Euro hole	100	150
717 962-141	100	PE bag, with Euro hole	100	150
717 962-161	100	PE bag, with Euro hole	100	150
717 962-171	100	PE bag, with Euro hole	100	150
717 962-181	100	PE bag, with Euro hole	100	150
717 964-001	100	PE bag, with Euro hole	100	151
<b>8HS</b>				
071 415-001	100	PE bag, with Euro hole	100	152
749 192-002	100	Folding box	100	166
749 192-012	100	Folding box	100	166
749 192-022	100	Folding box	100	166
749 192-032	100	Folding box	100	166
749 192-042	100	Folding box	100	166
749 192-052	100	Folding box	100	166
749 192-062	100	Folding box	100	166
749 192-072	100	Folding box	100	166
749 192-082	100	Folding box	100	166
749 192-092	100	Folding box	100	166
749 193-002	100	Folding box	100	166
749 193-012	100	Folding box	100	166
749 193-022	100	Folding box	100	166
749 193-032	100	Folding box	100	166
749 193-042	100	Folding box	100	166
749 193-052	100	Folding box	100	166
749 193-062	100	Folding box	100	166
749 193-072	50	Folding box	50	166
749 193-082	50	Folding box	50	166
749 193-092	50	Folding box	50	166
749 194-002	50	Folding box	50	166
749 194-012	25	Folding box	25	166
749 194-022	25	Folding box	25	166

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001 914-011	10	Folding box	10	170
001 915-001		Folding box	10	42
001 915-032		Folding box	10	42
001 916-001	1	Folding box	1	51
001 918-002	25	Folding box	25	55
001 918-011	25	Folding box	25	55
001 918-021	25	Folding box	25	55
001 920-011	1	Folding box	1	49
001 925-001	1	Folding box	1	44
001 930-001	1	Pro-fit packaging	1	55
001 930-003	25	Folding box	25	55
001 930-031	25	Folding box	25	59
001 930-041	25	Folding box	25	55
001 931-041	1	Folding box	1	80
001 931-051	1	Folding box	1	80
001 931-061	1	Folding box	1	80
001 931-071	1	Folding box	1	80
001 931-081	1	Folding box	1	80
002 262-001		Folding box	10	42
002 262-003	1	Pro-fit packaging	1	42
002 263-001	1	Folding box	1	47
002 263-011	10	Folding box	10	46
002 263-031	1	Folding box	1	47
002 264-051	1	Folding box	1	81
002 264-061	1	Folding box	1	81
003 831-001	10	Folding box	10	67
003 831-011	10	Folding box	10	67
003 832-001	10	Folding box	10	70
003 832-011	10	Folding box	10	70
005 476-001	100	Industrial packaging	100	56
005 476-002	5	Folding box	5	56
005 951-001	1	Folding box	1	62
005 951-003	1	Pro-fit packaging	1	62
005 951-027	1	Folding box	16	62
005 951-041	1	PE bag	1	62
005 951-061	1	Folding box	1	64
005 952-001	1	Folding box	1	84
005 952-011	1	Folding box	1	84
005 952-013	1	Pro-fit packaging	1	84
005 952-041	1	Folding box	1	86, 93
005 952-061	1	Folding box	1	85
005 952-081	1	Folding box	1	86, 93
005 952-091	1	Folding box	1	85
005 952-101	1	Folding box	1	86, 93
005 952-111	1	Folding box	1	86, 93
007 024-001	10	PE bag	1	20
007 241-021	1	Folding box	1	73
007 241-031	1	Folding box	1	73
007 589-001	10	Folding box	10	34
007 589-002	1	Pro-fit packaging	1	34
007 589-011	10	Folding box	10	35
007 589-021	10	Folding box	10	35
007 589-031	1	Pro-fit packaging	1	34

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007 589-032	10	Folding box	10	34
007 589-041	1	Pro-fit packaging	1	35
007 589-042	8	Folding box	8	35
007 589-052	8	Folding box	8	35
007 589-062	20	Folding box	20	40
007 589-111	1	PE bag	1	37
007 589-112	1	Pro-fit packaging	1	37
007 589-141	1	PE bag	1	37
007 589-152	8	Folding box	8	35
007 644-041	1	Folding box	1	76
007 644-051	1	Folding box	1	76
008 084-001	10	Folding box	10	67
008 084-011	10	Folding box	10	70
008 084-021	10	Folding box	10	67
008 084-031	10	Folding box	10	70
008 969-001	1	Folding box	1	84
008 969-011	1	Folding box	1	85
008 981-001	1	Folding box	1	85
009 256-801	510	PE film	1	136, 182
011 896-001	1	Folding box	1	76
179 368-001	1	Folding box	1	84
180 663-002	10	PE bag	10	145
180 663-012	10	PE bag	10	145
180 663-022	10	PE bag	10	145
180 663-032	10	PE bag	10	145
180 664-002	10	PE bag	10	146
180 664-012	10	PE bag	10	146
180 664-022	10	PE bag	10	146
180 664-032	10	PE bag	10	146
201 021-022	10	PE bag	10	139
201 021-032	10	PE bag	10	139
201 021-042	10	PE bag	10	139
201 021-062	10	PE bag	10	140
201 021-082	10	PE bag	10	140
201 021-122	10	PE bag	10	140
201 021-801	6	Pro-fit packaging	1	138
201 021-811	8	Pro-fit packaging	1	138
201 021-821	10	Pro-fit packaging	1	138
201 021-831	14	Pro-fit packaging	1	138
201 021-841	18	Pro-fit packaging	1	138
201 021-851	26	Pro-fit packaging	1	138
201 022-022	10	PE bag	10	139
201 022-032	10	PE bag	10	139
201 022-042	10	PE bag	10	139
201 022-062	10	PE bag	10	140
201 022-082	10	PE bag	10	140
201 022-122	10	PE bag	10	140
201 022-801	6	Pro-fit packaging	1	138
201 022-811	8	Pro-fit packaging	1	138
201 022-821	10	Pro-fit packaging	1	138
201 022-831	14	Pro-fit packaging	1	138
201 022-841	18	Pro-fit packaging	1	138
201 022-851	26	Pro-fit packaging	1	138
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746 183-022	10	PE bag	10	133, 136, 182

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746 183-042	10	PE bag	10	134, 136, 182
746 183-052		PE bag	10	134
746 183-062		PE bag	10	134
746 184-012	10	PE bag	10	133, 136, 182
746 184-022	10	PE bag	10	133, 136, 182
746 184-032	10	PE bag	10	134, 136, 182
746 184-042	10	PE bag	10	134, 136, 182
746 184-052	10	PE bag	10	134, 136, 182
746 184-062	10	PE bag	10	134, 136, 182
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001 933-031	1	Folding box	1	47
001 933-042	10	Folding box	10	46
001 934-021	1	Folding box	1	81
001 935-031	1	Folding box	1	79
001 935-041	1	Folding box	1	79
001 935-051	1	Folding box	1	79
001 935-061	1	Folding box	1	79
001 939-001	10	Folding box	10	56
001 940-001	1	Folding box	1	51
001 941-001	1	Pro-fit packaging	1	54
001 941-002	25	Folding box	25	54
001 941-041	25	Folding box	25	54
001 941-062	10	Folding box	10	54
001 943-001	1	Pro-fit packaging	1	54
001 943-003	25	Folding box	25	54
001 943-011	10	Folding box	10	54
001 943-041	25	Folding box	25	59
001 944-011	1	Folding box	1	49
001 946-001	10	Folding box	10	79
001 946-011	10	Folding box	10	38
001 946-021	10	Folding box	10	38
001 946-022	1	Pro-fit packaging	1	38
001 946-031	10	Folding box	10	38
001 946-041	10	Folding box	10	38
001 946-051	10	Folding box	10	38
001 946-072	10	Folding box	10	39
001 946-082	10	Folding box	10	39
001 946-092	10	Folding box	10	39
001 946-101	1	Folding box	1	39
001 946-127		Folding box	50	39
002 281-001	1	Folding box	1	44
002 281-002	1	Pro-fit packaging	1	44
002 281-011	1	Folding box	1	44
002 286-021	10	Folding box	10	40
002 286-031	10	Folding box	10	41
003 833-001	10	Folding box	10	67
003 833-011	10	Folding box	10	67
003 833-031	10	Folding box	10	67
003 834-001	10	Folding box	10	70
003 834-021	10	Folding box	10	70
003 834-031	10	Folding box	10	70
004 123-001	5	Folding box	5	41
004 123-002	1	Pro-fit packaging	1	41
004 123-012	5	Folding box	5	41

