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ELECTRICAL INSTALLATION MATERIAL



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**Purpose:**

Blade fuses are mainly used in fuse systems in vehicle electrics. A distinction is made between:

1. the widely used standard design **ATO** (up to max. 40 A),
2. the large-format **MAXI** blade fuse for high voltages (up to max. 80 A),
3. the small-format **MINI** blade fuse for individual powered devices (up to max. 30 A),
4. and the even more compact **low-profile MINI variant** (also up to 30 A).

Advantages:

- OEM quality compliant with ISO 8820-3
- Compact design
- Easy to use
- Complete assortment including special variants for electric vehicles and LED fuses for fast replacements even at night

1.1.1 Blade fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
ATO blade fuses	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



1.1 Fuses

1.1.1 Blade fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
MINI blade fuse 	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
Low-Profile MINI blade fuses 	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
MAXI blade fuses 	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
ATO blade fuses with LEDs (only up to 12 V) 	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

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

1.1 Fuses

1.1.1 Blade fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
MINI blade fuses with LEDs (only up to 12 V) 	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
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	Ampere	Contents in pcs.	Short designation	Part number	PU in pcs.
Fuse gripper/ tester  	ATO/MINI blade fuse gripper with integrated function tester		1	A 96	8PE 713 576-011	1
	MAXI blade fuse gripper		1	D 225	8PE 713 576-021	1
Fuse assortment	Assortment of ATO fuses plus four fuse holders (page 20) 8KV 004 418-004	15 each of 5 A, 7.5 A, 10 A, 15 A, 20 A, 25 A, 30 A	109	D 99	8JS 004 743-803	1
	ATO assortment	1 each of 3 A, 5 A, 7.5 A, 15 A, 25 A, 30 A; 2 each of 10 A, 20 A	10	D 49	8JS 711 683-903	1
	ATO assortment	5 each of 2 A, 5 A, 7.5 A, 15 A, 20 A, 30 A	30	D 263	8JS 711 683-861	1
	MINI assortment	3 each of 4 A, 5 A, 30 A; 5 each of 10 A, 15 A, 20 A	24	D 44	8JS 728 596-901	1

1.1 Fuses

	Description	Ampere	Contents in pcs.	Short designation	Part number	PU in pcs.
Fuse assortment	MAXI assortment	1 each of 20 A; 3 each of 30 A, 40 A, 50 A, 60 A	13	D 43	8JS 728 595-901	1
	ATO assortment with LED	1 each of 5 A, 7.5 A, 10 A, 15 A, 20 A	5	D 202	8JS 711 683-931	1
	MINI assortment with LED	1 each of 5 A, 7.5 A, 10 A, 15 A, 20 A	5	D 211	8JS 728 596-921	1

Assortment case	Designation	Part number Case	PU in pcs.
Fuse assortment case 	The assortment comprises ATO (25 for each current rating) and MINI blade fuses (20 for each current rating) plus one MINI/ATO blade fuse tester/gripper. Quantity delivered as refill set deviates from the quantity in the original set.	8JS 009 257-801	1

Contents of fuse assortment case	Designation	Ampere	Colour	Quantity in the assortment	refill	Short designation	Part numbers of fuses	PU in pcs.
	ATO blade fuse	2 A	■	25	Spare parts	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

**Purpose:**

Strip fuses – aka leaf fuses – essentially consist of a stamped strip of fuse metal. Alongside the open type, which has no sheath, closed types with plastic insulators or ceramic casings are also used. Because of their more solid construction these are primarily used to secure high-current and high-voltage electrical systems.

The main CF8 fuse is especially designed for applications at the battery terminal. The associated insulating nuts and terminals are included in the programme.

Advantages:

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

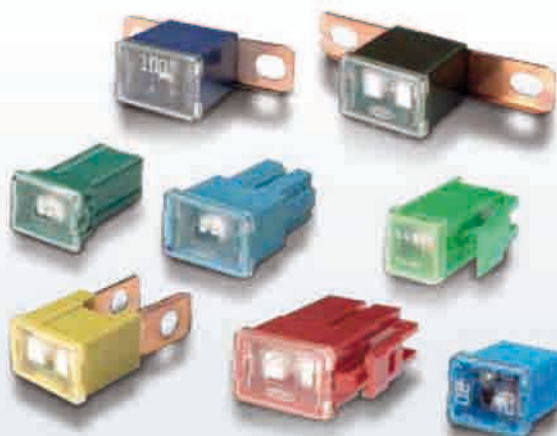
1.1.2 Strip and screw fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
MIDI high-current fuses 	30 A		1	D 164	8JS 742 901-061	1
	40 A		1	D 165	8JS 742 901-001	1
	50 A		1	D 166	8JS 742 901-011	1
	60 A		1	D 167	8JS 742 901-021	1
	70 A		1	D 168	8JS 742 901-031	1
	80 A		1	D 169	8JS 742 901-041	1
	100 A		1	D 170	8JS 742 901-051	1
	125 A		1	D 171	8JS 742 901-071	1
	150 A		1	D 172	8JS 742 901-081	1
MEGA high-current fuses 	100 A		1	D 173	8JS 742 902-001	1
	125 A		1	D 174	8JS 742 902-011	1
	150 A		1	D 175	8JS 742 902-021	1
	175 A		1	D 176	8JS 742 902-031	1
	200 A		1	D 177	8JS 742 902-041	1
	225 A		1	D 178	8JS 742 902-061	1
	250 A		1	D 179	8JS 742 902-051	1
	300 A		1	D 180	8JS 742 902-071	1
	350 A		1	D 243	8JS 742 902-081	1
	400 A		1	D 244	8JS 742 902-091	1
	450 A		1	D 245	8JS 742 902-101	1
	500 A		1	D 246	8JS 742 902-111	1

1.1 Fuses

1.1.2 Strip and screw fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
Fuse strips 41 x 11 mm 	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
HSB fuse strips 42 x 12 mm 	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
Fuse strips for battery-driven railless vehicles 82 x 20 mm (DIN 43560 part 1) 	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
CF 8 main fuses up to 58 V 	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

	Description	Contents in pcs.	Short designation	Part number	PU in pcs.
Accessories CF 8 main fuses   	Insulating nut	1		9MJ 747 877-001	1
	Battery terminal 1-pole + terminal ø 17.5 mm pin ø 8 mm	1		8KX 747 875-001	1
	Battery terminal 2-pole + terminal ø 17.5 mm pin ø 8 mm	1		8KX 747 875-011	1

1.1 Fuses

**Purpose:**

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.

This type of fuse is also available in a number of sizes and designs. More recent vehicles primarily come with JCASE fuses or even especially compact low-profile JCASE fuses.

Advantages:

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

1.1.3 Cartridge fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
Female (AS) 	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
Female small (F) 	30 A		1	D 105	8JS 740 026-101	1
	40 A		1	D 106	8JS 740 026-111	1
Male (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

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

1.1 Fuses

1.1.3 Cartridge fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
Bent (C) 	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
Bent short (CS) 	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
Female slot (D) 	25 A		1	D 220	8JS 740 026-601	1
	30 A		1	D 221	8JS 740 026-611	1
Female slot (E) 	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
JCASE 	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
Low Profile JCASE 	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

1.1 Fuses

1.1.4 Other fuses	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
Torpedo fuses, (DIN 72581, part 1, 6 x 25 mm) 	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
Glass-tube fuses 5 x 20 mm, quick-acting 	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
Glass-tube fuses 6.3 x 32 mm, quick-acting 	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
Description	Ampere		Contents in pcs.	Short designation	Part number	PU in pcs.
Assortment of glass-tube and Torpedo fuses	5 x 20 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	8JS 003 481-823	1
Assortment of glass-tube fuses	5 x 20 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	8JS 003 481-803	1

**Purpose:**

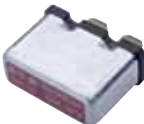
Circuit-breakers, like conventional fuses, are used to protect equipment from excess load and short-circuit by interrupting the application circuit. Their advantage over conventional fuses is that they can do this many times over, without having to be replaced each time they are triggered. An automatic or manual reset restores the circuit-breaker to its original state - saving 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 manual trigger gives users a fast and easy way of interrupting a circuit and then reclosing it manually – which is optimal for many electrical tests, such as those needed in vehicle workshops.

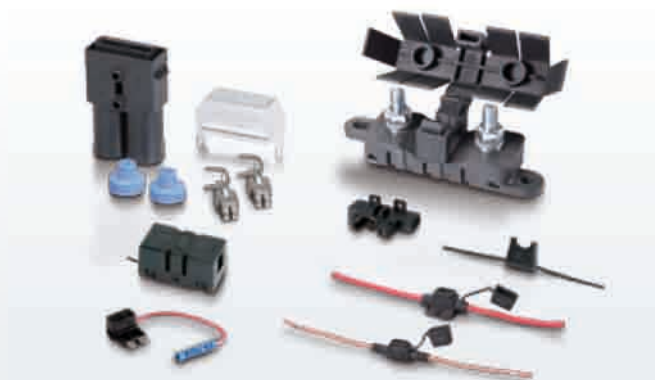
Advantages:

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

1.2 Circuit-breakers	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
Resettable, connection as AT0 fuses 	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
With manual trigger, connections as AT0 fuses 	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
Automatic reset, 2 male blade connections 6.3 x 0.8 mm 	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

1.2 Circuit-breakers

1.2 Circuit-breakers	Ampere	Colour	Contents in pcs.	Short designation	Part number	PU in pcs.
Automatic reset, connections as MINI fuses 	5 A		1	C 22	8JS 174 330-001	1
	7.5 A		1	C 23	8JS 174 330-011	1
	10 A		1	C 24	8JS 174 330-021	1
	15 A		1	C 25	8JS 174 330-031	1
	20 A		1	C 26	8JS 174 330-041	1
	25 A		1	C 27	8JS 174 330-051	1
	30 A		1	C 28	8JS 174 330-061	1
Automatic reset, connections as MAXI fuses 	10 A		1	C 29	8JS 174 333-001	1
	15 A		1	C 30	8JS 174 333-011	1
	20 A		1	C 31	8JS 174 333-021	1
	25 A		1	C 32	8JS 174 333-031	1
	30 A		1	C 33	8JS 174 333-041	1
	35 A		1	C 34	8JS 174 333-051	1
	40 A		1	C 35	8JS 174 333-061	1
	50 A		1	C 36	8JS 174 333-071	1

**Purpose:**

Whenever upgrading or converting an electrical system calls for additional overload protection (e.g. when connecting additional consumers), the **fuse holder** serves as a link between the cable and the fuse.

Here the range of products is at least as wide as the range of possible applications. You can use variants for a wide range of fuse types depending on your specific needs - with integrated cables, covers or even completely enclosed in rubberised seals for maximum moisture resistance.

Advantages:

- Wide assortment of products for numerous applications
- Pragmatic safety solutions for minor upgrades and conversions

1.3.1 Inline fuse holders	Description	Load-carrying capacity	Contents in pcs.	Short designation	Part number	PU in pcs.
ATO inline fuse holders  	with 1.3 mm ² cables, splash-proof	max. 20 A	1	D 81	8JD 743 557-021	1
	with 3.3 mm ² cables, splash-proof	max. 30 A	1	D 82	8JD 743 557-031	1
	with 1.3 mm ² cables	max. 20 A	1	D 83	8JD 743 557-041	1
	with cables 3.3 mm ²	max. 30 A	1	D 84	8JD 743 557-051	1

1.3 Fuse holders

1.3.1 Inline fuse holders	Description	Load-carrying capacity	Contents in pcs.	Short designation	Part number	PU in pcs.
MINI inline fuse holders, 	with 2 mm ² cables, splash-proof	max. 20 A	1	D 181	8JD 743 557-001	1
	with 3 mm ² cables, splash-proof	max. 30 A	1	D 182	8JD 743 557-011	1
MINI inline fuse holders 	with protective cap, 2.5 mm ² , splash-proof, possible to clip several holders together	max. 20 A	1	D 264	8JD 187 871-001	1
Low-profile MINI inline fuse holder 	with 1.5 mm ² cables, splash-proof	max. 15 A	1	D 265	8JD 187 871-011	1
	with 2.5 mm ² cables, splash-proof	max. 20 A	1	D 266	8JD 187 871-021	1
Low-profile MINI inline fuse holder 	with 0.75 mm ² cables, splash-proof	max. 10 A	1	D 247	8JD 743 557-091	1
	with 3.0 mm ² cables, splash-proof	max. 30 A	1	D 248	8JD 743 557-101	1
JCASE inline fuse holders 	with 8.3 mm ² cables, splash-proof	max. 60 A	1	D 250	8JD 743 557-111	1
Low-profile JCASE inline fuse holder 	with 8.3 mm ² cables, splash-proof	max. 40 A	1	D 251	8JD 743 557-121	1

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

1.3 Fuse holders

1.3.1 Inline fuse holders	Description	Load-carrying capacity	Contents in pcs.	Short designation	Part number	PU in pcs.
Inline fuse holder for glass-tube fuses   	for 5 x 20 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 mm glass tube fuses without fuse	max. 20 A at 32 V	1	D 253	8JD 003 285-021	1
	with glass tube fuse inserts 2 A 5 x 20 mm, 170 mm long, flat receptacle 6.3 x 0.8 mm		2	I 03	8KV 003 285-801	1
			8	I 54	8KV 003 285-002	8

1.3.2 Other fuse holders	Description	Contents in pcs.	Short designation	Part number	PU in pcs.
MAXI fuse holders   	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 twin-spring contacts 8KW 054 944-003 (page 106); possible to line up several holders together; compatible with female connector housing 8 JA 003 526-001 for mini-relays (see main Electrical catalogue)	1		8JA 007 024-001	1

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

1.3 Fuse holders

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1.3.2 Other fuse holders	Description	Load-carrying capacity	Contents in pcs.	Short designation	Part number	PU in pcs.
Inline fuse holder for glass-tube fuses 	with two twin-spring contacts 8KW 054 944-003 (page 106) and cover, for cables up to 2.5 mm ² ,	max. 30 A	6	D 77	8JD 005 235-002	6
	for cables 2.5–4.0 mm ² use twin-spring contacts 8KW 054 943-003 (page 106)!					
	Possible to clip several holders together.	max. 30 A	2	D 24	8JD 005 235-801	1
MINI fuse holder 	with protective cap, holds up to 4 MINI blade fuses		10		8JD 187 871-031	10
MAXI fuse holders  	splash-proof, with cover, 2 screws each, contacts for cables from 2.5–6.0 mm ² and 5.0– 10.0 mm ²	20 A– 60 A	1	D 183	8JD 743 708-001	1
	watertight, with cover, seals and contacts, for cables 4–6 mm ²	20 A– 80 A	1	D 184	8JD 743 710-001	1
	for cables 6–10 mm ²		1	D 185	8JD 743 709-001	1
Auxiliary fuse holder  	MINI fuse holder with 4 blade fuses 1 each of 3 A, 5 A, 7.5 A, 10 A		5	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		5	D 193	8JD 743 557-811	1

1.3.2 Other fuse holders	Description	Load-carrying capacity	Contents in pcs.	Short designation	Part number	PU in pcs.
MEGA and MIDI fuse holders 	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 which allows cable routing from any direction	max. 500 A	1	D 254	8JD 743 135-011	1
MIDI / MEGA combo-fuse holders 	with protective cap, for 4 x MIDI and 1 x MEGA fuse, housing constructed with additional attachment points and cable openings		1		8JD 187 871-041	1
Fuse holder for railless battery vehicles 	for fuses 8JS 713 575-201 to -311 (Page 11)		1	D 226	8JD 743 557-081	1
Torpedo fuse holder for cable cross-sections 1.5–2.5 mm² 	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 insert 16 A		10		8KV 002 127-021	10
	with fuse insert 25 A		10		8KV 002 127-011	10
	without fuse insert		10		8KV 002 136-011	10

1.4 Fuse boxes



Purpose:

If a single fuse holder is not sufficient to enable any further equipment to be added to the electrical system, or if you want to add a number of functions simultaneously, you may wish to use 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.

Advantages:

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

These **fuse box sets** are modular, making it possible to configure your **fuse box** individually as appropriate for your application. Thanks to the new lamellar contact system they can also be used for high currents: up to 60 A using the enclosed individual contacts, and even up to 125 A using the contact busbars that are available separately.

In each case the ordered set contains the housing, the insert, 16 individual contacts and – depending on the set – a suitable cover for standard ATO fuses or circuit-breakers 8JS 174 320-xxx or 8JS 174 326-xxx (page 16).

A coding set and various sizes of contact strip are available as accessories.