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004 123-032	5	Folding box	5	41
004 123-042	5	Folding box	5	34
004 123-051	1	PE bag	1	34
004 777-001	5	Folding box	5	40
004 777-002	1	Pro-fit packaging	1	40
004 777-011	5	Folding box	5	40
005 949-001	1	Folding box	1	62
005 949-011	1	Folding box	1	62
005 949-012	1	Pro-fit packaging	1	62
005 949-031	1	Folding box	1	64
005 949-041	1	Folding box	1	62
006 462-001	25	Folding box	25	54
006 464-001	10	Folding box	10	59
007 242-011	1	Folding box	1	73
007 242-021	1	Folding box	1	73
007 645-021	1	Folding box	1	76
007 645-031	1	Folding box	1	76
008 023-001	1	Folding box	1	31
008 023-011	1	Folding box	1	31
008 023-021	1	Folding box	1	31
008 023-031	1	Folding box	1	31, 32
008 023-067	160	Folding box	160	32
008 032-001	1	PE bag, with Euro hole	1	37
008 085-001	10	Folding box	10	67
008 085-011	10	Folding box	10	70
008 085-021	10	Folding box	10	67
008 085-031	10	Folding box	10	70
008 085-041	10	Folding box	10	67
008 085-051	10	Folding box	10	70
010 806-001	1	Folding box	1	80
011 895-001	1	Folding box	1	76
742 649-001	4	PE bag	1	27
742 649-041	4	PE bag	1	27
<b>8JD</b>				
002 289-201	1	PE bag	1	28
002 289-211	1	PE bag	1	28
002 290-141	10	Folding box	10	28
002 290-201	1	PE bag	1	28
002 290-211	1	PE bag	1	28
002 291-141	10	Folding box	10	28
002 291-201	1	PE bag	1	28
002 291-211	1	PE bag	1	28
002 294-081	10	Folding box	10	28
002 294-201	1	PE bag	1	28
002 294-211	1	PE bag	1	28
003 285-011	1	PE bag	1	20
003 285-021	1	PE bag	1	20
004 588-001	10	Folding box	15	28
005 235-002	6	Pro-fit packaging	6	21
005 235-801	2	Pro-fit packaging	1	21
005 993-001	10	Folding box	10	26
005 993-002	1	Pro-fit packaging	1	26
005 993-021	10	Folding box	10	26
005 993-032	10	Folding box	10	26

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005 993-051	10	Folding box	10	27
005 993-061	10	Folding box	10	27
005 993-072	10	Folding box	10	26
005 993-082	10	Folding box	10	26
005 993-092	10	Folding box	10	26
005 993-102	10	Folding box	10	26
005 993-112	10	Folding box	10	27
005 993-122	10	Folding box	10	27
005 993-161	1	Folding box	1	25
005 993-171	1	Folding box	1	25
005 993-181	1	Folding box	1	25
008 151-001	10	Folding box	10	143
008 151-011	10	Folding box	10	143
008 151-021	10	Folding box	10	143
008 151-031	10	Folding box	10	143
008 151-041	10	Folding box	10	143
008 151-051	10	Folding box	10	143
008 151-061	10	Folding box	10	143
008 152-001	10	Folding box	10	143
008 152-011	10	Folding box	10	143
008 152-021	10	Folding box	10	143
008 152-031	10	Folding box	10	144
008 152-041	10	Folding box	10	144
008 152-051	10	Folding box	10	144
008 152-061	10	Folding box	10	144
187 871-001	1	Pro-fit packaging	1	19
187 871-011	1	Pro-fit packaging	1	19
187 871-021	1	Pro-fit packaging	1	19
187 871-031	10	Folding box	10	21
187 871-041	1	Folding box	1	22
743 135-001	1	Pro-fit packaging	1	22
743 135-011	1	PE bag	1	22
743 136-001	1	Pro-fit packaging	1	22
743 557-001	1	Pro-fit packaging	1	19
743 557-011	1	Pro-fit packaging	1	19
743 557-021	1	Pro-fit packaging	1	19
743 557-031	1	Pro-fit packaging	1	19
743 557-041	1	Pro-fit packaging	1	19
743 557-051	1	Pro-fit packaging	1	19
743 557-081	1	Pro-fit packaging	1	22
743 557-091	1	Pro-fit packaging	1	19
743 557-101	1	Pro-fit packaging	1	19
743 557-111	1	PE bag	1	20
743 557-121	1	PE bag	1	20
743 557-801	1	Pro-fit packaging	1	21
743 557-811	1	Pro-fit packaging	1	21
743 708-001	1	Pro-fit packaging	1	21
743 709-001	1	Pro-fit packaging	1	21
743 710-001	1	Pro-fit packaging	1	21
<b>8JR</b>				
177 882-012	50	PE bag	50	153
177 882-022	50	PE bag	50	153
177 882-032	50	PE bag	50	153
177 882-042	50	PE bag	50	153
177 882-052	50	PE bag	50	153

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177 883-002	50	PE bag	50	153
177 883-012	50	PE bag	50	153
177 883-022	50	PE bag	50	153
177 883-032	50	PE bag	50	153
177 883-042	50	PE bag	50	153
177 883-052	50	PE bag	50	153
177 883-062	25	PE bag	25	153
178 252-002	50	PE bag	50	153
178 252-012	50	PE bag	50	153
178 252-022	50	PE bag	50	153
178 252-032	50	PE bag	50	153
178 252-042	50	PE bag	50	153
178 252-052	25	PE bag	25	153
178 587-002	10	PE bag	10	153
178 587-012	10	PE bag	10	153
178 587-022	10	PE bag	10	153
178 587-032	10	PE bag	10	153
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003 481-823	8	Pro-fit packaging	1	15
004 743-803	109	Pro-fit packaging	1	8
009 257-801	475	PE film	1	8, 178
025 889-003	100	Pro-fit packaging	100	14
025 889-801	5	Pro-fit packaging	1	14
089 015-003	100	Pro-fit packaging	100	14
089 015-801	5	Pro-fit packaging	1	14
091 603-003	100	Pro-fit packaging	100	14
091 603-801	5	Pro-fit packaging	1	14
174 320-001	1	Pro-fit packaging	1	17
174 320-011	1	Pro-fit packaging	1	17
174 320-021	1	Pro-fit packaging	1	17
174 320-031	1	Pro-fit packaging	1	17
174 320-041	1	Pro-fit packaging	1	17
174 320-051	1	Pro-fit packaging	1	17
174 320-061	1	Pro-fit packaging	1	17
174 320-071	1	Pro-fit packaging	1	17
174 326-001	1	Pro-fit packaging	1	17
174 326-011	1	Pro-fit packaging	1	17
174 326-021	1	Pro-fit packaging	1	17
174 326-031	1	Pro-fit packaging	1	17
174 326-041	1	Pro-fit packaging	1	17
174 326-051	1	Pro-fit packaging	1	17
174 326-061	1	Pro-fit packaging	1	17
174 326-071	1	Pro-fit packaging	1	17
174 326-081	1	Pro-fit packaging	1	17
174 328-001	1	Pro-fit packaging	1	17
174 328-011	1	Pro-fit packaging	1	17
174 328-021	1	Pro-fit packaging	1	17
174 328-031	1	Pro-fit packaging	1	17
218 229-012	5	Pro-fit packaging	5	7
218 229-022	5	Pro-fit packaging	5	7
218 229-032	5	Pro-fit packaging	5	7
218 229-042	5	Pro-fit packaging	5	7
218 229-052	5	Pro-fit packaging	5	7
218 229-062	5	Pro-fit packaging	5	7

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218 230-012	5	Pro-fit packaging	5	7
218 230-022	5	Pro-fit packaging	5	7
218 230-032	5	Pro-fit packaging	5	7
218 230-042	5	Pro-fit packaging	5	7
704 073-003	100	Pro-fit packaging	100	14
704 073-801	5	Pro-fit packaging	1	14
711 683-002	50	Pro-fit packaging	50	5, 8, 178
711 683-011	50	Pro-fit packaging	50	5
711 683-021	50	Pro-fit packaging	50	5, 8, 178
711 683-031	50	Pro-fit packaging	50	5, 8, 178
711 683-042	50	Pro-fit packaging	50	5
711 683-052	50	Pro-fit packaging	50	5, 8, 178
711 683-062	10	Pro-fit packaging	10	6
711 683-072	10	Pro-fit packaging	10	6
711 683-082	10	Pro-fit packaging	10	6
711 683-092	10	Pro-fit packaging	10	6
711 683-102	10	Pro-fit packaging	10	6
711 683-112	10	Pro-fit packaging	10	6
711 683-122	10	Pro-fit packaging	10	6
711 683-132	10	Pro-fit packaging	10	6
711 683-202	10	Pro-fit packaging	10	7
711 683-212	10	Pro-fit packaging	10	7
711 683-222	10	Pro-fit packaging	10	7
711 683-232	10	Pro-fit packaging	10	7
711 683-242	10	Pro-fit packaging	10	7
711 683-252	10	Pro-fit packaging	10	7
711 683-262	10	Pro-fit packaging	10	7
711 683-272	10	Pro-fit packaging	10	7
711 683-821	5	Pro-fit packaging	1	5
711 683-831	5	Pro-fit packaging	1	5
711 683-841	5	Pro-fit packaging	1	5
711 683-851	5	Pro-fit packaging	1	5
711 683-861	30	Pro-fit packaging	1	8
711 683-871	5	Pro-fit packaging	1	5
711 683-881	5	Pro-fit packaging	1	5
711 683-903	10	Pro-fit packaging	1	8
711 683-931	1	Pro-fit packaging	1	8
711 684-002	50	Pro-fit packaging	50	5, 8, 178
711 684-821	5	Pro-fit packaging	1	5
711 685-002	50	Pro-fit packaging	50	5, 8, 178
711 685-821	5	Pro-fit packaging	1	5
711 686-002	50	Pro-fit packaging	50	5, 8, 178
711 686-821	5	Pro-fit packaging	1	5
711 687-002	50	Pro-fit packaging	50	5, 8, 178
711 687-821	5	Pro-fit packaging	1	5
711 688-002	50	Pro-fit packaging	50	5, 8, 178
711 688-821	5	Pro-fit packaging	1	5
711 689-002	50	Pro-fit packaging	50	5, 8, 178
711 689-821	5	Pro-fit packaging	1	5
711 690-002	50	Pro-fit packaging	50	5, 8, 178
711 690-821	5	Pro-fit packaging	1	5
713 144-003	100	Pro-fit packaging	100	14
713 549-003	100	Pro-fit packaging	100	14
713 550-003	100	Pro-fit packaging	100	14

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713 567-003	50	Pro-fit packaging	50	14
713 575-001	100	Folding box	100	10
713 575-011	100	Folding box	100	10
713 575-021	100	Folding box	100	10
713 575-031	100	Folding box	100	10
713 575-041	100	Folding box	100	10
713 575-051	100	Folding box	100	10
713 575-061	100	Folding box	100	10
713 575-102	10	PE bag	10	10
713 575-112	10	PE bag	10	10
713 575-122	10	PE bag	10	10
713 575-132	10	PE bag	10	10
713 575-142	10	PE bag	10	10
713 575-152	10	PE bag	10	10
713 575-162	10	PE bag	10	10
713 575-172	10	PE bag	10	10
713 575-201	1	PE bag	1	10
713 575-211	1	PE bag	1	10
713 575-221	1	PE bag	1	10
713 575-231	1	PE bag	1	10
713 575-241	1	PE bag	1	10
713 575-251	1	PE bag	1	10
713 575-261	1	PE bag	1	10
713 575-271	1	PE bag	1	10
713 575-281	1	PE bag	1	10
713 575-291	1	PE bag	1	10
713 575-301	1	PE bag	1	10
713 575-311	1	PE bag	1	10
713 804-003	100	Pro-fit packaging	100	14
713 805-003	50	Pro-fit packaging	50	14
713 806-003	50	Pro-fit packaging	50	14
713 807-003	50	Pro-fit packaging	50	14
713 808-003	50	Pro-fit packaging	50	14
728 595-051	1	Pro-fit packaging	1	6
728 595-061	1	Pro-fit packaging	1	6
728 595-071	1	Pro-fit packaging	1	6
728 595-081	1	Pro-fit packaging	1	6
728 595-091	1	Pro-fit packaging	1	6
728 595-101	1	Pro-fit packaging	1	6
728 595-111	1	Pro-fit packaging	1	6
728 595-131	10	Pro-fit packaging	10	6
728 595-141	10	Pro-fit packaging	10	6
728 595-151	10	Pro-fit packaging	10	6
728 595-161	10	Pro-fit packaging	10	6
728 595-171	10	Pro-fit packaging	10	6
728 595-181	10	Pro-fit packaging	10	6
728 595-191	10	Pro-fit packaging	10	6
728 595-212	10	Pro-fit packaging	10	6
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728 596-081	50	Pro-fit packaging	50	5, 8, 178
728 596-091	50	Pro-fit packaging	50	5, 8, 178
728 596-101	50	Pro-fit packaging	50	5, 8, 178
728 596-111	50	Pro-fit packaging	50	5, 8, 178
728 596-121	50	Pro-fit packaging	50	5, 8, 178