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



The housing insert is inserted ...



... and clicked into place.



Next step: insert fuses.



Put cover in place.



Finished.

Fuse box sets from Hella:

1. 8JD 005 993-161
with standard cover
2. 8JD 005 993-171
with high 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.

1.4 Fuse boxes	Description	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
ATO fuse boxes          	Fuse box set for ATO blade fuses, each comprising housing, insert and cover plus 16 individual contacts	8-pole	4		8JD 005 993-161	1
	Fuse box set for 8JS 174 320-xxx circuit-breakers, each comprising housing, insert and cover plus 16 individual contacts	8-pole	4		8JD 005 993-171	1
	Fuse box set for 8JS 174 326-xxx circuit-breakers, each comprising housing, insert and cover plus 16 individual contacts	8-pole	4		8JD 005 993-181	1
	Contact rails for currents up to 125 A	2-pole	10		9MK 741 492-022	10
		3-pole	10		9MK 741 492-032	10
		4-pole	10		9MK 741 492-042	10
		5-pole	10		9MK 741 492-052	10
		6-pole	10		9MK 741 492-062	10
		7-pole	10		9MK 741 492-072	10
		8-pole	10		9MK 741 492-082	10

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

1.4 Fuse boxes

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1.4 Fuse boxes	Description	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
ATO fuse boxes       	with 8 axial outputs, (6.3 x 0.8 mm), transparent cover and contact parts	4-pole	10		8JD 005 993-072	10
	with 8 side outputs (6.3 x 0.8 mm), transparent cover and contact parts	4-pole	10		8JD 005 993-082	10
	with 10 axial outputs (6.3 x 0.8 mm), transparent cover, for max. 5 x 30-A- flat fuse inserts, with two angle brackets	5-pole	10		8JD 005 993-001	10
			1	D 95	8JD 005 993-002	1
	with 10 axial solder connections (2.2 mm), transparent cover, for max. 5 x 15-A-flat fuse inserts	5-pole	10		8JD 005 993-021	10
	with 10 side outputs (6.3 x 0.8 mm), transparent cover, for max. 5 x 30-A-flat fuse inserts	5-pole	10		8JD 005 993-032	10
	with 12 axial outputs (6.3 x 0.8 mm), transparent cover and contact parts	6-pole	10		8JD 005 993-092	10
	with 12 side outputs (6.3 x 0.8 mm), transparent cover and contact parts	6-pole	10		8JD 005 993-102	10

1.4 Fuse boxes	Description	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
ATO fuse boxes  	with 24 axial connections (6.3 x 0.8 mm), transparent cover	6-pole	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-pole	10		8JD 005 993-112	10
	with 16 side outputs (6.3 x 0.8 mm), transparent cover and contact parts	8-pole	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-pole	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
	Special fuse box, splash- proof with holders integrated in the cover for 4 spare blade fuses, rubber seal and 12 contacts for cables 1.5 to 2.5 mm ² , up to 10 A	12-pole	1		8JD 005 993-131	1

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

1.4 Fuse boxes

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1.4 Fuse boxes	Description	Cover colour	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
Torpedo fuse boxes with 8 A fuse inserts 	Threaded connections for cables up to 6 mm ²	■	1-pole	10		8JD 002 288-001	10
	Threaded connections for cables up to 6 mm ²	■	2-pole	10		8JD 002 289-001	10
		transparent	2-pole	10		8JD 002 289-011	10
	Male blade connection 6.3 x 0.8 mm ²	transparent	2-pole	10		8JD 002 289-081	10
	Threaded connections for cables up to 6 mm ²	■	4-pole	15		8JD 002 294-001	15
		transparent	4-pole	15		8JD 002 294-011	15
	Male blade connection 6.3 x 0.8 mm ²	transparent	4-pole	10		8JD 002 294-081	10
	Threaded connections for cables up to 6 mm ²	■	6-pole	10		8JD 002 291-001	10
		transparent	6-pole	10		8JD 002 291-011	10
	Male blade connection 6.3 x 0.8 mm ²	transparent	6-pole	10		8JD 002 291-141	10
	Threaded connections for cables up to 6 mm ²	■	8-pole	5		8JD 002 290-001	5
		transparent	8-pole	5		8JD 002 290-031	5
	Male blade connection 6.3 x 0.8 mm ²	transparent	8-pole	10		8JD 002 290-141	10
	Connection rail		2-pole	100		9XS 091 200-007	100
	60 male blade connections 6.3 x 0.8 mm	transparent	12-pole	10		8JD 004 588-001	10

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2. Plug-type connections

Cigarette lighters, power sockets and USB sockets

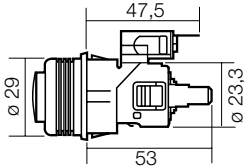


Purpose:

These products are used for various special applications. The power sockets are used to connect a variety of consumers such as lights, fans, cool boxes, phones, laptops, portable refrigerators and coffee makers. Cigarette lighters are offered in a variety of designs.

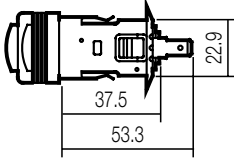
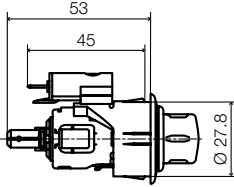
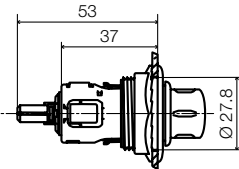
Advantages:

- 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, power sockets and USB sockets	Description	Voltage	max. load-carrying capacity as socket	Part number	PU
 	Universal cigarette lighter with light type of connection: blade coupling 6.3 mm, fastened with a green clamping sleeve, pierced hole: Ø 28 mm, control panel thickness: max. 2.5 mm				
	Boxed	12 V	10 A	8EZ 008 021-001	1
	Boxed	24 V	5 A	8EZ 008 021-011	1

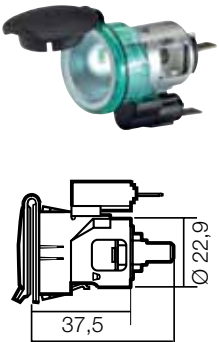
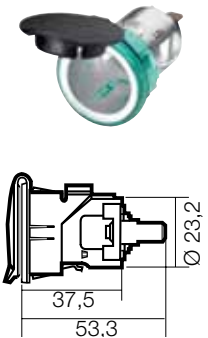
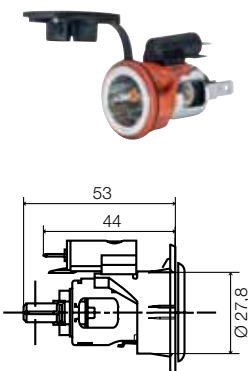
2. Plug-type connections

2.1 Cigarette lighters and power sockets

2.1 Cigarette lighters, power sockets	Description	Voltage	max. load-carrying capacity as socket	Part number	PU
 	Universal cigarette lighter without light type of connection: blade coupling 6.3 mm, fastened with a lock washer, pierced hole: Ø 23.5 mm, control panel thickness: max. 2.5 mm				
	Boxed	12 V	10 A	8EZ 008 022-001	1
	Boxed	24 V	5 A	8EZ 008 022-011	1
 	Universal SAE standard cigarette lighter with light type of connection: blade coupling 6.3 mm, fastened with a red clamping sleeve, pierced hole: Ø 28 mm, control panel thickness: max. 2.0 mm				
	Boxed	12 V		8EZ 008 021-021	1
	Boxed	24 V		8EZ 008 021-031	1
 	Universal SAE standard cigarette lighter without light type of connection: blade coupling 6.3 mm, fastened with a hexagon nut, pierced hole: Ø 28 mm, control panel thickness: max. 2.0 mm				
	Boxed	12 V		8EZ 008 021-041	1
	Boxed	24 V		8EZ 008 021-051	1

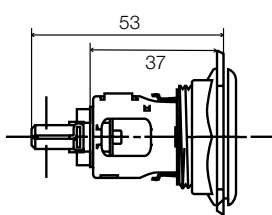
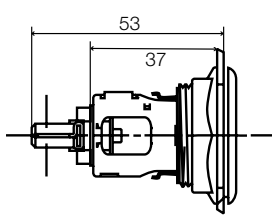
2. Plug-type connections

2.1 Cigarette lighters and power sockets

2.1 Cigarette lighters, power sockets	Description	Voltage	max. load-carrying capacity as socket	Part number	PU
	Power socket with light and cover Type of connection: blade coupling 6.3 mm, fixed using a green clamping sleeve, pierced hole: Ø 28 mm, control panel thickness: max. 2.5 mm with 12 V bulb installed, an additional bulb must be ordered for 24 V.				
	Boxed	12 V	15 A	8JB 008 023-011	1
	Power socket unlit with cover Type of connection: blade coupling 6.3 mm, fixed using a green clamping sleeve, pierced hole: Ø 28 mm, control panel thickness: max. 2.5 mm				
	Boxed	12 / 24 V	15 A	8JB 008 023-001	1
	Power socket with light and cover Connection: blade coupling 6.3 mm, fixed using a red clamping sleeve, pierced hole: Ø 28 mm, internal diameter: 21.0 mm				
	Boxed	12 V	20 A with a cable cross-section of 2.5 mm ²	8JB 008 023-021	1
	Boxed	24 V	15 A with a cable cross-section of 1.5 mm ²	8JB 008 023-031	1
	Fixing by means of a green clamping sleeve Boxed	24 V		8JB 008 023-041	1

2. Plug-type connections

2.1 Cigarette lighters and power sockets

2.1 Cigarette lighters and power sockets	Description	Voltage	max. load-carrying capacity as socket	Part number	PU
 	Power socket unlit, with cover Connection: blade coupling 6.3 mm, fixed using a hexagon nut, red sleeve, pierced hole: Ø 28 mm, internal diameter: 21.0 mm	12 / 24 V	20 A with a cable cross-section of 2.5 mm ² 15 A with a cable cross-section of 1.5 mm ²	8JB 008 023-051	1
 	Power socket unlit Connection: two blade couplings 6.3 mm, fixed using a black hexagon nut, black sleeve, pierced hole: Ø 28 mm, internal diameter: 21.0 mm cover not printed	12 / 24 V	20 A with a cable cross-section of 2.5 mm ² 15 A with a cable cross-section of 1.5 mm ²	8JB 008 023-067	160
	USB socket for installation Connection: cable length: 15 cm, cable cross-section: 1.0 mm ² , pierced hole: 27.8 mm ± 0.1 mm, panel thickness with threaded bush: 2 - 8 mm USB socket for installation with mounting plate 60 x 44 mm	12 V	Input: 12 V ± 4 V, 800 mA Output: 5 V ± 0.25 VDC	8JB 004 125-001 8JB 004 125-011	1
	Two power sockets: 2-pole, max. 20 A with cable cross-section 2.5 mm ² , max 15 A with cable cross-section 1.5 mm ² internal diameter 21 mm, for universal plugs, with mounting plate 60 x 44 mm One USB socket for installation Connection: cable length: 15 cm, cable cross-section: 1.0 mm ² , pierced hole: 27.8 mm ± 0.1 mm, panel thickness with threaded bush: 2 - 8 mm	12 V	Input: 12 V ± 4 V, 800 mA Output: 5 V ± 0.25 VDC	8JB 004 123-061	1

2. Plug-type connections

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

Product details

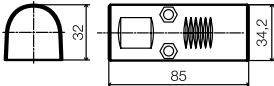
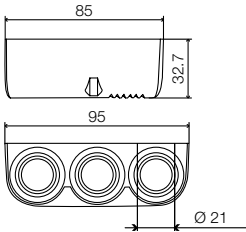


Purpose:

These products are used for various special applications. Depending on the version, the sockets can be installed both inside and outside the vehicle. The plug system compliant with ISO 4165 and the power sockets are used for the electrical connection of various consumers, such as lights, fans, cool boxes, phones, laptops, portable refrigerators and coffee coffee maker.

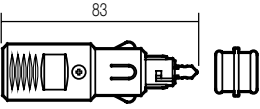
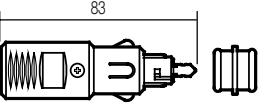
Advantages:

- 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 compliant with ISO 4165 available with polarity reversal protection through T-plug connection
- Extensions, battery monitors and adapters for consumers in the range

2.2.1 Universal plugs, sockets, adapters and couplings	Description	Connection	Part number	PU
 	Surface-mount socket 2-pole, no cover, plastic housing internal diameter 21 mm, for universal plugs load-carrying capacity: max. 20 A at 24 V (cable cross-section 2.5 mm²) max. 15 A at 24 V (cable cross-section 1.5 mm²) Boxed	2 flat plug connections - 6.3 mm	8JB 004 123-042	5
 	Surface-mount three-way socket 2-pole, plastic housing internal diameter 21 mm, for universal plugs load-carrying capacity: max. 20 A at 24 V (cable cross-section 2.5 mm²) max. 15 A at 24 V (cable cross-section 1.5 mm²) Polythene bag		8JB 004 123-051	1

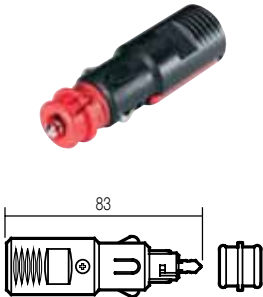
2. Plug-type connections

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

2.2.1 Universal plugs, sockets, adapters and couplings	Description	Connection	Part number	PU
 	Universal safety plug with ducted strain relief, integrated replaceable 8 A fuse and pulling tool, cable opening 7 mm load-carrying capacity: max. 8 A at 6–24 V, cable cross-section around 0.75 mm² Boxed Pro-fit packaging	2 screw terminals up to 2.5 mm² 2 screw terminals up to 2.5 mm²	8JA 007 589-001 8JA 007 589-002	10 1
 	Universal safety plug with LED and screwed strain relief, integrated replaceable 8 A fuse and pulling tool, cable opening 7 mm load-carrying capacity: max. 8 A at 6–24 V Boxed Pro-fit packaging	2 screw terminals up to 2.5 mm² 2 screw terminals up to 2.5 mm²	8JA 007 589-032 8JA 007 589-031	10 1

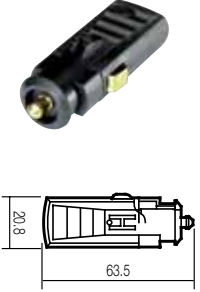
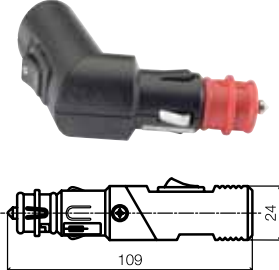
2. Plug-type connections

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

2.2.1 Universal plugs, sockets, adapters and couplings	Description	Connection	Part number	PU
 Universal safety plug with screwed strain relief, no fuse, with pulling tool, cable opening 7 mm Load-carrying capacity: 8 A at 24 V Boxed Load-carrying capacity: 16 A at 24 V Boxed		2 screw terminals up to 2.5 mm² 2 screw terminals up to 2.5 mm²	8JA 007 589-011 8JA 007 589-021	10 10
 Universal economy plug cable opening: 5 x 3 mm load-carrying capacity: max. 8 A at 6–24 V Boxed Pro-fit packaging		2 screw terminals up to 2.5 mm² 2 screw terminals up to 2.5 mm²	8JA 002 252-103 8JA 002 252-101	12 1
 Universal economy plug cable opening: Ø 8 mm load-carrying capacity: max. 8 A at 6–24 V Boxed		2 screw terminals up to 2.5 mm²	8JA 001 921-102	12

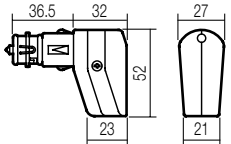
2. Plug-type connections

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

2.2.1 Universal plugs, sockets, adapters and couplings	Description	Connection	Part number	PU
	Universal economy plug with ducted strain relief cable opening: 5 x 3 mm Boxed	2 screw terminals up to 2.5 mm ²	8JA 007 158-001	1
	Universal economy plug with ducted strain relief cable opening: Ø 8 mm Boxed	2 screw terminals up to 2.5 mm ²	8JA 004 667-001	10
	Universal right-angle plug with screwed strain relief, with integrated, replaceable 8 A fuse, can be pivoted completely through 180°, with sufficient space for electronics (dimensions for circuit board: 28.5 x 26.5 x 1.5 mm) Boxed Pro-fit packaging	2 screw terminals up to 2.5 mm ² 2 screw terminals up to 2.5 mm ²	8JA 007 589-042 8JA 007 589-041	8 1
	Universal right-angle plug with screw-type strain relief, printed O-I rocker switch and integrated, replaceable 8 A fuse, can be pivoted completely through 180° Boxed	2 screw terminals up to 1.5 mm ²	8JA 007 589-152	8