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728 596-141	50	Pro-fit packaging	50	5, 8, 178
728 596-151	50	Pro-fit packaging	50	5, 8, 178
728 596-161	50	Pro-fit packaging	50	5, 8, 178
728 596-171	50	Pro-fit packaging	50	5, 8, 178
728 596-182	10	Pro-fit packaging	10	6
728 596-192	10	Pro-fit packaging	10	6
728 596-202	10	Pro-fit packaging	10	6
728 596-212	10	Pro-fit packaging	10	6
728 596-222	10	Pro-fit packaging	10	6
728 596-232	10	Pro-fit packaging	10	6
728 596-242	10	Pro-fit packaging	10	6
728 596-252	10	Pro-fit packaging	10	6
728 596-262	5	Pro-fit packaging	5	6
728 596-272	5	Pro-fit packaging	5	6
728 596-282	5	Pro-fit packaging	5	6
728 596-292	5	Pro-fit packaging	5	6
728 596-302	5	Pro-fit packaging	5	6
728 596-312	5	Pro-fit packaging	5	6
728 596-322	5	Pro-fit packaging	5	6
728 596-332	5	Pro-fit packaging	5	6
728 596-342	5	Pro-fit packaging	5	6
728 596-352	5	Pro-fit packaging	5	6
728 596-801	5	Pro-fit packaging	1	5
728 596-811	5	Pro-fit packaging	1	5
728 596-821	5	Pro-fit packaging	1	5
728 596-831	5	Pro-fit packaging	1	5
728 596-841	5	Pro-fit packaging	1	5
728 596-851	5	Pro-fit packaging	1	5
728 596-861	5	Pro-fit packaging	1	5
728 596-871	5	Pro-fit packaging	1	5
728 596-881	5	Pro-fit packaging	1	5
728 596-891	5	Pro-fit packaging	1	5
728 596-901	24	Pro-fit packaging	1	8
728 596-921	1	Pro-fit packaging	1	8
740 026-001	1	Pro-fit packaging	1	13
740 026-011	1	Pro-fit packaging	1	13
740 026-021	1	Pro-fit packaging	1	13
740 026-031	1	Pro-fit packaging	1	13
740 026-041	1	Pro-fit packaging	1	13
740 026-101	1	Pro-fit packaging	1	13
740 026-111	1	Pro-fit packaging	1	13
740 026-201	1	Pro-fit packaging	1	13
740 026-211	1	Pro-fit packaging	1	13
740 026-221	1	Pro-fit packaging	1	13
740 026-231	1	Pro-fit packaging	1	13
740 026-241	1	Pro-fit packaging	1	13
740 026-251	1	Pro-fit packaging	1	13
740 026-261	1	Pro-fit packaging	1	13
740 026-271	1	Pro-fit packaging	1	13
740 026-301	1	Pro-fit packaging	1	13
740 026-311	1	Pro-fit packaging	1	13
740 026-321	1	Pro-fit packaging	1	13
740 026-331	1	Pro-fit packaging	1	13
740 026-341	1	Pro-fit packaging	1	13

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740 026-351	1	Pro-fit packaging	1	13
740 026-361	1	Pro-fit packaging	1	13
740 026-371	1	Pro-fit packaging	1	13
740 026-401	1	Pro-fit packaging	1	14
740 026-411	1	Pro-fit packaging	1	14
740 026-421	1	Pro-fit packaging	1	14
740 026-431	1	Pro-fit packaging	1	14
740 026-441	1	Pro-fit packaging	1	14
740 026-501	1	Pro-fit packaging	1	13
740 026-511	1	Pro-fit packaging	1	13
740 026-521	1	Pro-fit packaging	1	13
740 026-531	1	Pro-fit packaging	1	13
740 026-541	1	Pro-fit packaging	1	13
740 026-551	1	Pro-fit packaging	1	13
740 026-561	1	Pro-fit packaging	1	13
740 026-571	1	Pro-fit packaging	1	13
740 026-601	1	Pro-fit packaging	1	13
740 026-611	1	Pro-fit packaging	1	13
740 026-701	1	Pro-fit packaging	1	13
740 026-711	1	Pro-fit packaging	1	13
740 026-721	1	Pro-fit packaging	1	13
740 026-731	1	Pro-fit packaging	1	14
740 026-741	1	Pro-fit packaging	1	14
740 026-751	1	Pro-fit packaging	1	14
740 026-761	1	Pro-fit packaging	1	14
740 026-771	1	Pro-fit packaging	1	14
740 026-781	1	Pro-fit packaging	1	14
742 901-001	1	Pro-fit packaging	1	10
742 901-011	1	Pro-fit packaging	1	10
742 901-021	1	Pro-fit packaging	1	10
742 901-031	1	Pro-fit packaging	1	10
742 901-041	1	Pro-fit packaging	1	10
742 901-051	1	Pro-fit packaging	1	10
742 901-061	1	Pro-fit packaging	1	10
742 901-071	1	Pro-fit packaging	1	10
742 901-081	1	Pro-fit packaging	1	10
742 901-091	1	Pro-fit packaging	1	10
742 901-101	1	Pro-fit packaging	1	10
742 902-001	1	Pro-fit packaging	1	10
742 902-011	1	Pro-fit packaging	1	10
742 902-021	1	Pro-fit packaging	1	10
742 902-031	1	Pro-fit packaging	1	10
742 902-041	1	Pro-fit packaging	1	10
742 902-051	1	Pro-fit packaging	1	10
742 902-061	1	Pro-fit packaging	1	10
742 902-071	1	Pro-fit packaging	1	10
742 902-081	1	Pro-fit packaging	1	10
742 902-091	1	Pro-fit packaging	1	10
742 902-101	1	Pro-fit packaging	1	10
742 902-111	1	Pro-fit packaging	1	10
747 876-001	1	PE bag	1	11
747 876-011	1	PE bag	1	11
747 876-021	1	PE bag	1	11
747 876-031	1	PE bag	1	11

Part number	Content in pcs.	Type of packaging	Order unit in pcs.	Page
747 876-041	1	PE bag	1	11
747 876-051	1	PE bag	1	11
747 876-061	1	PE bag	1	11
747 876-071	1	PE bag	1	11
747 876-081	1	PE bag	1	11
<b>8KA</b>				
004 797-021	1	Folding box	1	90
004 797-031	1	Folding box	1	90
004 797-041	1	Folding box	1	90
004 797-051	1	Folding box	1	90
004 797-071		Folding box	1	91
004 797-081		Folding box	1	91
004 797-101		Folding box	1	91
004 797-111		Folding box	1	91
004 797-141	1	Folding box	1	90
004 797-151	1	Folding box	1	90
007 589-081	1	PE bag	1	36
007 589-091	1	PE bag	1	36
007 589-101	1	PE bag	1	36
007 589-102	1	Pro-fit packaging	1	36
007 589-131	1	PE bag	1	36
007 648-001		Folding box	1	91
007 648-011		Folding box	1	91
007 648-021		Folding box	1	91
007 648-031		Folding box	1	91
007 648-041	1	Folding box	1	92
007 648-051	1	Folding box	1	92
007 648-061	1	Folding box	1	92
007 648-071		Folding box	1	91
007 648-081		Folding box	1	91
007 648-091	1	Folding box	1	92
007 965-011	1	Folding box	1	90
010 807-001	1	Folding box	1	81
<b>8KB</b>				
193 607-001	1	Folding box	1	170
193 607-002	10	Folding box	10	170
863 949-001	1	Folding box	1	170
863 949-011	1	Folding box	1	170
<b>8KL</b>				
054 002-002	100	Coils	100	96
054 003-002	100	Coils	100	96
054 004-002	100	Coils	100	96
054 005-002	100	Coils	100	96
054 006-002	100	Coils	100	96
054 007-002	100	Coils	100	96
054 008-002	100	Coils	100	96
054 009-002	100	Coils	100	96
054 010-002	100	Coils	100	96
054 011-002	100	Coils	100	96
054 012-002	100	Coils	100	96
054 013-002	100	Coils	100	96
054 014-002	100	Coils	100	96
054 017-001	100	Ring	100	98
177 729-002	50	Ring	50	98



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177 729-012	50	Ring	50	98
177 729-022	50	Ring	50	98
177 729-112	50	Ring	50	98
198 465-001	100	Ring	100	97
199 936-001	50	Ring	50	97
199 937-001	50	Ring	50	97
712 929-001	50	Ring	50	96
712 929-011	50	Ring	50	96
712 930-001	50	Ring	50	96
712 931-001	50	Ring	50	96
712 932-001	50	Ring	50	96
712 933-001	50	Ring	50	96
712 934-001	50	Ring	50	96
712 935-001	50	Ring	50	96
712 936-001	50	Ring	50	96
712 937-001	50	Ring	50	96
712 938-001	50	Ring	50	96
712 939-001	50	Ring	50	96
712 940-001	50	Ring	50	96
712 941-001	50	Ring	50	96
712 942-001	50	Ring	50	96
712 943-001	50	Ring	50	96
712 943-002	100	Coils	100	96
712 944-001	50	Ring	50	96
712 944-002	100	Coils	100	96
712 945-001	50	Ring	50	96
712 945-002	100	Coils	100	96
712 946-001	50	Ring	50	96
712 946-002	100	Coils	100	96
712 947-001	50	Ring	50	96
712 947-002	100	Coils	100	96
712 948-001	50	Ring	50	96
712 948-002	100	Coils	100	96
712 949-001	50	Ring	50	96
712 949-002	100	Coils	100	96
712 950-001	50	Ring	50	96
712 950-002	100	Coils	100	96
712 952-001	50	Ring	50	96
712 952-002	50	Coils	50	96
712 953-001	50	Ring	50	96
712 953-002	50	Coils	50	96
712 954-002	50	Coils	50	96
712 955-001	50	Ring	50	96
712 955-002	50	Coils	50	96
712 956-002	50	Coils	50	96
712 957-001	50	Ring	50	96
712 957-002	50	Coils	50	96
712 958-001	50	Ring	50	96
712 958-002	50	Coils	50	96
712 959-001	50	Ring	50	96
712 959-002	50	Coils	50	96
712 960-001	50	Ring	50	96
712 960-002	25	Coils	25	96
712 962-001	50	Ring	50	96

Part number	Content in pcs.	Type of packaging	Order unit in pcs.	Page
712 962-002	25	Coils	25	96
712 964-001	50	Ring	50	96
712 965-001	50	Ring	50	96
712 966-001	50	Ring	50	96
712 967-001	50	Ring	50	96
712 968-001	50	Ring	50	96
712 969-001	50	Ring	50	96
712 970-001	50	Ring	50	96
712 971-001	50	Ring	50	96
712 972-001	50	Ring	50	96
712 975-001	50	Ring	50	97
712 975-002	50	Coils	50	97
712 976-001	50	Ring	50	97
712 977-001	50	Ring	50	97
712 977-002	25	Coils	25	97
712 978-001	50	Ring	50	97
712 980-001	50	Ring	50	98
712 980-002	100	Coils	100	98
712 980-032	100	Coils	100	98
712 981-001	50	Ring	50	98
712 986-001	200	Ring	200	97
712 987-001	200	Ring	200	97
712 988-001	200	Ring	200	97
712 989-001	200	Ring	200	97
712 990-001	200	Ring	200	97
712 991-001	50	Ring	50	97
712 992-001	50	Ring	50	97
712 993-001	50	Ring	50	97
712 994-001	50	Ring	50	97
712 995-001	50	Ring	50	97
712 996-001	50	Ring	50	97
712 997-001	50	Ring	50	97
713 735-001	50	Ring	50	97
713 737-001	50	Ring	50	98
713 740-001	50	Ring	50	98
713 740-032	50	Ring	50	98
713 740-042	100	Ring	100	98
713 741-001	50	Ring	50	98
713 742-001	50	Ring	50	98
713 744-001	50	Ring	50	98
713 750-001	50	Ring	50	98
713 751-001	50	Ring	50	98
713 752-001	50	Ring	50	98
713 753-001	50	Ring	50	98
713 753-011	25	Ring	25	98
713 753-021	25	Ring	25	98
715 434-001	50	Ring	50	97
715 435-001	50	Ring	50	97
715 436-001	50	Ring	50	98
715 437-001	50	Ring	50	98
717 460-001	50	Ring	50	96
717 461-001	50	Ring	50	96
717 462-001	50	Ring	50	96
717 463-001	50	Ring	50	96

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717 464-001	50	Ring	50	96
719 852-001	25	Ring	25	97
735 190-001	100	Ring	100	97
735 190-002	50	Coils	50	97
742 810-001	50	Ring	50	97
<b>8KV</b>				
002 127-011	10	PE bag	10	22
002 127-021	10	PE bag	10	22
002 127-801	2	Pro-fit packaging	1	22
002 132-001	10	Folding box	10	130
002 133-001	10	Folding box	10	130
002 135-821	10	Pro-fit packaging	1	130
002 136-001	10	PE bag	10	22
002 136-011	10	PE bag	10	22
002 137-001	10	Folding box	10	130
002 139-001	10	Folding box	10	130
002 140-001	10	Folding box	10	130
002 141-001	10	Folding box	10	130
002 142-031	1	PE bag	1	128
002 143-031	1	PE bag	1	128
002 144-031	1	PE bag	1	128
002 145-031	1	PE bag	1	128
003 284-001	1	Folding box	1	130
004 258-031	1	Folding box	1	129
004 259-031	1	Folding box	1	129
004 418-004	10	Pro-fit packaging	10	20
004 418-821	2	Pro-fit packaging	1	20
177 785-007	20	Industrial packaging	20	129
177 785-017	30	Industrial packaging	30	129
705 123-002	25	Pro-fit packaging	25	130
705 123-004	1000	Industrial packaging	1000	130
705 123-813	5	Pro-fit packaging	1	130
712 169-003	10	Pro-fit packaging	10	130
713 222-812	10	Pro-fit packaging	1	120
714 340-002	10	Pro-fit packaging	10	20
715 923-003	25	Pro-fit packaging	25	130
744 858-003	50	Pro-fit packaging	50	130
744 859-003	50	Pro-fit packaging	50	130
744 860-003	25	Pro-fit packaging	25	130
<b>8KW</b>				
009 253-801	240	PE film	1	117; 180
009 254-801	401	PE film	1	122; 181
009 255-801	760	PE film	1	114; 179
043 629-013	100	Pro-fit packaging	100	112; 114; 179
043 630-014	1500	Industrial packaging	1500	112
043 635-013	100	Pro-fit packaging	100	112
043 636-003	100	Pro-fit packaging	100	113; 114; 179
044 022-003	100	Pro-fit packaging	100	119; 122; 181
044 022-004	1000	Pro-fit packaging	1000	119
044 022-822	15	Pro-fit packaging	1	119
044 023-003	50	Pro-fit packaging	50	119
044 023-004	1000	Pro-fit packaging	1000	119
044 024-003	50	Pro-fit packaging	50	119
044 025-003	100	Pro-fit packaging	100	119
044 026-003	100	Pro-fit packaging	50	119