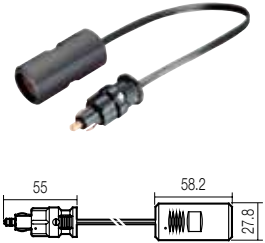
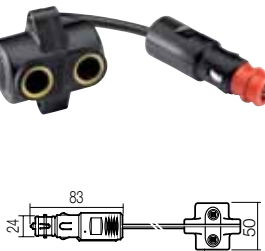
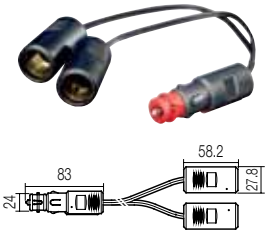
2. Plug-type connections

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

2.2.1 Universal plugs, sockets, adapters and couplings	Description	Connection/length	Part number	PU
 	Universal right-angle plug with screw-type strain relief, integrated 7.5 A ATO blade-type fuse and LED function check Boxed	2 screw terminals up to 1.5 mm ²	8JA 007 589-052	8
 	Cable for adapting standard and cigarette lighter sockets to standard sockets Cable: 2 x 0.75 mm ² Universal safety plug with integrated 8 A fuse load-carrying capacity: max. 8 A at 24 V Polythene bag	4.0 m	8KA 007 589-071	1
 	Extension cable for adapting standard and cigarette lighter sockets to cigarette lighter connectors Cable: 2 x 0.75 mm ² Universal safety plug with integrated 8 A fuse load-carrying capacity: max. 8 A at 24 V Polythene bag	4.0 m	8KA 007 589-081	1
 	Helical extension cable for adapting standard and cigarette lighter sockets to cigarette lighter connectors Cable: 2 x 0.75 mm ² Universal safety plug with integrated 8 A fuse load-carrying capacity: max. 8 A at 24 V Polythene bag Pro-fit packaging	0.6 – 3.0m 0.6 – 3.0m	8KA 007 589-091 8KA 007 589-092	1 1

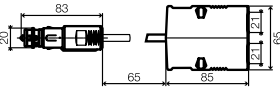
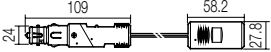
2. Plug-type connections

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

2.2.1 Universal plugs, sockets, adapters and couplings	Description	Length	Part number	PU
 Adapter cable for adapting standard sockets to cigarette lighter connectors Cable: 2 x 0.75 mm² load-carrying capacity: max. 8 A at 24 V Polythene bag Pro-fit packaging		0.25 m	8KA 007 589-101	1
 Adapter for adapting standard sockets to cigarette lighter connectors. Load-carrying capacity: max. 16 A at 12 / 24 V Polythene bag		93 mm	8KA 007 589-131	1
 Adapter cable for adapting standard and cigarette lighter sockets to two standard sockets Cable: 2 x 0.75 mm² Universal safety plug with integrated 8 A fuse load-carrying capacity: max. 8 A at 24 V Pro-fit packaging		0.12 m	8JB 008 032-001	
 Twin coupling for adapting standard and cigarette lighter sockets to two cigarette lighter connectors Cable: 2 x 0.75 mm² Universal safety plug with integrated 16 A fuse load-carrying capacity: max. 2 x 8 A at 24 V Polythene bag Pro-fit packaging		0.25 m	8JA 007 589-111	1
		0.25 m	8JA 007 589-112	1

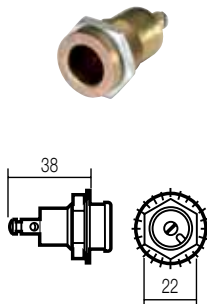
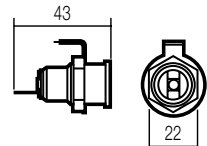
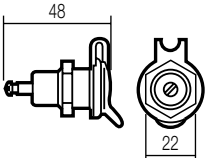
2. Plug-type connections

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

2.2.1 Universal plugs, sockets, adapters and couplings	Description	Length	Part number	PU
 	Twin coupling for adapting standard or cigarette lighter sockets to two cigarette lighter connectors load-carrying capacity: max. 16 A at 12 / 24 V Polythene bag	65 mm	8JA 007 589-141	1
 	Battery monitor – protects the battery from total discharge by switching consumers off in good time, e.g. cool boxes, seat heating, fans and other mobile 12 V devices when voltage is low. Automatic switch-on once operating voltage returns to normal level. Cable: 2 x 0.75 mm² suitable for standard and cigarette lighter sockets, LED function control and short-circuit protection load-carrying capacity: max. 8 A at 12 V Polythene bag	1.0 m	8ES 007 589-121	1

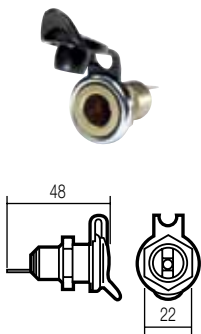
2. Plug-type connections

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

2.2.2 2-pole plug system compliant with ISO 4165	Description	Connection	Part number	PU
Socket compliant with ISO 4165, light-weight metal pierced hole: Ø 18.5 mm control panel thickness: max. 7 mm load-carrying capacity: max. 8 A at 24 V				
	Standard socket 2-pole Boxed	 1 screw terminal, earth on the housing	 8JB 001 946-031	 10
	Standard socket 2-pole, with additional earth plug Boxed	 2 flat plug connections - 6.3 mm	 8JB 001 946-041	 10
	Standard socket 2-pole, with cover Boxed Pro-fit packaging	 1 screw terminal, earth on the housing 1 screw terminal, earth on the housing	 8JB 001 946-021 8JB 001 946-022	 10 1

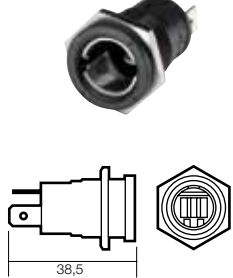
2. Plug-type connections

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

2.2.2 2-pole plug system compliant with ISO 4165	Description	Connection	Part number	PU
 Socket 2-pole, with cover Boxed		1 blade coupling 6.3 mm, earth on the housing	8JB 001 946-011	10
 Socket 2-pole, with cover and additional earth plug Boxed		2 flat plug connections - 6.3 mm	8JB 001 946-051	10

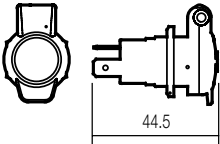
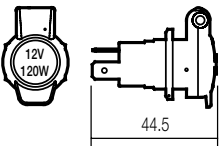
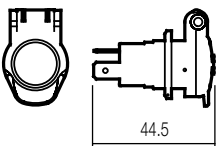
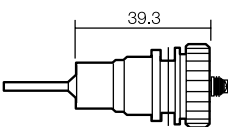
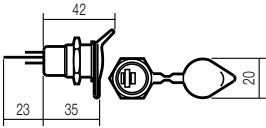
Socket compliant with ISO 4165, plastic housing

polarity reversal protection through T-plug connection, recommended female connector housing 8JD 008 152-021 (10 pcs.), recommended blade terminal sleeves 8KW 701 235-033 (100 pcs.), pierced hole: Ø 18.5 mm, control panel thickness: max. 7 mm, load-carrying capacity: max. 16 A at 6 – 24 V

 Socket 2-pole, without cover Boxed		2 flat plug connections - 6.3 mm	8JB 001 946-072	10
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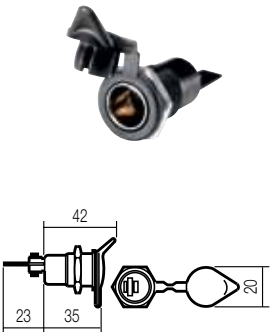
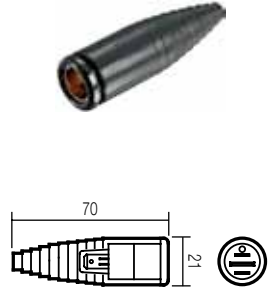
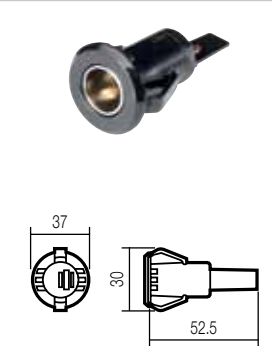
2. Plug connections

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

2.2.2 2-pole plug system compliant with ISO 4165	Description	Connection	Part number	PU
  	Socket 2-pole, with snap cover, cover does not latch, load-carrying capacity max. 16 A at 6 – 24 V Boxed	2 flat plug connections - 6.3 mm	8JB 001 946-082 8JB 001 946-127	10 50
 	Socket 2-pole, with arresting cover, (the cover remains in place when opened, the catch is released on insertion so that the cover automatically closes when the plug is removed.) load-carrying capacity max. 16 A at 6 – 24 V Boxed	2 flat plug connections - 6.3 mm	8JB 001 946-092	10
 	Socket 2-pole, watertight as per IP 67, with unloseable cover, 300 mm lead 2.5 mm ² , ideally suited for use in boats and near motors temperature range: -40°C to +105 °C Boxed	Blade contact and earth sleeve	8JB 001 946-101	1
 	Socket 2-pole, with cover Boxed Pro-fit packaging	2 flat plug connections - 6.3 mm 2 flat plug connections - 6.3 mm	8JB 004 777-001 8JB 004 777-002	5 1

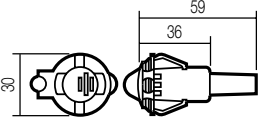
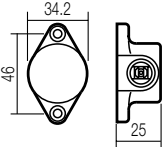
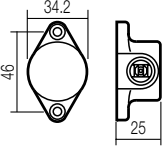
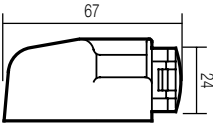
2. Plug-type connections

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

2.2.2 2-pole plug system compliant with ISO 4165	Description	Connection	Part number	PU
 Socket 2-pole, with cover	Boxed	2 screw terminals	8JB 004 777-011	5
 Coupling for setting up individual extensions for a power supply to electric appliances and lights. load-carrying capacity: max. 16 A at 24 V	Pro-fit packaging Boxed	2 flat plug connections - 6.3 mm 2 flat plug connections - 6.3 mm	8JA 007 589-061 8JA 007 589-062	1 20
 Socket 2-pole, without cover control panel thickness: max. 3 mm pierced hole: Ø 23 mm load-carrying capacity: max. 8 A at 6 V – 24 V	Boxed	2 flat plug connections 6.3 mm	8JB 002 286-021	10

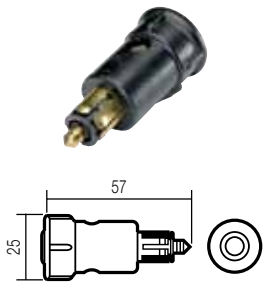
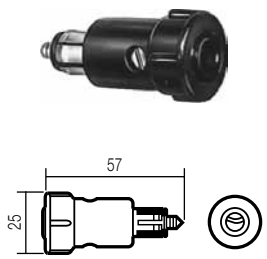
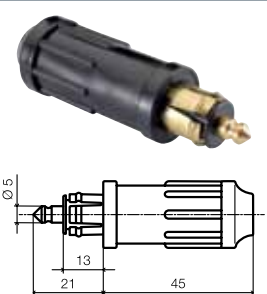
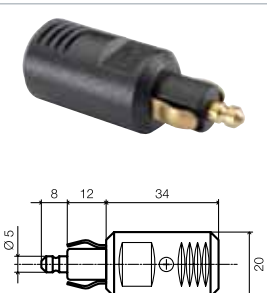
2. Plug-type connections

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

2.2.2 2-pole plug system compliant with ISO 4165	Description	Connection	Part number	PU
 	Socket 2-pole, with cover control panel thickness: max. 2 mm pierced hole: Ø 23 mm load-carrying capacity: max. 8 A at 6 V – 24 V			
Boxed		2 flat plug connections - 6.3 mm	8JB 002 286-031	10
 	Surface-mount socket 2-pole, without cover, plastic housing contacts CuZn			
Boxed		2 screw terminals	8JB 004 123-001	5
Pro-fit packaging		2 screw terminals	8JB 004 123-002	1
 	Surface-mount socket 2-pole, without cover, plastic housing, designed to be resistant to seawater contacts CuZn nickel plated			
Boxed		2 screw terminals	8JB 004 123-012	5
 	Surface-mount socket 2-pole, with cover, plastic housing			
Boxed		2 flat plug connections - 6.3 mm	8JB 004 123-032	5
Pro-fit packaging		2 flat plug connections - 6.3 mm	8JB 004 123-031	1

2. Plug-type connections

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

2.2.2 2-pole plug system compliant with ISO 4165	Description	Connection	Part number	PU
Plug compliant with ISO 4165, plastic design				
	Plug without strain relief cable opening: Ø 9.2 mm load-carrying capacity: max. 18 A at 24 V			
	Boxed	2 screw terminals up to 2.5 mm ²	8JA 002 262-001	10
	Pro-fit packaging	2 screw terminals up to 2.5 mm ²	8JA 002 262-003	1
	Plug with screw-type strain relief cable opening: Ø 9.2 mm load-carrying capacity: max. 18 A at 24 V			
	Boxed	2 screw terminals up to 2.5 mm ²	8JA 001 915-001	10
	Plug without strain relief cable opening: Ø 7.5 mm load-carrying capacity: max. 15 A at 24 V			
	Boxed	2 screw terminals	8JA 001 915-022	10
	Plug with solder contacts and ducted strain relief cable opening: Ø 7.5 mm load-carrying capacity: max. 8 A at 24 V			
	Boxed	2 solder contacts	8JA 001 915-032	10

2. Plug-type connections

2.3 2-pole plug system compliant with DIN 14 690


Purpose:

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

Advantages:

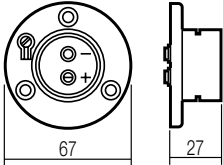
- Complete range comprising connector, socket and coupling box
- Socket and coupling box with captive cover

Technical data:

Operating temperature: -40°C to +100°C

rated output: 6 – 42 V

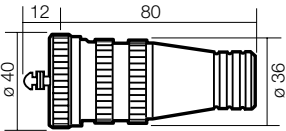
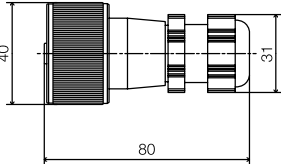
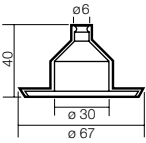
strength of current: max. 16 A

2.3 2-pole plug system compliant with DIN 14 690	Description	Connection	Part number	PU
 	Socket, light-weight metal, with captive cover form A with seal in screw cover and rubber underlay for cables Ø 6...8 mm			
Boxed		2 screw terminals	8JB 002 281-001	1
Pro-fit packaging		2 screw terminals	8JB 002 281-002	1

2. Plug-type connections

2.3 2-pole plug system compliant with DIN 14 690

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2.3 2-pole plug system compliant with DIN 14 690	Description	Connection	Part number	PU
  Boxed	Coupling socket, light-weight metal, with screw cover form B seal in screw-on cover with cable protection sleeve for cables Ø 6- 10 mm	2 screw terminals	8JB 002 281-011	1
  Boxed	Socket, light-weight metal, form C with union nut for cables Ø 6 – 10 mm	2 screw terminals	8JA 001 925-001	1
  Boxed	Accessories rubber underlay for cables Ø 6 – 8 mm		9GD 735 641-032	10
 Polythene bag	Contact insert for 2-pole connection compliant with DIN 14 690 (Hella part number: 8JA 001 925-001)	2 screw terminals	9MK 748 467-001	1

**Purpose:**

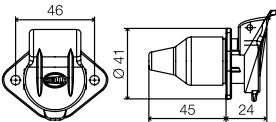
The 3-pole plug system compliant with DIN 9680 is used for tractors and agricultural machinery for the electrical connection of long-term consumers such as mowing attachments, excavator attachments and sweeping machines with a max. current consumption of 25 A. The standard does not apply to electrical connections for the supply of lighting equipment (see ISO 1724). The 3-pole plug system without standard is used for the transfer of auxiliary functions between the tractor and the trailer.

Advantages:

- Easy to assemble
- Wide range of different connection options (screw terminals and blade couplings)
- Sturdy plastic housing with high mechanical strength

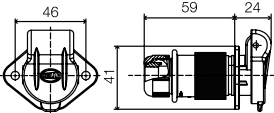
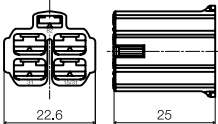
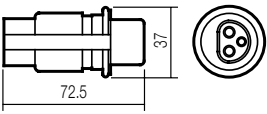
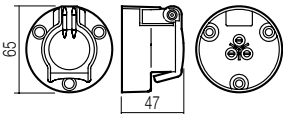
Technical data:

Rated output: 6 – 42 V
strength of current: max. 16 A

2.4 3-pole plug systems	Description	Connection	Part number	PU
 	Socket black plastic design, DIN 9680, with rubber grommet pierced hole: ø 30 mm temperature range: -25°C to +75°C watertight as per IP 54			
	Boxed	4 x 6.3 mm / 1 x 4.8 mm male blade connections	8JB 001 933-011	10

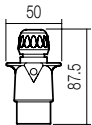
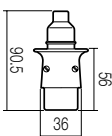
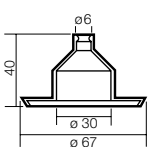
2. Plug-type connections

2.4 3-pole plug systems

2.4 3-pole plug systems	Description	Connection	Part number	PU
 	Socket DIN 9680, with screw cap temperature range -25°C to +75°C watertight as per IP 54 Boxed	4 x 6.3 mm / 1 x 4.8 mm male blade connections	8JB 001 933-042	10
 	Receptacle housings for 8JB 001 933-011 and -042 Boxed	4 x 6.3 mm / 1 x 4.8 mm male blade connections	9MK 180 175-001	20
 	Plug black plastic design, DIN 9680, with rubber seals for cables Ø 8...13 mm Boxed	4 x 6.3 mm / 1 x 4.8 mm male blade connections	8JA 002 263-011	10
 	Socket black plastic design, with rubber seal in cover base: Ø 65 mm (round housing) Boxed	3 screw terminals	8JB 001 933-031	1

2. Plug-type connections

2.4 3-pole plug systems

2.4 3-pole plug systems	Description	Connection	Part number	PU
 	Plug black plastic design, for cables Ø 6.3...8.3 mm, with union nut and rubber grommet	3 screw terminals	8JA 002 263-031	1
 	Plug black plastic design, for cables Ø 6.3...8.3 mm, with protective cable grommet	3 screw terminals	8JA 002 263-001	1
 	Rubber underlay for cables Ø 6,8 mm		9GD 735 641-032	10

2. Plug-type connections
2.5 4-pole plug system compliant with DIN 72 575



Purpose:

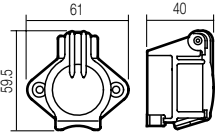
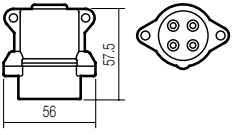
The 4-pole plug system compliant with DIN 72 575 is used for the transfer of auxiliary functions between the tractor and the trailer.

Advantages:

- Easy to assemble
- Sturdy plastic housing with high mechanical strength

Load-carrying capacity:

max. 16 A at 6–24 V (cable cross-section 1.5 mm²)
max. 25 A at 6–24 V (cable cross-section 2.5 mm²)

2.5 4-pole plug systems compliant with DIN 72 575	Description	Connection	Part number	PU
 	Socket with rubber seal in cover, 90° cable outlet for cables Ø 7.2 – 9.0 mm Operating temperature -40°C to +85°C Boxed	4 screw terminals	8JB 001 944-011	1
 	Plug with screw-type strain relief for cables Ø 5 – 9 mm Boxed	4 screw terminals	8JA 001 920-011	1

**Purpose:**

The 5-pole plug system compliant with ISO 1724 is used for the transfer of auxiliary functions between the tractor and the trailer.

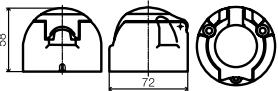
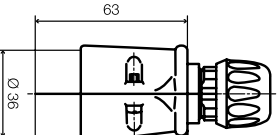
Advantages:

- Easy to assemble
- Sturdy plastic housing with high mechanical strength

Load-carrying capacity:

max. 16 A at 6–24 V (cable cross-section 1.5 mm²)

max. 25 A at 6–24 V (cable cross-section 2.5 mm²)

2.6.1 5-pole plug system compliant with ISO 1724	Description	Connection	Part number	PU
 	Socket with cover base: Ø max. 72 mm, Temperature range: -25°C to +75°C Boxed	5 screw terminals	8JB 001 940-001	1
 	Plug screw-type tension relief and union nut for cables up to Ø 8 mm temperature range: -25°C to +75°C Boxed	5 screw terminals	8JA 001 916-001	1

2. Plug-type connections

2.6 Plug-type connections 12 V



Purpose:

This 7-pole 12 V plug system compliant with ISO 1724 / ISO 3732 is the most frequently used system for electrical connections between traction vehicle and trailer with 12 V vehicle electric system. The system is mainly used for applications with average requirements. The system comprises a regular plug-type connector, type N, compliant with ISO 1724 and an auxiliary plug-type connector, type S, compliant with ISO 3732. The auxiliary system differs from the normal system by its white housing, contact inserts and non-interchangeable contact arrangement.

Advantages:

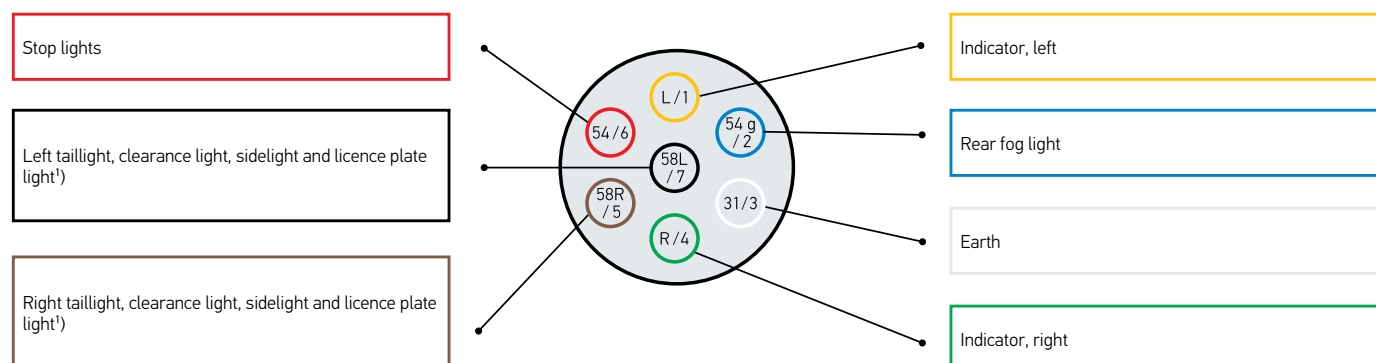
- Economical system for simple applications
- Easy to assemble
- Wide range of different connection options (screw terminals and blade couplings)
- Coupling sockets available
- Sockets with rear fog light switch-off available

Load-carrying capacity:

Max. 15 A at 12 V
 cable cross-section: max. 1 x 2.5 mm², max 2 x 1.5 mm²
 permissible temperature range: -25 to 70°C ambient temperature

2.6.2 7-pole plug system / 12 V (compliant with ISO 1724)

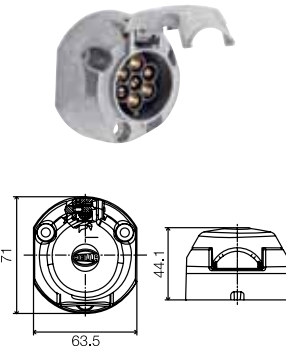
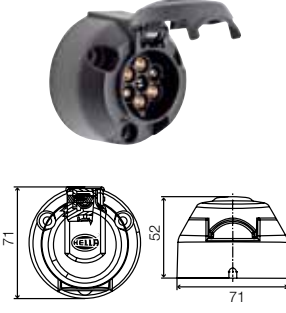
Pin-out – trailer plug fitting 12 V / 7-pole N type ISO 1724



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

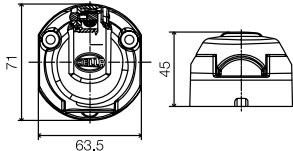
Contact no.	Function	Cable cross-section	Colour of wire insulation
1 / L	Indicator, left	1.5 mm ²	Yellow
2 / 54g	Rear fog light	1.5 mm ²	Blue
3 / 31	Earth	2.5 mm ²	White
4 / R	Indicator, right	1.5 mm ²	Green
5 / 58R	Right taillight, clearance light, sidelight and licence plate lights ¹⁾	1.5 mm ²	Brown
6 / 54	Stop lights	1.5 mm ²	Red
7 / 58L	Left taillight, clearance light, sidelight and licence plate lights ¹⁾	1.5 mm ²	Black

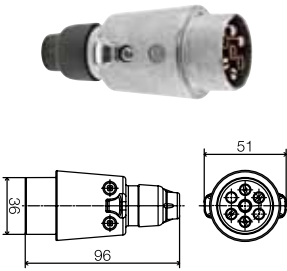
¹⁾ The licence plate lights must be connected in such a way that none of the lamps is connected to both contacts 5 and 7.

2.6.2 7-pole plug systems ISO 1724	Description	Connection	Part number	PU
7-pole plug system compliant with ISO 1724 Socket: centre contact 7/58L as pin Plug: centre contact 7/58L as sleeve Base: Ø max. 72 mm				
 Socket with cover, solid metal removable contact insert Boxed Pro-fit packaging with switch-off contact for the rear fog light on the motor vehicle Boxed		7 screw terminals 7 screw terminals 7 screw terminals with auxiliary terminal	8JB 001 941-002 8JB 001 941-001 8JB 001 941-062	25 1 10
 Socket with cover, solid metal removable contact insert Boxed		7 flat plug connections 6.3 mm	8JB 001 941-041	25
 Socket with cover, black plastic design removable contact insert Boxed		7 flat plug connections 6.3 mm	8JB 006 462-001	25

2. Plug-type connections

2.6 Plug-type connections 12 V

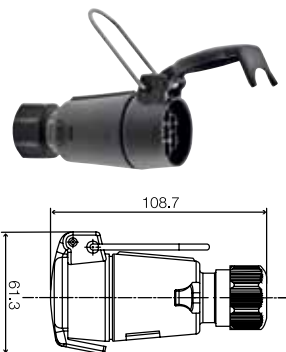
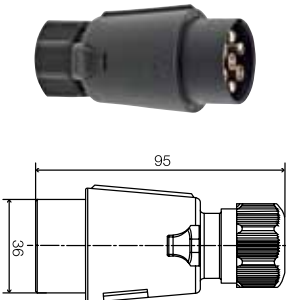
2.6.2 7-pole plug systems ISO 1724	Description	Connection	Part number	PU
 	Socket with cover, black plastic design removable contact insert			
	Boxed	7 screw terminals	8JB 001 943-003	25
	Pro-fit packaging	7 screw terminals	8JB 001 943-001	1
	with switch-off contact for the rear fog light on the motor vehicle Boxed	7 screw terminals	8JB 001 943-011	10
	Socket underlay for cables Ø 8–11 mm, with 180° cable outlet, 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			
	Boxed		9GD 735 641-001	10
	Socket underlay for cables Ø 8–11 mm, with 180° cable outlet, suitable for the following sockets: 8JB 006 462-001 8JB 001 941-041			
	Boxed		9GD 735 641-051	10
	Rubber underlay for cables Ø 8–11 mm, with 90° cable outlet, suitable for the following sockets: 8JB 001 943-003 8JB 001 943-001 8JB 001 943-011			
	Boxed		9GD 735 641-042	10

2.6.2 7-pole plug systems ISO 17 24	Description	Connection	Part number	PU
	Plug metal version, with screw-type strain relief and rubber grommet			
	Boxed	7 screw terminals	8JA 001 918-002	25
	Boxed	7 flat plug connections 6.3 mm	8JA 001 918-011	25
	Plug metal version, with screw-type strain relief and rubber grommet, sturdy version			
	Boxed	7 screw terminals	8JA 001 918-021	25
	Plug black plastic design, with screw-type strain relief and rubber grommet			
	Boxed	7 screw terminals	8JA 001 930-003	25
	Pro-fit packaging	7 screw terminals	8JA 001 930-001	1
	Boxed	7 flat plug connections 6.3 mm	8JA 001 930-041	25

2. Plug-type connections

2.6 Plug-type connections 12 V

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2.6.2 7-pole plug systems ISO 17 24	Description	Connection	Part number	PU
	Coupling socket with cover, black plastic design, with screw-type strain relief, trailer fitting and rubber grommet for 7-wire extension cables			
	Boxed	7 screw terminals	8JB 001 939-001	10
	Plug black plastic design, folding version with strain relief, contact insert and union nut, included individually			
	Boxed	7 screw terminals	8JA 005 476-002	5
	Industrial packaging	7 screw terminals	8JA 005 476-001	100

2.6.2 7-pole plug systems ISO 17 24	Description	Diameter	Part number	PU
Grommet for 7-pole plug not for 8JA 001 918-021 or 8JA 001 930-021				
	Polythene bag	Ø 10.2 mm	9GD 179 708-002	10
	Polythene bag	Ø 16.2 mm	9GD 179 708-002	10
	Polythene bag	Ø 13.2 mm	9GD 179 708-002	10
	Polythene bag	Ø 2 x 6.5 mm	9GD 179 708-002	10
	Polythene bag	Ø 8.5 mm	9GD 179 708-002	10



Purpose:

This 7-pole 12 V plug system compliant with ISO 1724 / ISO 3732 is the most frequently used system for electrical connections between traction vehicle and trailer with 12 V vehicle electric system. The system is mainly used for applications with average requirements. The system comprises a regular plug-type connector, type N, compliant with ISO 1724 and an auxiliary plug-type connector, type S, compliant with ISO 3732. The auxiliary system differs from the normal system by its white housing, contact inserts and non-interchangeable contact arrangement.

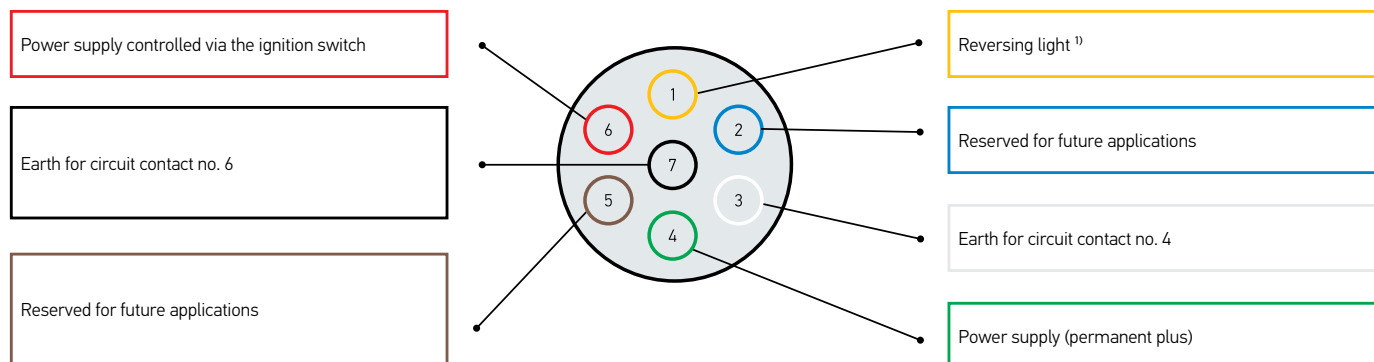
Advantages:

- Economical system for simple applications
- Easy to assemble
- Wide range of different connection options (screw terminals and blade couplings)
- 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 mm², max 2 x 1.5 mm²
 permissible temperature range: -25 to 70°C ambient temperature

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

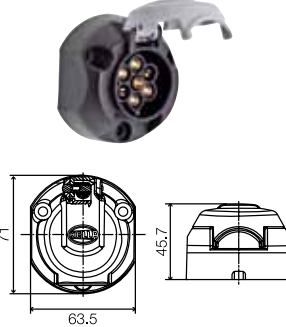
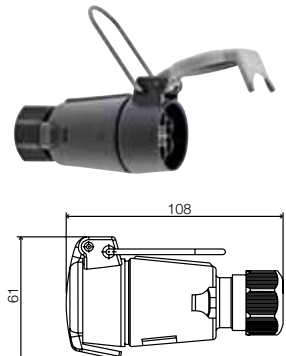
Contact no.	Function	Cable cross-section	Colour of wire insulation
1	Reversing light ¹⁾	1.5 mm ²	
2	Reserved for future applications	not prescribed	No cable or blue
3	Earth for circuit contact no. 4	2.5 mm ²	
4	Power supply (permanent plus)	2.5 mm ²	
5	Reserved for future applications	1.5 mm ²	
6	Power supply via the ignition switch	2.5 mm ²	
7	Earth for circuit contact no. 6	2.5 mm ²	

¹⁾ The earth for this contact is usually contact no. 3 of the 12 V, 7-pole N type plug connector compliant with ISO 1724.