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044 027-003	100	Pro-fit packaging	100	120, 122, 181
044 028-003	100	Pro-fit packaging	100	120, 122, 181
044 029-003	50	Pro-fit packaging	50	120, 122, 181
044 030-003	50	Pro-fit packaging	50	120, 122, 181
044 031-003	50	Pro-fit packaging	50	120
044 032-003	50	Pro-fit packaging	50	119, 122, 181
044 033-002	100	Pro-fit packaging	100	120, 122, 181
044 033-004	1000	Pro-fit packaging	1000	120
044 033-812	12	Pro-fit packaging	1	120
044 034-003	50	Pro-fit packaging	50	120
044 035-003	25	Pro-fit packaging	25	122, 130, 181
044 036-003	100	Pro-fit packaging	100	119, 122, 181
044 036-004	1000	Pro-fit packaging	1000	119
044 036-812	15	Pro-fit packaging	1	119
044 037-003	100	Pro-fit packaging	100	120, 122, 181
044 038-003	50	Pro-fit packaging	50	120
044 039-003	100	Pro-fit packaging	100	120, 122, 181
044 039-812	12	Pro-fit packaging	1	120
044 040-003	100	Pro-fit packaging	100	119
044 040-003	100	Pro-fit packaging	100	119, 122, 181
044 040-004	1000	Pro-fit packaging	1000	119
044 041-003	100	Pro-fit packaging	100	120
044 275-003	100	Pro-fit packaging	100	120
044 276-003	100	Pro-fit packaging	100	120, 122, 181
044 277-003	50	Pro-fit packaging	50	120
044 280-003	100	Pro-fit packaging	100	120
044 280-004	1000	Pro-fit packaging	1000	120
044 282-003	50	Pro-fit packaging	50	120
044 285-023	100	Pro-fit packaging	100	113
044 288-003	100	Pro-fit packaging	100	119, 122, 181
044 288-812	15	Pro-fit packaging	1	119
044 291-003	100	Pro-fit packaging	100	120, 122, 181
045 145-003	50	Pro-fit packaging	50	119, 122, 181
045 145-812	10	Pro-fit packaging	1	119
048 056-033	100	Pro-fit packaging	100	113, 114, 179
054 941-003	50	Pro-fit packaging	50	109
054 942-003	50	Pro-fit packaging	50	109
054 943-003	50	Pro-fit packaging	50	110
054 944-003	50	Pro-fit packaging	50	110
054 945-003	50	Pro-fit packaging	50	108
054 946-003	50	Pro-fit packaging	50	108
054 947-003	50	Pro-fit packaging	50	109
054 947-013	50	Pro-fit packaging	50	109
054 948-003	50	Pro-fit packaging	50	109
054 948-013	50	Pro-fit packaging	50	109
172 971-002	50	Pro-fit packaging	50	110
177 784-002	100	Pro-fit packaging	100	126
177 784-012	100	Pro-fit packaging	100	126
177 784-102	50	Pro-fit packaging	50	126
177 784-112	50	Pro-fit packaging	50	126
177 784-122	50	Pro-fit packaging	50	126
177 784-202	25	Pro-fit packaging	25	126
177 784-212	25	Pro-fit packaging	25	126
177 784-222	25	Pro-fit packaging	25	126
177 784-302	20	Pro-fit packaging	20	126

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177 784-312	20	Pro-fit packaging	20	126
177 784-322	20	Pro-fit packaging	20	126
177 784-332	20	Pro-fit packaging	20	126
177 784-402	10	Pro-fit packaging	10	126
177 784-412	10	Pro-fit packaging	10	126
177 784-422	10	Pro-fit packaging	10	126
177 784-502	10	Pro-fit packaging	10	126
177 784-512	10	Pro-fit packaging	10	126
177 784-522	10	Pro-fit packaging	10	126
177 784-602	5	Pro-fit packaging	5	126
177 784-612	5	Pro-fit packaging	5	126
177 784-702	5	Pro-fit packaging	5	126
177 784-712	5	Pro-fit packaging	5	126
178 042-002	100	Pro-fit packaging	100	121
178 042-012	100	Pro-fit packaging	100	121
178 042-022	100	Pro-fit packaging	100	121
178 042-032	100	Pro-fit packaging	100	121
178 042-042	100	Pro-fit packaging	100	121
178 042-052	50	Pro-fit packaging	50	121
178 042-102	100	Pro-fit packaging	100	121
178 042-112	100	Pro-fit packaging	100	121
178 042-122	100	Pro-fit packaging	100	121
178 042-132	100	Pro-fit packaging	100	121
178 042-142	50	Pro-fit packaging	50	121
178 042-152	50	Pro-fit packaging	50	121
178 042-202	50	Pro-fit packaging	50	121
178 042-212	50	Pro-fit packaging	50	121
178 042-222	50	Pro-fit packaging	50	121
178 042-232	50	Pro-fit packaging	50	121
178 042-242	50	Pro-fit packaging	50	121
178 043-002	100	Pro-fit packaging	100	121
178 043-012	50	Pro-fit packaging	50	121
178 043-022	50	Pro-fit packaging	50	121
178 044-002	100	Pro-fit packaging	100	121
178 044-012	100	Pro-fit packaging	100	121
178 044-022	50	Pro-fit packaging	50	121
178 045-002	100	Pro-fit packaging	100	121
178 045-012	100	Pro-fit packaging	100	121
178 045-102	50	Pro-fit packaging	50	121
178 045-112	50	Pro-fit packaging	50	121
178 045-202	50	Pro-fit packaging	50	121
178 045-212	50	Pro-fit packaging	50	121
178 045-222	50	Pro-fit packaging	50	121
201 025-012	50	Pro-fit packaging	50	141
201 025-022	50	Pro-fit packaging	50	141
201 025-112	50	Pro-fit packaging	50	141
201 025-122	50	Pro-fit packaging	50	141
700 142-003	50	Pro-fit packaging	50	119
700 143-003	50	Pro-fit packaging	50	119
700 144-003	50	Pro-fit packaging	50	113, 114, 179
701 235-033	100	Pro-fit packaging	100	112, 114, 179
701 235-034	1500	Industrial packaging	1500	112
701 671-003	100	Pro-fit packaging	100	113
702 796-003	100	Pro-fit packaging	100	119, 122, 181
705 123-002	25	Pro-fit packaging	25	122, 181

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705 392-003	100	Pro-fit packaging	100	119
705 393-003	100	Pro-fit packaging	100	119, 122, 181
705 393-812	10	Pro-fit packaging	1	119
708 373-003	50	Pro-fit packaging	50	119, 122, 181
708 373-004	1000	Pro-fit packaging	1000	119
708 374-003	50	Pro-fit packaging	50	119
708 374-004	1000	Pro-fit packaging	1000	119
708 374-812	8	Pro-fit packaging	1	119
719 874-007	2500	Industrial packaging	2500	112
732 566-003	25	Pro-fit packaging	25	116, 117, 180
732 567-003	25	Pro-fit packaging	25	116, 117, 180
732 568-003	25	Pro-fit packaging	25	116, 117, 180
732 569-003	25	Pro-fit packaging	25	116, 117, 180
732 570-003	25	Pro-fit packaging	25	116
732 571-003	25	Pro-fit packaging	25	116
732 572-003	25	Pro-fit packaging	25	116
732 573-003	25	Pro-fit packaging	25	116, 117, 180
732 574-003	25	Pro-fit packaging	25	116, 117, 180
732 575-003	25	Pro-fit packaging	25	116, 117, 180
732 576-003	25	Pro-fit packaging	25	116, 117, 180
732 577-003	25	Pro-fit packaging	25	116, 117, 180
732 578-003	25	Pro-fit packaging	25	116
732 579-003	25	Pro-fit packaging	25	116, 117, 180
732 580-003	25	Pro-fit packaging	25	116, 117, 180
732 581-003	25	Pro-fit packaging	25	116, 117, 180
733 815-003	100	Pro-fit packaging	100	112, 114, 179
744 697-003	100	Pro-fit packaging	100	119
744 698-003	100	Pro-fit packaging	100	119
744 699-003	100	Pro-fit packaging	100	119
744 700-003	50	Pro-fit packaging	50	119
744 703-003	50	Pro-fit packaging	50	119
744 704-003	50	Pro-fit packaging	50	119
744 705-003	25	Pro-fit packaging	25	119
744 708-003	100	Pro-fit packaging	100	111
744 709-003	100	Pro-fit packaging	100	111
744 710-003	100	Pro-fit packaging	100	111
744 711-003	100	Pro-fit packaging	100	111
744 712-003	100	Pro-fit packaging	100	111
744 713-003	100	Pro-fit packaging	100	111
744 714-003	100	Pro-fit packaging	100	111
744 715-003	50	Pro-fit packaging	50	111
744 716-003	50	Pro-fit packaging	50	111
744 717-003	50	Pro-fit packaging	50	111
744 718-003	50	Pro-fit packaging	50	111
744 719-003	50	Pro-fit packaging	50	111
744 720-003	50	Pro-fit packaging	50	111
744 721-003	50	Pro-fit packaging	50	111
744 722-003	50	Pro-fit packaging	50	111
744 723-003	50	Pro-fit packaging	50	111
744 724-003	25	Pro-fit packaging	25	111
744 725-003	25	Pro-fit packaging	25	111
744 726-003	25	Pro-fit packaging	25	111
744 727-003	25	Pro-fit packaging	25	111
744 728-003	25	Pro-fit packaging	25	111
744 729-003	25	Pro-fit packaging	25	111