2. Plug-type connections

2.6 Plug-type connections 12 V

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2.6.3 7-pole 12 V plug systems in accordance with ISO 3732	Description	Connection	Part number	PU
7-pole plug system compliant with ISO 3732 Socket: centre contact 7/58L as sleeve Plug: centre contact 7/58L as pin, Base: Ø max. 72 mm				
 Boxed	Socket black plastic design with light-grey cover, contact insert can be removed	7 screw terminals	8JB 001 943-041	25
 Boxed	Plug light-grey plastic design, with screw-type strain relief and rubber grommet	7 screw terminals	8JA 001 930-031	25
 Boxed	Coupling socket black plastic design with light-grey cover, with screw-type strain relief, trailer fitting and rubber grommet for 7-wire extension cables	7 screw terminals	8JB 006 464-001	10
 Boxed	Socket underlay for cables Ø 8–11 mm, with 180° cable outlet		9GD 735 641-001	10
 Boxed	Rubber underlay for cables Ø 8–11 mm, with 90° cable outlet		9GD 735 641-042	10



Purpose:

This 13-pole plug system compliant with ISO 11446 was developed at the end of the 1980s. Its large number of poles compared with the 7-pole system allows all the lighting and auxiliary functions to be transferred using only one plug. The system is continually replacing the older plug-type connector generation on account of its advantages, particularly with regard to watertightness, stability, contact reliability and easy handling thanks to the bayonet closure.

Advantages:

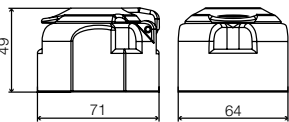
- Easy handling thanks to the bayonet closure
- Easy to assemble
- Tightness compliant with protection class IP 54K
- Sockets with rear fog light switch-off available

Load-carrying capacity:

max. 16 A at 6–24 V (cable cross-section 1.5 mm²)

max. 25 A at 6–24 V (cable cross-section 2.5 mm²)

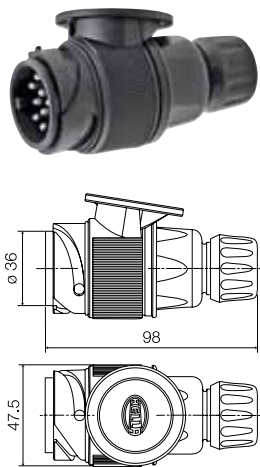
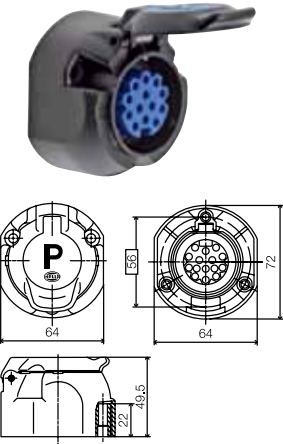
permissible temperature range: -40 to 85°C

2.6.4 13-pole 12 V plug systems compliant with ISO 11446	Description	Connection	Part number	PU
 	Socket with cover, black plastic design removable contact insert, rubber underlay and rubber seal in cover			
	Boxed With switch-off contact for the rear fog light on the motor vehicle	13 screw terminals	8JB 005 949-001	1
	Boxed	13 screw terminals with auxiliary terminal	8JB 005 949-011	1
	Pro-fit packaging	13 screw terminals with auxiliary terminal	8JB 005 949-012	1
	With microswitch, three-way switch left		8JB 005 949-041	1

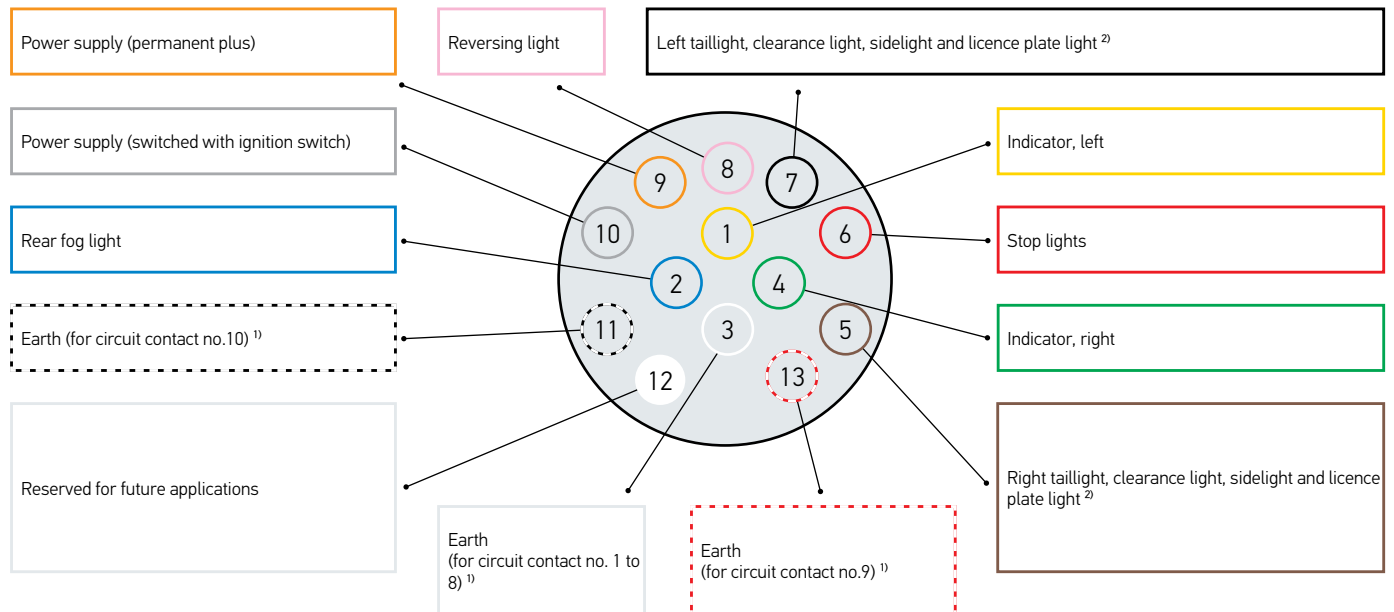
2. Plug-type connections

2.6 Plug connections 12 V

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2.6.4 13-pole plug systems compliant with ISO 11 446	Description	Connection	Part number	PU
 Plug black plastic design with rubber seal, union nut and bayonet closure Boxed Boxed Pro-fit packaging		13 screw terminals 13 screw terminals 13 screw terminals	8JA 005 951-001 8JA 005 951-027 8JA 005 951-003	1 16 1
 Plus black plastic design, "click" version, plug can not be reopened once it has been assembled, including parking socket Polythene bag		13 screw terminals	8JA 005 951-041	1
 Parking socket black plastic design with blue cover, for protecting the 13-pole connector when the trailer is parked Boxed			8HG 005 953-001	1

2.3.4 Pin-out – trailer plug fitting 13-pole ISO 11446



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

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

¹⁾ The 3 earth cables must not be connected together in the trailer.²⁾ The licence plate lights must be connected in such a way that none of the lamps is connected to both contacts 5 and 7.

2. Plug connections

2.6 Plug connections 12 V

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Purpose:

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.

Advantages:

- Compatible with standard ISO 1724
- Simple and rational fitting
- Socket contains micro-switch with changeover function for switching the rear fog light, the parking system and/or trailer detection.

Load-carrying capacity:

- Operating temperature: -25°C to 75°C
- Load-carrying capacity max. 20 A (with 2.5 mm² cable)

2.6.5 7+6-pole plug system compliant with NEN 6120	Description	Connection	Part number	PU
 Socket 7+6-pole, black plastic design, with rubber seal in cover, microswitch compatible with MULTICON and WeSt plugs Boxed				
 Plug 7+6-pole, black plastic design with rubber seal and union nut for cables Ø 11.5 ... 14.0 mm compatible to WeSt sockets. Not suitable for MULTICON sockets. Boxed				
		13 screw terminals	8JB 005 949-031	1
		13 screw terminals	8JA 005 951-061	1



Purpose:

This 7-pole 24 V plug system compliant with ISO 1185 / ISO 3731 is currently the most widespread system for the electrical connection between traction vehicle and trailer or prime mover and semi-trailer in the commercial vehicles field. The system is mainly used for applications with average requirements. The system comprises a regular plug-type connector, type N, compliant with ISO 1185 and an auxiliary plug-type connector, type S, compliant with ISO 3731. The auxiliary system differs from the normal system by its white housing, contact inserts and non-interchangeable contact arrangement.

Advantages:

- Economical system for simple applications
- Easy to assemble
- Wide range of different connection options (screw terminals and blade couplings)
- Housing parts made of sturdy materials (aluminium, break-proof plastic)

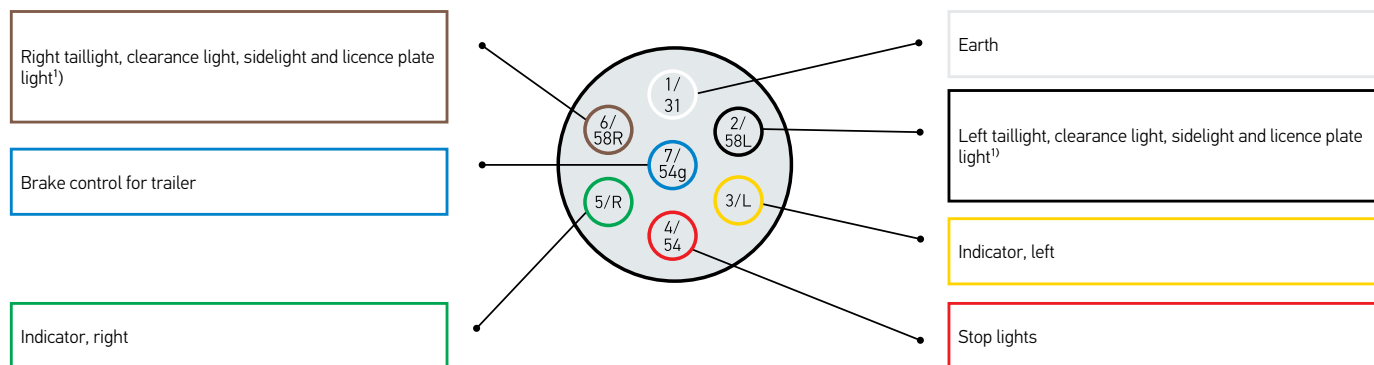
Load-carrying capacity:

max. 20 A (with 2.5 mm² cable)
 max. 15 A (with 1.5 mm² cable)
 permissible temperature range: -25 to 75°C

2.7.1 7--pole plug system compliant with ISO 1185 (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

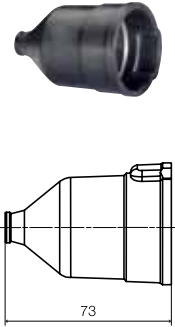
Contact no.	Function	Cable cross-section	Colour of wire insulation
1/31	Earth	2.5 mm ²	□
2/58L	Left taillight, clearance light, sidelight and licence plate lighting ¹⁾	1.5 mm ²	■
3/L	Indicator, left	1.5 mm ²	■
4/54	Stop lights	1.5 mm ²	■
5/R	Indicator, right	1.5 mm ²	■
6/58R	Right taillight, clearance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

¹⁾ The licence plate lights must be connected in such a way that none of the lamps is connected to both contacts 2 and 6.

2. Plug-type connections

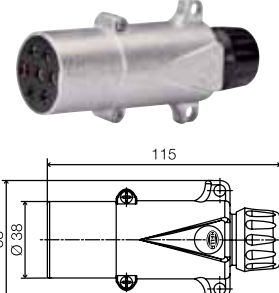
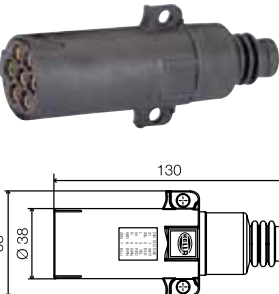
2.7 Plug-type connections 24 V

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2.7.1 7-pole plug system compliant with ISO 1185 (N-type)	Description	Connection	Part number	PU
 Socket, metal version, with cable grommet for cables Ø 9.5 ... 12.5 mm. Boxed Boxed Boxed		7 screw terminals 7 flat plug connections 6.3 mm 16 blade couplings 6.3 mm (5 x 2-fold / 2 x 3-fold)	8JB 003 833-001 8JB 003 833-031 8JB 003 833-011	10 10 10
 Socket, plastic version, with cable grommet for cables Ø 9.5 ... 12.5 mm. Boxed Boxed Boxed		7 screw terminals 7 flat plug connections 6.3 mm 16 blade couplings 6.3 mm (5 x 2-fold / 2 x 3-fold)	8JB 008 085-001 8JB 008 085-021 8JB 008 085-041	10 10 10
 Cable grommet for cables Ø 9.5 ... 12.5 mm. Boxed			9GD 735 641-012	10

2. Plug-type connections

2.7 Plug-type connections 24 V

2.7.1 7-pole plug system compliant with ISO 1185 (N-type)	Description	Connection	Part number	PU
	Plug, metal version, with high-strength cable gland, interior seal for cables Ø 9.2 ... 11.5 mm			
Boxed		7 screw terminals	8JA 003 831-001	10
Boxed		7 flat plug connections 6.3 mm	8JA 003 831-011	10
	Plug, plastic version, with cable grommet for cables Ø 8.0 ... 12.0 mm.			
Boxed		7 screw terminals	8JA 008 084-001	10
Boxed		7 flat plug connections 6.3 mm	8JA 008 084-021	10

2. Plug-type connections

2.7 Plug-type connections 24 V

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Purpose:

This 7-pole 24 V plug system compliant with ISO 1185 / ISO 3731 is currently the most widespread system for the electrical connection between traction vehicle and trailer or prime mover and semi-trailer in the commercial vehicles field. The system is mainly used for applications with average requirements. The system comprises a regular plug-type connector, type N, compliant with ISO 1185 and an auxiliary plug-type connector, type S, compliant with ISO 3731. The auxiliary system differs from the normal system by its white housing, contact inserts and non-interchangeable contact arrangement.

Advantages:

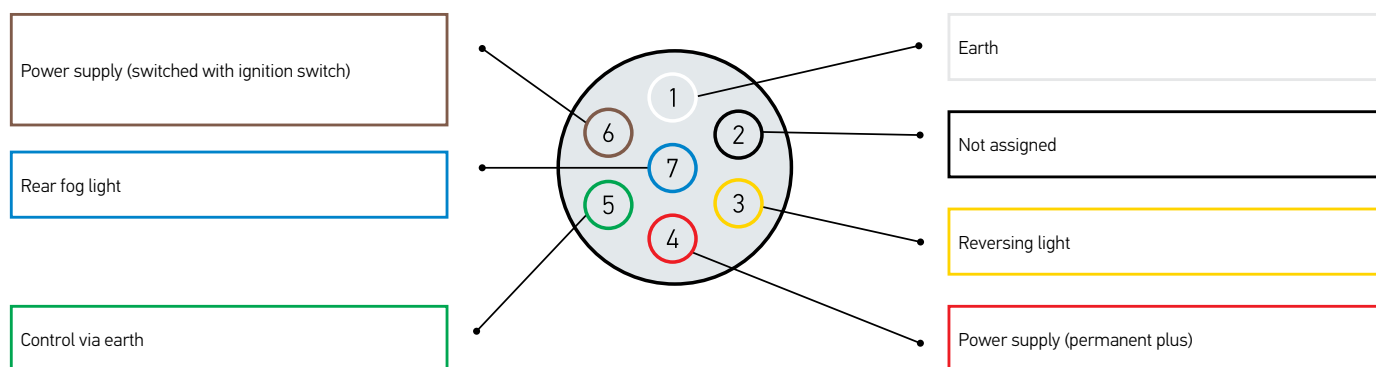
- Economical system for simple applications
- Easy to assemble
- Wide range of different connection options (screw terminals and blade couplings)
- Housing parts made of sturdy materials (aluminium, break-proof plastic)

Load-carrying capacity:

max. 20 A (with 2.5 mm² cable)
max. 15 A (with 1.5 mm² cable)
permissible temperature range: -25 to 75°C

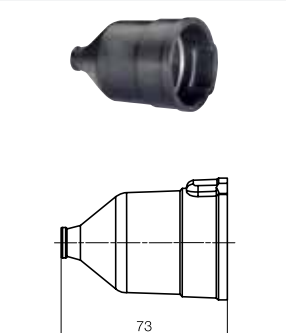
2.7.2 7-pole plug system compliant with ISO 3731 (S-type)

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

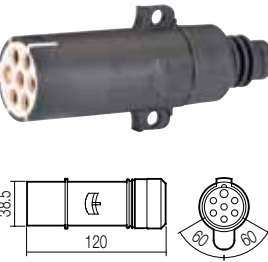
Contact no.	Function	Cable cross-section	Colour of wire insulation
1	Earth	2.5 mm ²	□
2	Reserved for future applications	1.5 mm ²	■
3	Reversing light	1.5 mm ²	■
4	Power supply (permanent plus)	2.5 mm ²	■
5	Control via earth	1.5 mm ²	■
6	Power supply via the ignition switch	2.5 mm ²	■
7	Rear fog light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

2.7.2 7-pole plug system compliant with ISO 3731 (S-type)	Description	Connection	Part number	PU
	Socket, metal version, with cable grommet for cables Ø 9.5 ... 12.5 mm.			
	Socket, plastic version, with cable grommet for cables Ø 9.5 ... 12.5 mm.			
	Cable grommet for cables Ø 9.5 ... 12.5 mm.			

2. Plug-type connections

2.7 Plug-type connections 24 V

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2.7.2 7-pole plug system compliant with ISO 3731 (S-type)	Description	Length	Part number	PU
	Plug, metal version, with high-strength cable gland, interior seal for cables Ø 9.2 ... 11.5 mm.			
	Boxed	7 screw terminals	8JA 003 832-001	10
	Plug, plastic version, with cable grommet for cables Ø 9.5 ... 12.5 mm.			
	Boxed	7 screw terminals	8JA 008 084-011	10
	Boxed	7 flat plug connections 6.3 mm	8JA 008 084-031	10



Purpose:

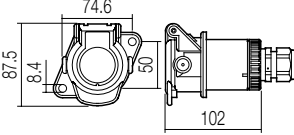
The 15-pole plug system compliant with ISO 12098 is the modern system for the transfer of lighting and auxiliary functions in 24 V vehicle electric systems. On account of its technical advantages, such as reliable contacting and watertightness, the system is used by many leading commercial vehicle manufacturers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

Advantages:

- The system meets the high requirements on modern trailer plug-type connectors compliant 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:

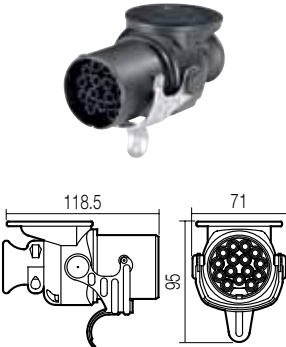
max. 16 A at 6 – 24 V (cable cross-section 1.5 mm²)
 max. 25 A at 6 – 24 V (cable cross-section 2.5 mm²)

2.7.3 15-pole plug system compliant with ISO 12 098	Description	Connection	Part number	PU
 	Socket sturdy plastic version with cover, ADR/GGVS tested, with rubber seals and nickel-plated male contacts, made of glass fibre reinforced polyamide, high-strength cable gland on the cable outlet pierced hole: Ø 54 mm, for cable diameters: 12–18 mm, male contacts: 12 x 1.5 mm ² + 3 x 2.5 mm ²			
	Boxed	15 screw terminals	8JB 007 242-011	1
	Boxed	15 crimped/solder connections	8JB 007 242-021	1

2. Plug-type connections

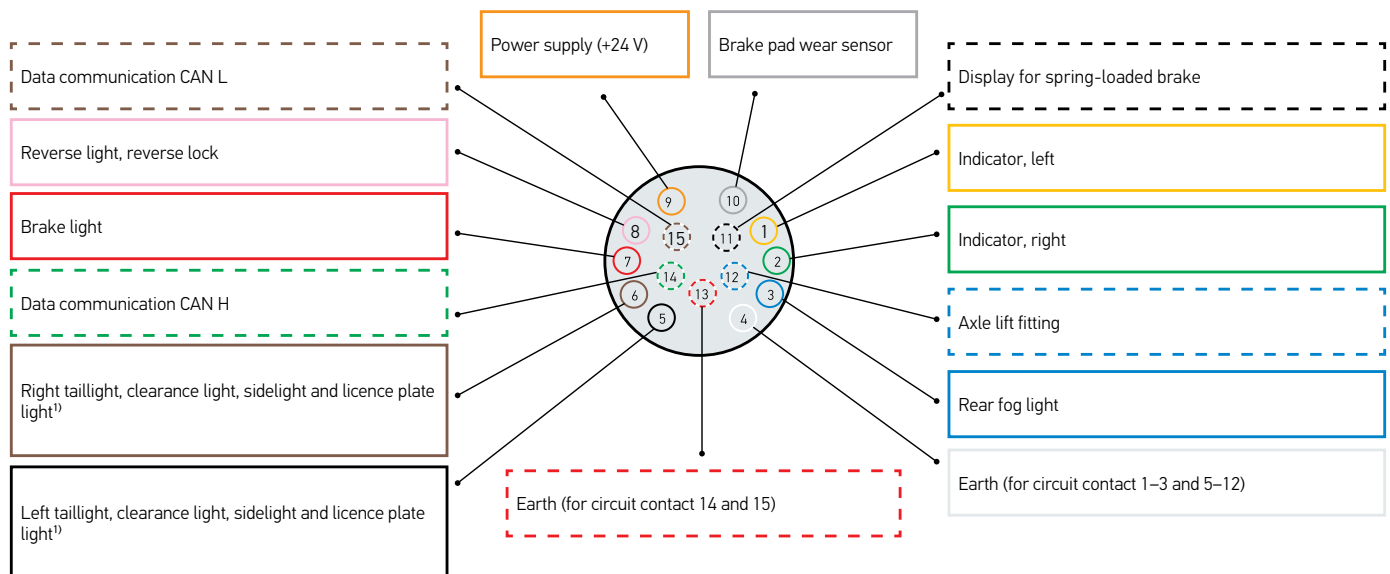
2.7 Plug-type connections 24 V

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2.7.3 15-pole plug system compliant with ISO 12 098	Description	Connection	Part number	PU
 Plug ADR / GGVS tested, with rubber seals and nickel-plated female contacts, made of glass fibre reinforced polyamide, mechanical strain relief, securely held in place by a non-rusting metal shackle for cable diameters: 12–18 mm contact socket: 12 x 1.5 mm² + 3 x 2.5 mm² Boxed Boxed		15 screw terminals 15 crimped/solder connections	8JA 007 241-021 8JA 007 241-031	1 1
 Parking socket for 15-pole 24 V plug 8JA 007 241-021 / -031 pierced hole: Ø 54 mm Boxed			8HG 007 647-001	1
 Crimp/solder male contact set* (12 x 1.5 mm² + 3 x 2.5 mm²) for socket 8JB 007 242-021			9MK 726 761-811	1
 Crimp/solder female contact set* (12 x 1.5 mm² + 3 x 2.5 mm²) for plug 8JA 007 241-031			9MK 726 758-821	1

* You will find suitable tools on page 177.

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



Contact assignment for plug-type connectors compliant with ISO 12098, 24 V, 15-pole

Contact no.	Function	Ø cable	Colour of wire insulation	
1	Indicator, left	1.5 mm ²		
2	Indicator, right	1.5 mm ²		
3	Rear fog light	1.5 mm ²		
4	Earth for contacts 1–3 and 5–12	2.5 mm ²		
5	Left taillight, clearance light, sidelight and licence plate lighting ¹⁾	1.5 mm ²		
6	Right taillight, clearance light, sidelight and licence plate lighting ¹⁾	1.5 mm ²		
7	Stop lights	1.5 mm ²		
8	Reversing light	1.5 mm ²		
9	Permanent power supply (+ 24 V)	2.5 mm ²		
10	Sensor for brake pad wear indication	1.5 mm ²		
11	Display for spring-loaded brake	1.5 mm ²		
12	Axle lift	1.5 mm ²		
13	Earth for data cables 14 and 15	2.5 mm ²		
14	CAN H	1.5 mm ²		
15	CAN L	1.5 mm ²		

¹⁾ The licence plate lights must be connected in such a way that none of the lamps is connected to both contacts 5 and 6.



Purpose:

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

Advantages:

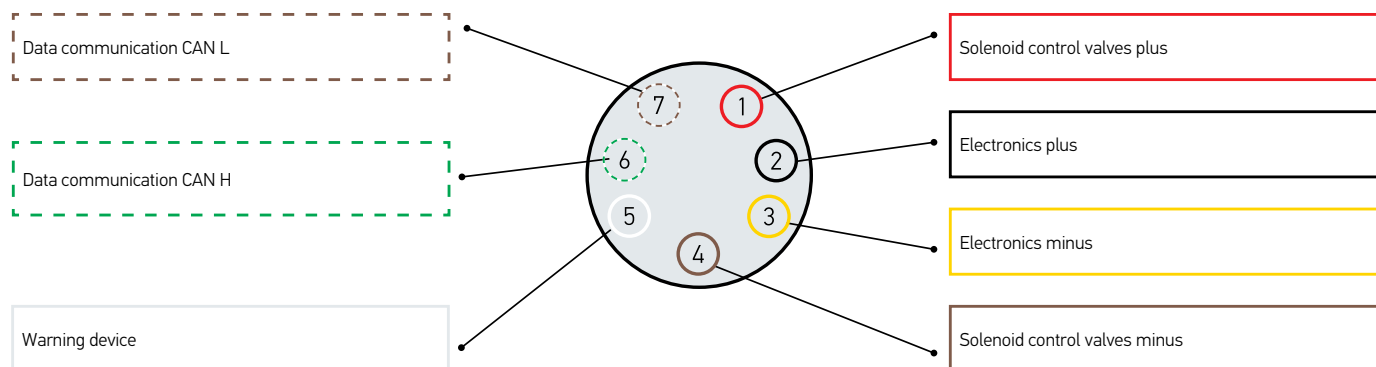
- The system meets the high requirements on modern trailer plug-type connectors compliant with ISO 4091
- High-grade lamella contacts with crimp connection
- Easy to assemble
- Crimp connection for OE applications
- Screw-type connection for spare part applications
- Both 12 V and 24 V versions of this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

Load-carrying capacity:

max. 16 A at – 24 V (cable cross-section 1.5 mm²)
max. 25 A at 24 V (cable cross-section 2.5 mm²)
max. 30 A at 24 V (cable cross-section 4.0 – 6.0 mm²)

2.7.4 Pin-out – ABS/EBS plug system compliant with ISO 7638

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

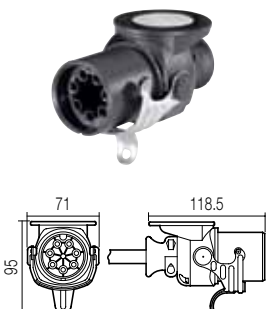
Contact no.	Function	Cable cross-section	Colour of wire insulation
1	Solenoid valve plus	4 mm ²	Red
2	Electronics plus	1.5 mm ²	Black
3	Electronics minus	1.5 mm ²	Yellow
4	Solenoid valve minus	4 mm ²	Brown
5	Warning device ¹⁾	1.5 mm ²	White
6	CAN H ²⁾	1.5 mm ²	Green
7	CAN L ²⁾	1.5 mm ²	Blue

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

²⁾ Compliant with ISO 11992-1 and ISO 11992-2.

2. Plug-type connections

2.7 Plug-type connections 24 V / 12 V

2.7.4 ABS / EBS plug system 24 V / ISO 7638-1 and 12 V / ISO 7638-2	Description	Connection	Part number	PU
	Socket with cover, ADR/GGVS tested, with rubber seals and nickel-plated male contacts, made of glass fibre reinforced polyamide, high-strength cable gland on the cable outlet pierced hole: Ø 54 mm, for cable diameters: 9–16 mm, male contacts: 5 x 1.5 mm² + 2 x 4 mm² + 2 x 6 mm² and two dummy plugs			
	Boxed	Screw connections	8JB 007 645-031	1
	Boxed	Crimp/solder connections	8JB 007 645-021	1
	12 V version with screw connections compliant with ISO 7638-2	Screw connections	8JB 011 895-001	1
	Plug ADR / GGVS tested, with rubber seals and nickel-plated female contacts, made of glass fibre reinforced polyamide, mechanical strain relief, securely held in place by a non-rusting metal shackle for cable diameters: 11–13 mm female contacts: 5 x 1.5 mm² + 2 x 4 mm² + 2 x 6 mm² and two dummy plugs			
	Boxed	Screw connections	8JA 007 644-051	1
	Boxed	Crimp/solder connections	8JA 007 644-041	1
	12 V version with screw connections compliant with ISO 7638-2	Screw connections	8JA 011 896-001	1
	Parking socket for ABS / EBS 24 V plug 8JA 007 644-041 and -051 pierced hole: Ø 54 mm made of glass fibre reinforced polyamide			
	Boxed		8HG 007 647-001	1

2. Plug-type connections

2.7 Plug-type connections 24 V

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2.7.4 ABS/EBS plug system compliant with ISO 7638	Description	Connection	Part number	PU
	Crimp/solder male contact set* (5 x 1.5 mm ² + 2 x 4 mm ² + 2 x 6 mm ² and two dummy plugs) for socket 8JB 007 645-021		9MK 726 762-831	1
	Crimp/solder female contact set* (5 x 1.5 mm ² + 2 x 4 mm ² + 2 x 6 mm ² and two dummy plugs) for plug 8JA 007 644-041		9MK 726 759-831	1

* You will find suitable tools on page 177.

2. Plug-type connections

2.8 Plug-type connections for special vehicles compliant with VG 96 923, VG 96 917 and ISO 4165



Purpose:

This product group contains various plug-type connectors for special applications that are mainly used in the military field, but can also increasingly be found wherever large currents are involved and value is placed on a high degree of safety coupled with simple use. The 12-pole 24 V system compliant with VG 96 923 stands out on account of the very high demands for military use, particularly with regard to soiling and impact resistance. The 2-pole 24 V system compliant with VG 96 917 meets up to similar requirements and is used for battery charging with currents up to 500 A (short-term load up to 10 s). The plug system compliant with ISO 4165 is used for the electrical connection of various consumers.