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744 731-003	10	Pro-fit packaging	10	111
744 732-003	10	Pro-fit packaging	10	111
744 733-003	50	Pro-fit packaging	50	119
744 734-003	50	Pro-fit packaging	50	119
744 752-003	100	Pro-fit packaging	100	112
744 754-003	25	Pro-fit packaging	25	116
744 755-003	25	Pro-fit packaging	25	116
744 757-003	25	Pro-fit packaging	25	116, 117, 180
744 758-003	25	Pro-fit packaging	25	116, 117, 180
744 761-003	25	Pro-fit packaging	25	116
744 762-003	25	Pro-fit packaging	25	116
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744 765-003	25	Pro-fit packaging	25	116
744 766-003	25	Pro-fit packaging	25	116, 117, 180
744 767-003	25	Pro-fit packaging	25	116
744 768-003	25	Pro-fit packaging	25	116, 117, 180
744 772-003	100	Pro-fit packaging	100	120
744 773-003	50	Pro-fit packaging	50	120
744 774-003	50	Pro-fit packaging	50	120
744 775-003	50	Pro-fit packaging	50	120
744 776-003	50	Pro-fit packaging	50	120
744 777-003	100	Pro-fit packaging	100	120
744 778-003	100	Pro-fit packaging	100	120
744 779-003	100	Pro-fit packaging	100	120
744 780-003	100	Pro-fit packaging	100	120
744 782-003	100	Pro-fit packaging	100	120
744 783-003	100	Pro-fit packaging	100	120
744 784-003	50	Pro-fit packaging	50	120
744 785-003	50	Pro-fit packaging	50	120
744 786-003	50	Pro-fit packaging	50	120
744 787-003	50	Pro-fit packaging	50	112, 114, 179
744 799-003	50	Pro-fit packaging	50	119
744 805-801	10	Pro-fit packaging	1	132
744 806-801	18	Pro-fit packaging	1	132
744 807-801	26	Pro-fit packaging	1	132
744 808-801	34	Pro-fit packaging	1	132
744 809-801	42	Pro-fit packaging	1	133
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744 817-003	100	Pro-fit packaging	100	112, 114, 179
744 819-003	100	Pro-fit packaging	100	112, 114, 179
744 820-003	100	Pro-fit packaging	100	112
744 821-003	100	Pro-fit packaging	100	112, 114, 179
744 823-003	100	Pro-fit packaging	100	112, 114, 179
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744 827-003	100	Pro-fit packaging	100	112, 114, 179
744 828-003	100	Pro-fit packaging	100	112, 114, 179
744 832-003	100	Pro-fit packaging	100	113, 114, 179
744 833-003	100	Pro-fit packaging	100	113
744 834-003	100	Pro-fit packaging	100	113, 114, 179
744 836-002	50	Pro-fit packaging	50	135, 136, 182
744 837-002	50	Pro-fit packaging	50	135, 136, 182
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744 840-003	100	Pro-fit packaging	100	124
744 841-003	100	Pro-fit packaging	100	124

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744 843-003	100	Pro-fit packaging	100	124
744 844-003	50	Pro-fit packaging	50	124
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744 846-003	100	Pro-fit packaging	100	124
744 847-003	50	Pro-fit packaging	50	124
744 851-003	10	PE bag	10	144
744 852-003	10	PE bag	10	144
744 853-003	10	PE bag	10	144
744 854-003	10	PE bag	10	145
744 855-003	10	PE bag	10	145
744 856-003	10	PE bag	10	145
744 857-003	10	PE bag	10	145
744 864-003	50	Pro-fit packaging	50	108
744 866-003	50	Pro-fit packaging	50	108
744 882-003	100	Pro-fit packaging	100	112
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744 886-003	10	PE bag	10	144
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744 888-013	50	Pro-fit packaging	50	126
744 889-013	50	Pro-fit packaging	50	126
744 890-013	50	Pro-fit packaging	50	126
746 778-003	10	Pro-fit packaging	10	111
746 779-003	10	Pro-fit packaging	10	111
746 780-003	2	Pro-fit packaging	2	111
746 781-003	2	Pro-fit packaging	2	111
746 782-003	2	Pro-fit packaging	2	111
746 783-003	10	Pro-fit packaging	10	111
863 904-003	50	Pro-fit packaging	50	110
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863 915-013	50	Pro-fit packaging	50	107
863 916-003	50	Pro-fit packaging	50	107
863 917-013	50	Pro-fit packaging	50	107
863 918-003	50	Pro-fit packaging	50	106
863 918-013	50	Pro-fit packaging	50	106
863 919-003	50	Pro-fit packaging	50	106
863 919-013	50	Pro-fit packaging	50	106
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863 922-013	50	Pro-fit packaging	50	108
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863 928-003	50	Pro-fit packaging	50	104
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863 930-013	50	Pro-fit packaging	50	103
863 931-003	50	Pro-fit packaging	50	103
863 932-003	50	Pro-fit packaging	50	101
863 932-013	50	Pro-fit packaging	50	101
863 933-003	50	Pro-fit packaging	50	101
863 933-013	50	Pro-fit packaging	50	101
863 934-003	50	Pro-fit packaging	50	102
863 934-013	50	Pro-fit packaging	50	102
863 934-023	50	Pro-fit packaging	50	102
863 945-003	50	Pro-fit packaging	50	106
863 945-013	50	Pro-fit packaging	50	106
863 951-003	10	Pro-fit packaging	10	105
863 951-013	10	Pro-fit packaging	10	105
863 951-023	10	Pro-fit packaging	10	105
<b>8KX</b>				
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091 391-001	10	Folding box	10	163
091 392-001	10	Folding box	10	163
091 394-001	10	Folding box	10	163
091 395-001	10	Folding box	10	163
091 450-031	1	Pro-fit packaging	1	160
091 450-032	25	Folding box	25	160
091 451-031	1	Pro-fit packaging	1	160
091 451-032	25	Folding box	25	160
091 452-031	1	Pro-fit packaging	1	160
091 452-032	25	Folding box	25	160
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174 396-012	10	Folding box	10	161
707 911-001	10	Folding box	10	160
707 911-011	10	Folding box	10	160
707 912-001	10	Folding box	10	160
707 912-011	10	Folding box	10	160
707 913-001	10	Folding box	10	160
707 913-011	10	Folding box	10	160
707 916-001	5	Folding box	5	163
707 916-011	5	Folding box	5	163
707 916-021	5	Folding box	5	163
707 917-011	5	Folding box	5	163
707 917-021	5	Folding box	5	163
707 917-031	5	Folding box	5	163
707 918-001	5	Folding box	5	163
707 918-011	5	Folding box	5	163
707 918-021	5	Folding box	5	163
707 918-031	5	Folding box	5	163
707 919-021	5	Folding box	5	161
716 405-001	10	Folding box	10	160
716 405-011	10	Folding box	10	160
719 756-001	10	Folding box	10	163
719 757-001	10	Folding box	10	163
719 757-012	10	Folding box	10	163
742 695-022	10	Folding box	10	161
742 695-032	10	Folding box	10	161
747 875-001	1	PE bag	1	11