Advantages:

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

Load-carrying capacity:

Current rating:

max. 15 A (cable cross-section 1.5 mm²)

max. 100 A (cable cross-section 25 mm²)

max. 160 A (cable cross-section 35 mm²)

max. 200 A (cable cross-section 50 mm²)

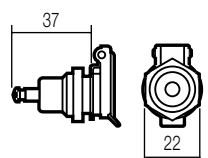
brief currents up to 10s:

max. 35 A (cable cross-section 1.5 mm²)

max. 250 A (cable cross-section 25 mm²)

max. 400 A (cable cross-section 35 mm²)

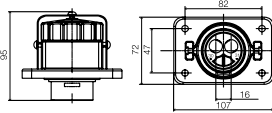
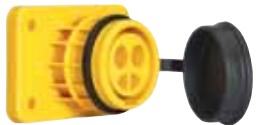
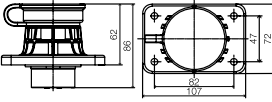
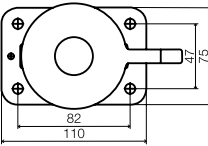
max. 500 A (cable cross-section 50 mm²)

2.8 Plug-type connections for special vehicles	Description	Connection	Part number	PU
 	Socket with green cover (ISO 4165 / VGV 96 921) compact design for installation, cover in RAL 6031 pierced hole: Ø 18.5 mm control panel thickness: max. 7 mm,	1 screw terminal, earth on the housing	8JB 001 946-001	10
	Boxed			

2. Plug-type connections

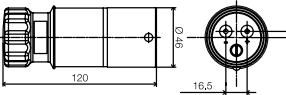
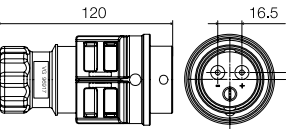
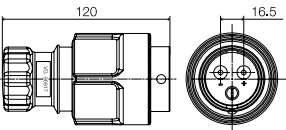
2.8 Plug-type connections for special vehicles compliant with VG 96 923, VG 96 917 and ISO 4165

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2.8 Plug-type connections for special vehicles	Description	Connection	Part number	PU
 	Socket, aluminium 2-pole with green screw-on cover (VG 96 917-3 form A). Seal in the screw-on cover, additional sealing ring between thread and screw-type cover. Permissible operating temperature: -40°C ... +85°C protection class: IP X4 (connected when inserted) contacts: CuZn, silver-plated			
	Boxed	2 crimped/solder female contacts for cables up to 50 mm²	8JB 001 935-031	1
	Boxed	2 crimped/solder female contacts for cables up to 35 mm²	8JB 001 935-051	1
  	Socket, plastic 2-pole with black rubber cap (mating compatible with VG 96 917). Permissible operating temperature: -40°C ... +85°C protection class: IP X6 with cover closed contacts: CuZn, silver-plated			
	Boxed, black	2 crimped/solder female contacts for cables up to 35 mm²	8JB 001 935-041	1
	Boxed, yellow	2 crimped/solder female contacts for cables up to 35 mm²	8JB 001 935-061	1
	Accessories grommet for 2-pole sockets: 8JB 001 935-031 8JB 001 935-041 8JB 001 935-051 8JB 001 935-061		9GD 735 641-062	1
 	Socket, metal yellow, 2-pole with black rubber cap (mating compatible with VG 96 917)			
	Boxed	2 crimped/solder female contacts for cables up to 50 mm²	8JB 010 806-001	1

2. Plug-type connections

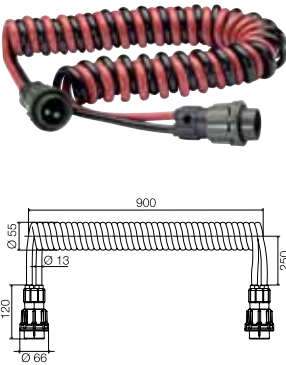
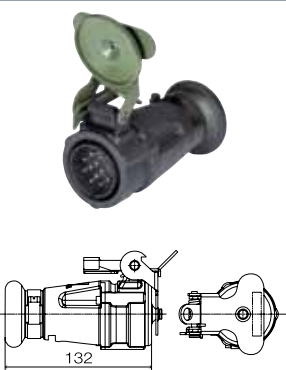
2.8 Plug-type connections for special vehicles compliant with VG 96 923, VG 96 917 and ISO 4165

2.8 Plug-type connections for special vehicles	Description	Connection	Part number	PU
 	Plug 2-pole (mating compatible with VG 96 917), black permissible operating temperature: -40°C ... +85°C contacts: CuZn, silver-plated			
	Metal design	2 crimp/solder pin contacts for cables up to 35 mm ²	8JA 001 931-041	1
	Plastic design	2 crimp/solder pin contacts for cables up to 35 mm ²	8JA 001 931-081	1
 	Plug, metal 2-pole with green threaded ring (VG 96917 form E) permissible operating temperature: -40°C ... +85°C protection class: IP X4 (connected when inserted) Contacts: CuZn, silver-plated			
	Boxed	2 crimp/solder pin contacts for cables up to 35 mm ²	8JA 001 931-051	1
	Boxed	2 crimp/solder pin contacts for cables up to 50 mm ²	8JA 001 931-071	1
 	Plug, metal 2-pole with black plastic-covered threaded ring (VG 96917 form E) permissible operating temperature: -40°C ... +85°C protection class: IP X4 (connected when inserted) contacts: CuZn, silver-plated			
	Boxed	2 crimp/solder pin contacts for cables up to 50 mm ²	8JA 001 931-061	1

2. Plug-type connections

2.8 Plug-type connections for special vehicles compliant with VG 96 923, VG 96 917 and ISO 4165

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2.8 Plug-type connections for special vehicles	Description	Connection	Part number	PU
	Helical cable 2-pole, max. working length 4 m, cross-section 2 x 35 mm², plus two mounted plugs with threaded ring (VG 96917) permissible operating temperature: -40°C ... +85°C rated current 300 A (at an ambient temperature of 20°C)		8KA 010 807-001	1
	Socket 12-pole with green cover (VG 96923 A-12 S), with screw accessories and screw cap permissible operating temperature: -40°C ... +85°C protection class: IP 68 connectable cross-sections: 12 x 1.5 mm², for cable diameters 18 ... +23.5 mm contacts: CuZn, silver-plated Boxed	12 solder contact sleeves	8JB 001 934-021	1
	Plug 12-pole, with green cover (VG 96923) permissible operating temperature: -40°C ... +85°C protection class: IP 54 (when connected) connectable cross-sections: 12 x 1.5 mm², for cable diameters 24 mm contacts: CuZn, silver-plated Boxed Boxed	12 solder male contacts 12 solder contact sleeves	8JA 002 264-051 8JA 002 264-061	1 1

2. Plug-type connections

2.8 Plug-type connections for special vehicles compliant with VG 96 923, VG 96 917 and ISO 4165

2.8 Plug-type connections for special vehicles	Description	Connection	Part number	PU
	Crimp female contact for cables up to 50 mm ² for articles: 8JB 001 935-031 8JB 001 935-061	Crimp female contact 50 mm ²	9MK 748 466-011	1
	Crimp female contact for cables up to 35 mm ² for articles: 8JB 001 935-041 8JB 001 935-051	Crimp female contact 35 mm ²	9MK 748 466-021	1
	Crimp male contact for cables up to 50 mm ² for article: 8JA 001 931-071	Crimp male contact 50 mm ²	9MK 748 465-011	1
	Crimp male contact for cables up to 35 mm ² for articles: 8JA 001 931-041, 8JA 001 931-051, 8JA 001 931-061, 8JA 001 931-081	Crimp male contact 35 mm ²	9MK 748 465-021	1

2. Plug-type connections

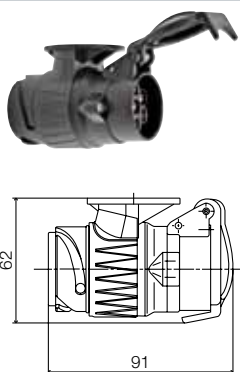
2.9 Adapter 12 V / 24 V

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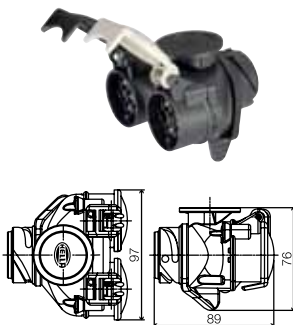
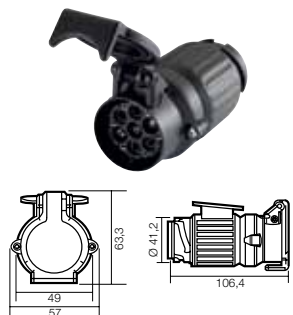
Purpose:

- Adapter from 13-pole socket (ISO 11446) on the traction vehicle to 7-pole plug (ISO 1724) on the trailer cable.
- Adapter from 7-pole socket (ISO 1724) on the traction vehicle to 13-pole plug (ISO 11446) on the trailer cable.
- Cable connection 7-pole (ISO 1724)
- UK short adapter from 13-pole socket (ISO 11446) on the traction vehicle to two 7-pole plugs (ISO 1724 + ISO 3732) on the trailer cables.
- Adapter cable 24 V from 15-pole socket (ISO 12 098) on the traction vehicle to two 2-pole sockets (ISO 1185 + ISO 3731) on the trailer
- Adapter cable available in two lengths, other lengths on request

2.9 Adapter 12 V / 24 V	Description	Length	Part number	PU
	Extra short adapter from 13-pole socket (ISO 11 446) on the traction vehicle to a 7-pole plug (ISO 1724) on the trailer cable. Round cover compliant with ISO 11 446 protects from soiling and damage, insertion aid for single-hand operation, splashwater protection in accordance with IP 54, nickel-plated contacts (corrosion protection and constant low insertion forces), low weight load from the 13-pole socket (only 99 g), load-carrying capacity: max. 16 A at 12 V			
	Boxed	57 mm	8JA 008 969-001	1
	Short adapter from 13-pole socket (ISO 11 446) on the traction vehicle to a 7-pole plug (ISO 1724) on the trailer cable load-carrying capacity: max. 16 A at 12 V			
	Boxed	120 mm	8JA 005 952-011	1
	Pro-fit packaging	120 mm	8JA 005 952-013	1

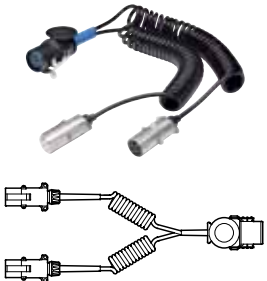
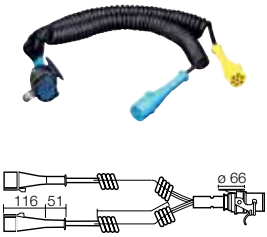
2. Plug-type connections

2.9 Adapter 12 V / 24 V

2.9 Adapter 12 V / 24 V	Description	Length	Part number	PU
	Adapter from 13-pole socket (ISO 11446) on the traction vehicle to a 7-pole plug (ISO 1724) on the trailer cable. With trailer fitting on the 7-pole coupling socket	0.25 m	8JA 005 952-001	1
	"UK" short adapter from 13-pole socket (ISO 11 446) to 2 x 7-pole plugs (ISO 1724 + ISO 3732)	89 mm	8JA 179 368-001	1
	Short adapter from 13-pole socket (ISO 11 446) on the traction vehicle to 7-pole plug (ISO 1724) on the trailer cable	106 mm	8JA 005 952-091	1
	Extremely short adapter from 7-pole socket (ISO 1724) on the traction vehicle to 13-pole plug (ISO 11 446) on the trailer cable.	57 mm	8JA 008 969-011	1

2. Plug-type connections

2.9 Adapter 12 V / 24 V

2.9 Adapter 12 V / 24 V	Description	Length	Part number	PU
	Mini short adapter from 7-pole socket (ISO 1724) on the traction vehicle to 13-pole plug (ISO 11 446) on the trailer cable.			
	Boxed	100 mm	8JA 008 981-001	1
	Adapter cable from 15-pole socket (ISO 12 098) on the traction vehicle to two 7-pole sockets (ISO 1185 + ISO 3731) on the trailer, with 15-pole plastic plug and 7-pole metal plugs cable diameter: 8.7 mm outer helix: Ø 50 mm sheath: polyurethane			
	Boxed	max. 3.5 m	8JA 005 952-111	1
	Boxed	max. 4 m	8JA 005 952-041	1
	Adapter cable from 15-pole socket (ISO 12098) on the traction vehicle to two 7-pole sockets (ISO 1185 + ISO 3731) on the trailer, absolutely watertight with 15-pole plastic plug and moulded 7-pole plastic plugs! (protection class IPX9K for the cable outlet)			
	Boxed	max. 3.5 m	8JA 005 952-101	1
	Boxed	max. 4 m	8JA 005 952-081	1
	Short adapter from 15-pole socket (ISO 12 098) on the traction vehicle to two 7-pole plugs (ISO 1185 + ISO 3731) on the trailer, made of glass fibre reinforced polyamide			
	Boxed	155 mm	8JA 005 952-061	1



Purpose:

- Test plug for 7-pole sockets (ISO 1724) and 13-pole sockets (ISO 11 446)
- Test plugs for helical cables (ISO 1185)
- Test plugs for testing ABS sockets

2.10 Test plugs 12 V / 24 V	Description	Length	Part number	PU
	Test plugs for testing 7-pole sockets 12 V (ISO 1724) function display with LEDs 7-pole, 12 V			
	Boxed		8PD 004 508-001	1
	Test plugs for testing 13-pole sockets 12 V (ISO 11 446) function display with LEDs 13-pole, 12 V			
	Boxed		8PD 007 216-001	1

2. Plug-type connections

2.10 Test plugs 12 V / 24 V

2.7 Test plugs 12 V / 24 V	Description	Length	Part number	PU
	Test plugs for testing 7-pole sockets compliant with ISO 1185, normal version			
	Boxed	81 mm	8PD 004 508-011	1
	Test plugs for testing helical cables compliant with ISO 1185, normal version			
	Boxed	89 mm	8PD 004 508-021	1
	Test plugs for testing ABS sockets			
	Boxed	110 mm	8PD 004 508-031	1

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3. Cables

3.1 Helical cables

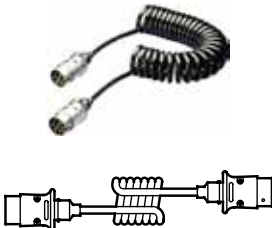


Purpose:

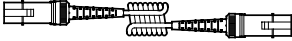
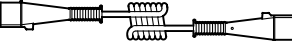
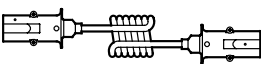
Helical cables are used for the electrical connection between traction vehicles and semi-trailers in the commercial vehicles field.

Advantages:

- Wide range of products for all common applications
- Cable sheathing in a choice of 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

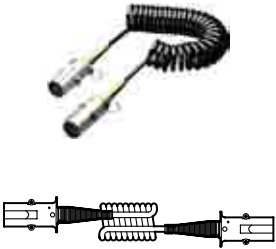
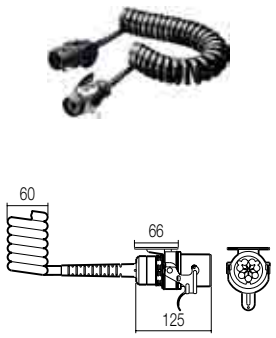
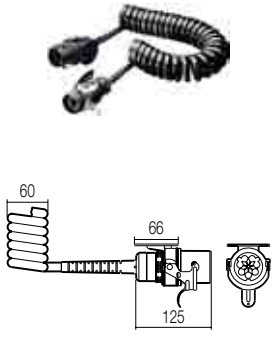
3.1 Helical cables	Description	ISO	Cross-section in mm ²	Material	Part number	PU
	Helical cable, 12 V 7-pole max. Working length 4 m with two screwed-on metal plugs	1724, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-021	1

3.1 Helical cables	Description	Length	Part number	PU
	Cable 7-pole, 12 V, "N" (ISO 1724) sheathing: PVC cable cross-sections: 6 x 1.0 mm ² + 1 x 1.5 mm ² with two screwed-on plastic plugs	3000		
Polythene bag		3 m	8KA 002 185-061	1

3.1 Helical cables	Description	ISO	Cross-section in mm ²	Material	Part number	PU
 	Helical cable, 24 V 7-pole with two screwed-on plastic plugs					
	with anti-kink sleeves, 4 m	1185 „N“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-041	1
	with anti-kink sleeves, 3.5 m	1185 „N“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-141	1
	with anti-kink sleeves, 4 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
 	Helical cable, 24 V 7-pole max. Working length 4 m, with moulded plastic plugs and anti-kink sleeves, power outlet watertight (IP X9K)					1
		1185 „N“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-031	1
		3731 „S“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 007 965-011	1
 	Helical cable, 24 V 7-pole max. Working length 4 m, with two screwed-on metal plugs					
		1185 „N“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-071	1
		3731 „S“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-081	1

3. Cables

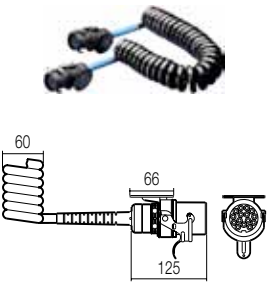
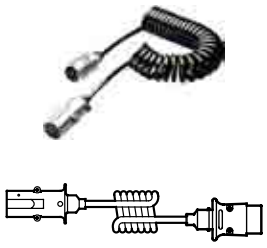
3.1 Helical cables

3.1 Helical cables	Description	ISO	Cross-section in mm ²	Material	Part number	PU
	7-pole max. Working length 4 m, with screwed-on metal plugs, metal anti-kink protection and hanger	1185 „N“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-101	1
		3731 „S“, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 004 797-111	1
	ABS helical cable, 5-pole, 24 V with two mounted ABS plugs and anti-kink sleeves 20,000 reversed bending operations guaranteed!* 4 m	7638-1	3 x 1.5 + 2 x 4.0	Hytrel	8KA 007 648-001	1
		7638-1	3 x 1.5 + 2 x 4.0	Polyurethane	8KA 007 648-011	1
		7638-1	3 x 1.5 + 2 x 4.0	Polyurethane	8KA 007 648-071	1
		7638-1	3 x 1.5 + 2 x 4.0	Polyurethane	8KA 007 648-071	1
	EBS helical cable, 7-pole with two mounted EBS plugs and anti-kink sleeves 20,000 reversed bending operations guaranteed!* 4 m	7638-1	5 x 1.5 + 2 x 4.0	Hytrel	8KA 007 648-021	1
		7638-1	5 x 1.5 + 2 x 4.0	Polyurethane	8KA 007 648-031	1
		7638-1	5 x 1.5 + 2 x 4.0	Polyurethane	8KA 007 648-081	1
		7638-1	5 x 1.5 + 2 x 4.0	Polyurethane	8KA 007 648-081	1

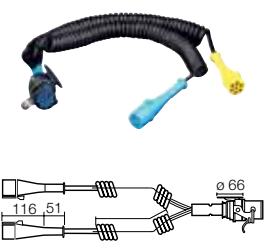
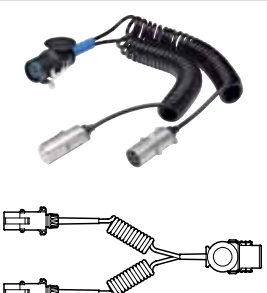
* ISO 4141 prescribes at least 10,000 reversed bending operations.