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<b>8PD</b>				
004 508-011	1	Folding box	1	88
004 508-021	1	Folding box	1	88
004 508-031	1	Folding box	1	88
007 216-001	1	Folding box	1	88
<b>8PE</b>				
002 007-001	1	Plastic box	1	199
002 007-011	1	Plastic box	1	199
008 932-001	1	Plastic box	1	199
713 576-011	1	Pro-fit packaging	1	7
713 576-021	1	Pro-fit packaging	1	7
863 807-021	1	PE bag	1	190, 192, 193
863 807-041	1	Folding box	1	196
863 807-051	1	Folding box	1	196
863 807-061	1	Folding box	1	196
863 807-071	1	Folding box	1	196
863 807-201	1	PE bag	1	190, 192, 193
863 807-211	1	PE bag	1	190, 192, 193
863 807-221	1	PE bag	1	190, 192, 193
863 807-231	1	Folding box	1	190
863 807-241	1	PE bag	1	192
863 807-251	1	PE bag	1	190, 193
863 807-301	1	PE bag	1	190, 194, 196
863 807-311	1	Plastic box	1	191, 194
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863 807-331	1	Plastic box	1	191, 194
863 807-341	1	Plastic box	1	191
863 807-351	1	Folding box	1	197
863 807-361	1	Folding box	1	197
863 807-371	1	Folding box	1	197
863 807-401	1	Plastic box	1	196
863 807-411	1	PE bag	1	187
863 807-421	1	PE bag	1	187
863 807-431	1	PE bag	1	187
863 807-441	1	PE bag	1	187
863 807-451	1	PE bag	1	187
863 807-461	1	PE bag	1	187
863 807-801	1	PE bag	1	187
863 807-811	12	Folding box	1	188
863 807-821	11	Folding box	1	190
863 807-831	5	Folding box	1	192
863 807-841	8	Folding box	1	193
<b>9GD</b>				
179 708-012	10	PE bag	10	56
179 708-022	10	PE bag	10	56
179 708-032	10	PE bag	10	56
179 708-042	10	PE bag	10	56
735 641-001	10	Folding box	10	55, 59
735 641-012	10	Folding box	10	67, 70
735 641-032	10	Folding box	10	44, 47
735 641-042	10	Folding box	10	55, 59
735 641-051	10	Folding box	10	55
735 641-062	1	PE bag	1	79
746 185-002	50	Pro-fit packaging	50	135, 136, 182

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746 186-002	50	Pro-fit packaging	50	135
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863 952-002	50	Pro-fit packaging	50	102
863 952-012	50	Pro-fit packaging	50	102
863 952-022	50	Pro-fit packaging	50	102
863 953-002	50	Pro-fit packaging	50	103
863 953-012	50	Pro-fit packaging	50	103
863 954-002	50	Pro-fit packaging	50	105
863 954-012	50	Pro-fit packaging	50	105
863 961-012	10	Pro-fit packaging	10	105
863 961-022	10	Pro-fit packaging	10	105
<b>9MJ</b>				
007 825-011	1	Cardboard roll	1	157
007 825-021	1	Cardboard roll	1	157
007 825-031	1	Cardboard roll	1	157
007 825-041	1	Cardboard roll	1	157
007 825-051	1	Cardboard roll	1	157
007 825-061	1	Cardboard roll	1	157
007 825-071	1	Cardboard roll	1	157
008 039-001	20	PE bag	20	157
008 039-011	16	PE bag	16	157
008 039-021	13	PE bag	13	157
008 039-031	11	PE bag	11	157
008 039-041	9	PE bag	9	157
008 039-051	7	PE bag	7	157
008 039-061	5	PE bag	5	157
176 267-001	1	PE bag	1	155
176 269-001	1	PE bag	1	155
176 270-001	1	PE bag	1	155
178 458-002	60	PE bag	1	157, 158, 183
178 458-012	60	PE bag	1	157, 158, 183
178 458-022	60	PE bag	1	157, 158, 183
178 458-032	60	PE bag	1	157, 158, 183
178 458-042	60	PE bag	1	157, 158, 183
178 458-052	60	PE bag	1	157, 158, 183
178 458-062	60	PE bag	1	157, 158, 183
178 458-072	60	PE bag	1	157, 158, 183
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178 458-092	20	PE bag	1	157, 158, 183
178 458-102	20	PE bag	1	157, 158, 183
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178 458-801	575	PE film	1	158, 183
186 375-003	10	PE film	10	155
186 375-011	1	PE film	1	155
707 869-003	10	PE film	10	155
707 869-013	10	PE film	10	155
707 869-852	2	Pro-fit packaging	1	155
707 870-013	10	PE film	10	155
707 871-013	10	PE film	10	155
707 872-003	10	PE film	10	155
707 873-013	10	PE film	10	155
707 874-013	10	PE film	10	155
707 875-003	10	PE film	10	155
707 875-013	10	PE film	10	155

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747 877-001	1	PE bag	1	11
<b>9MK</b>				
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726 759-831	11	PE bag	1	77
726 761-811	15	PE bag	1	73
726 762-831	11	PE bag	1	77
741 492-001	80	Folding box	80	27
741 492-011	80	Folding box	80	27
741 492-022	10	Folding box	10	25
741 492-032	10	Folding box	10	25
741 492-042	10	Folding box	10	25
741 492-052	10	Folding box	10	25
741 492-062	10	Folding box	10	25
741 492-072	10	Folding box	10	25
741 492-082	10	Folding box	10	25
748 465-011	1	PE bag	1	82
748 465-021	1	PE bag	1	82
748 466-011	1	PE bag	1	82
748 466-021	1	PE bag	1	82
748 467-001	1	PE bag	1	44
<b>9NB</b>				
201 023-032	10	PE bag	10	139
201 023-042	10	PE bag	10	139
201 023-062	10	PE bag	10	140
201 023-082	10	PE bag	10	140
201 023-122	10	PE bag	10	140
201 024-022	10	PE bag	10	139
201 024-032	10	PE bag	10	139
201 024-042	10	PE bag	10	139
201 024-062	10	PE bag	10	140
201 024-082	10	PE bag	10	140
201 024-122	10	PE bag	10	140
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<b>9XX</b>				
863 800-001	1	Folding box	1	185
863 800-011	1	Folding box	1	185
863 800-021	1	Folding box	1	185
863 801-001	1	PE bag	1	185
863 802-001	1	PE bag	1	185



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