3. Cables

3.1 Helical cables

3.1 Helical cables	Description	ISO	Cross-section in mm ²	Material	Part number	PU
	Helical cable, 15-pole, 24 V with two mounted plastic plugs with blue anti-kink sleeves					
	20,000 reversed bending operations guaranteed!* 4 m	12098	12 x 1.5 + 3 x 2.5	Hytrel	8KA 007 648-041	1
		12098	12 x 1.5 + 3 x 2.5	Polyurethane	8KA 007 648-051	1
	20,000 reversed bending operations guaranteed!* 3.5 m	12098	12 x 1.5 + 3 x 2.5	Polyurethane	8KA 007 648-091	1
	Helical cable, 7-pole, 12/24 V "N" Normal version for FMVSS functions, with two screwed-on metal plugs cable diameter: 8.8 mm outer diameter of helix: 48 mm					
		1185 „N“, 1724, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	8KA 007 648-061	1

* ISO 4141 prescribes at least 10,000 reversed bending operations.

3.1 Helical cables	Description	Length	Part number	PU
	Adapter cable from 15-pole socket (ISO 12 098) on the traction vehicle to two 7-pole sockets (ISO 1185 + ISO 3731) on the trailer, absolutely watertight with 15-pole plastic plug and moulded 7-pole plastic plugs! (protection class IPX9K for the cable outlet)			
	cable diameter: 8.8 mm outer helix: Ø 48 mm sheath: polyurethane			
	Boxed	max. 3.5 m	8JA 005 952-101	1
	Boxed	max. 4 m	8JA 005 952-081	1
	Adapter cable from 15-pole socket (ISO 12 098) on the traction vehicle to two 7-pole sockets (ISO 1185 + ISO 3731) on the trailer, with 15-pole plastic plug and 7-pole metal plugs			
	cable diameter: 8.7 mm outer helix: Ø 50 mm sheath: polyurethane			
	Boxed	max. 3.5 m	8JA 005 952-111	1
	Boxed	max. 4 m	8JA 005 952-041	1

3. Cables

3.2 Cables (By running meter)



Purpose:

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 **cab**le will be exposed.

Advantages:

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

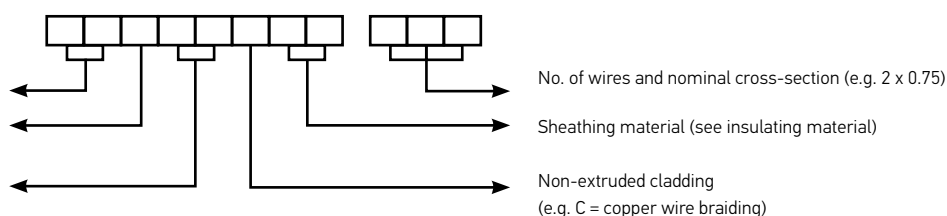
Codes for vehicle cables

Representation of the code structure compliant with DIN 7672278:

Basic code: FL⁷⁹

Special constructional features
(e.g. F = flat cable)

Insulating material (e.g. Y = PVC)



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 disconnectable cable	11Y	PUR

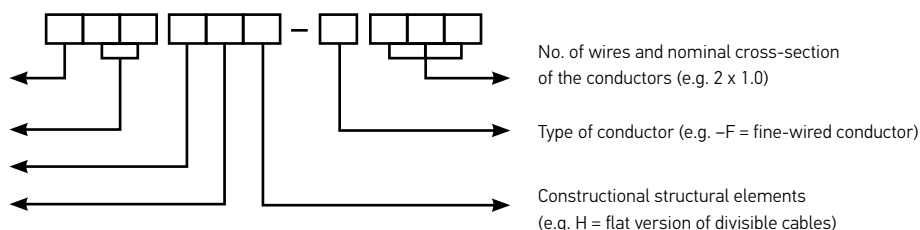
Representation of the code structure compliant with DIN VDE 0292:

Classification with standards
(e.g. H = agreement
with harmonised standards)

Rated voltage (e.g. 05 = 300/500 V)

Insulating material (e.g. V = PVC, soft)

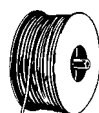
Sheathing materials (e.g. Q = polyurethane)



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-wired conductor of a flexible cable (flexibility corresponds to 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 polychlorophrene rubber mixture for sheathing on welding cables compliant with HD 22.6	D	Fine-wired conductor for welding cables compliant with HD 22.6

3. Cables

3.2 Cables (By running meter)



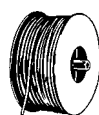
3.2.1 Single-wire PVC vehicle cables

Designation	Cable cross-section in mm ²	Wire colour	Metres per coil	Part number	Metres per ring	Part number
FLY	0.75	■	100	8KL 054 001-002	50	8KL 712 929-001
FLY	0.75	□	100	8KL 054 002-002	50	8KL 712 930-001
FLY	0.75	■	100	8KL 054 003-002	50	8KL 712 931-001
FLY	0.75	■			50	8KL 712 929-011
FLY	0.75	■	100	8KL 054 004-002	50	8KL 712 932-001
FLY	0.75	■	100	8KL 054 005-002	50	8KL 712 933-001
FLY	0.75	■	100	8KL 054 006-002	50	8KL 712 934-001
FLY	0.75	■	100	8KL 054 007-002	50	8KL 712 935-001
FLY	1.0	■	100	8KL 054 008-002	50	8KL 712 936-001
FLY	1.0	□	100	8KL 054 009-002	50	8KL 712 937-001
FLY	1.0	■	100	8KL 054 010-002	50	8KL 712 938-001
FLY	1.0	■	100	8KL 054 011-002	50	8KL 712 939-001
FLY	1.0	■	100	8KL 054 012-002	50	8KL 712 940-001
FLY	1.0	■	100	8KL 054 013-002	50	8KL 712 941-001
FLY	1.0	■	100	8KL 054 014-002	50	8KL 712 942-001
FLY	1.5	■	100	8KL 712 943-002	50	8KL 712 943-001
FLY	1.5	□	100	8KL 712 944-002	50	8KL 712 944-001
FLY	1.5	■	100	8KL 712 945-002	50	8KL 712 945-001
FLY	1.5	■	100	8KL 712 946-002	50	8KL 712 946-001
FLY	1.5	■	100	8KL 712 947-002	50	8KL 712 947-001
FLY	1.5	■	100	8KL 712 948-002	50	8KL 712 948-001
FLY	1.5	■	100	8KL 712 949-002	50	8KL 712 949-001
FLY	1.5	■	100	8KL 712 950-002	50	8KL 712 950-001
FLY	1.5	■ / ■			50	8KL 717 460-001
FLY	1.5	■ / ■			50	8KL 717 461-001
FLY	1.5	■ / □			50	8KL 717 462-001
FLY	1.5	■ / ■			50	8KL 717 463-001
FLY	1.5	■ / ■			50	8KL 717 464-001



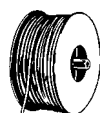
3. Cables

3.2 Cables (By running meter)



3.2.1 Single-wire PVC vehicle cables

Designation	Cable cross-section in mm ²	Wire colour	Metres per coil	Part number	Metres per ring	Part number
FLY	2.5	■	50	8KL 712 952-002	50	8KL 712 952-001
FLY	2.5	□	50	8KL 712 953-002	50	8KL 712 953-001
FLY	2.5	■	50	8KL 712 954-002		
FLY	2.5	■	50	8KL 712 955-002	50	8KL 712 955-001
FLY	2.5	■	50	8KL 712 956-002		
FLY	2.5	■	50	8KL 712 957-002	50	8KL 712 957-001
FLY	2.5	■	50	8KL 712 958-002	50	8KL 712 958-001
FLY	2.5	■	50	8KL 712 959-002	50	8KL 712 959-001
FLY	4.0	■	25	8KL 712 960-002	50	8KL 712 960-001
FLY	4.0	■	25	8KL 712 962-002	50	8KL 712 962-001
FLY	6	■			50	8KL 712 964-001
FLY	6	■			50	8KL 712 965-001
FLY	6	■			50	8KL 712 966-001
FLY	10	■			50	8KL 712 967-001
FLY	10	■			50	8KL 712 968-001
FLY	16	■			50	8KL 712 969-001
FLY	25	■			50	8KL 712 970-001
FLY	35	■			50	8KL 712 971-001
FLY	50	■			50	8KL 712 972-001



3.2.1 Multi-wire PVC vehicle cables

Designation	Cable cross-section in mm ²	Wire colour	Sheath colour	Metres per coil	Part number	Metres per ring	Part number
FLYY	1 x 1.5	■	■	50	8KL 712 975-002	50	8KL 712 975-001
FLYY	1 x 2.5	■	■			50	8KL 712 976-001
FLYY	2 x 0.75	2x ■	■	50	8KL 735 190-002	100	8KL 735 190-001
FLYY	2 x 0.75	■ / ■	■			200	8KL 712 986-001
FLYY	2 x 1.0	■ / ■	■			50	8KL 712 991-001
FLYY	2 x 1.5	2x ■	■	25	8KL 712 977-002	50	8KL 712 977-001
FLYY	2 x 1.5	■ / ■	■			50	8KL 712 992-001
FLYY	2 x 2.5	2x ■	■			50	8KL 712 978-001
FLYY	3 x 1.5	■ / ■ / ■	■			50	8KL 712 993-001

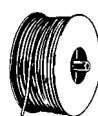


3. Cables

3.2 Cables (By running meter)



3.2.2 Multi-wire PVC vehicle cables	Designation	Cable cross-section in mm ²	Wire colour	Sheath colour	Metres per ring	Part number
	FLYY	4 x 0.75	■/□/■/■	■	200	8KL 712 987-001
	FLYY	4 x 0.75	■/□/■/■	■	200	8KL 712 988-001
	FLYY	4 x 1.0	■/□/■/■	■	50	8KL 712 994-001
	FLYY	4 x 1.5	■/□/■/■	■	50	8KL 712 995-001
	FLYY	5 x 1.0	■/■/□/■/■	■	50	8KL 712 996-001
	FLYY	5 x 1.5	■/■/□/■/■	■	50	8KL 715 434-001
	FLYY	6 x 0.75	■/■/□/■/■/■	■	200	8KL 712 989-001
	FLYY	7 x 0.75	■/■/■/□/■/■/■	■	200	8KL 712 990-001
	FLYY	7 x 1.0	■/■/■/□/■/■/■	■	50	8KL 715 435-001
	FLYY	7 x 1.5	■/■/■/□/■/■/■	■	50	8KL 712 997-001
	FLYY	8 x 0.75	■/■/■/□/■/■/■/■	■	100	8KL 198 465-001
	FLYY	8 x 1.5	■/■/□/■/■/■/■/■	■	50	8KL 713 735-001
	FLYY	6 x 1.5 + 1 x 2.5	(1.5) ■/■/■/■/■/■/■/ (2.5) □	■	50	8KL 199 936-001
	FLYY	7 x 1.5 + 5 x 2.5	(1.5) ■/■/■/■/■/■/■/ (2.5) □/■/■/■/■/■/■/ (2.5) □/■/■/■/■/■/■/■	■	50	8KL 199 937-001
	FLYY	9 x 1.5 + 4 x 2.5	(1.5) 7 x ■/■/■/■/■/■/■/ (2.5) 2 x ■/■/■/■/■/■/■	■	25	8KL 719 852-001
	FLYY	12 x 1.5 + 3 x 2.5	(1.5) ■/■/■/■/■/■/■/■/■/■/■/■/■/■/■/■/ (2.5) ■/■/■/■/■/■/■/■/■/■/■/■/■/■/■/■/■	■	50	8KL 742 810-001

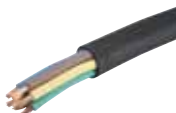


3.2.3 PVC flat cables	Designation	Cable cross-section in mm ²	Wire colour	Sheath colour	Metres per coil	Part number	Metres per ring	Part number
Flat cable for loudspeakers and music systems 	XYFAZ	2 x 0.5	■/■				100	8KL 054 017-001
	XYFAZ	2 x 0.75	■/■ - ■/■		100	8KL 712 980-002	50	8KL 712 980-001
	XYFAZ	2 x 0.75	■/■		100	8KL 712 980-032		
	XYFAZ	2 x 1.5	■/■ - ■				50	8KL 712 981-001
Vehicle flat cable 	FLFYY	2 x 0.75	■/■	■			50	8KL 177 729-002
	FLFYY	2 x 1.5	■/■	■			50	8KL 177 729-012
	FLFYY	2 x 1.5	■/□	■			50	8KL 177 729-112
	FLFYY	2 x 1.5	■/□	■			50	8KL 177 729-212
	FLFYY	2 x 2.5	■/■	■			50	8KL 177 729-022

3. Cables

3.2 Cables (By running meter)



3.2.4 Cables	Designation	Cable cross-section in mm ²	Wire colour	Sheath colour	Metres per ring	Part number
Rubber electrical cable 	H05 RR-F	2 x 0.75	■ / ■	■	100	8KL 713 740-042
	H05 RR-F	2 x 1.0	■ / ■	■	50	8KL 713 740-032
	H05 RR-F	2 x 1.5	■ / ■	■	50	8KL 713 740-001
	A05 RR-F	3 x 0.75	■ / ■ / ■	■	50	8KL 713 737-001
	A05 RR-F	3 x 1.0	■ / ■ / ■	■	50	8KL 713 741-001
	A05 RR-F	3 x 1.5	■ / ■ / ■	■	50	8KL 713 742-001
	05 RR-F	4 x 1.5	■ / ■ / ■ / ■ / ■	■	50	8KL 713 744-001
	05 RR-F	5 x 1.5	■ / ■ / ■ / ■ / ■	■	50	8KL 715 436-001
	05 RR-F	7 x 1.5	■ / ■ / ■ / ■ / ■ / ■ / ■	■	50	8KL 715 437-001
PVC electrical cable	H05 VV-F	2 x 0.75	■ / ■	■	100	8KL 177 370-032
	H05 VV-F	2 x 1.0	■ / ■	■	100	8KL 177 370-042
	H05 VV-F	2 x 1.5	■ / ■	■	100	8KL 177 370-052

3.2.5 ADR vehicle cables	Designation	Cable cross-section in mm ²	Wire colour	Sheath colour	Metres per ring	Part number
PVC vehicle cable, ADR-suitable 	FLRYY	2 x 1.0	■ / □	■	100	8KL 178 452-002
	FLRYY	2 x 1.0	■ / □	■	100	8KL 178 452-012
	FLRYY	5 x 1.0 + 1 x 2.5	(1.0) ■ - ■ / ■ / ■ - ■ / ■ / ■ / (2.5) □	■	50	8KL 178 453-002
	FLRYY	8 x 1.5 + 1 x 2.5	(1.5) ■ / ■ / ■ / ■ / ■ / ■ / ■ / (2.5) □	■	50	8KL 178 454-002
	FLRYY	10 x 1.5 + 3 x 2.5	(1.5) ■ / ■ / ■ / ■ / ■ / ■ / ■ / □ / □ / □ - ■ / □ - ■ / □ - ■ / (2.5) ■ / ■ / ■	■	25	8KL 178 456-002
	FLRYY	12 x 1.5 + 3 x 2.5	(1.5) ■ / ■ / ■ / ■ / ■ / ■ / ■ / ■ / ■ / □ - ■ / □ - ■ / □ - ■ / □ - ■ / (2.5) □ / □ / □ - ■	■	25	8KL 178 451-002

3.2.6 Welding cables	Designation	Cable cross-section in mm ²	Wire colour	Sheath colour	Metres per ring	Part number
Special welding cables for the connection of automatic and manual welding tools 	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

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4. Cable connectors

4.1 Crimp connectors



Purpose:

Uninsulated crimp connectors are generally used in those areas of the vehicle that are not at risk from splashes of water and primarily serve as removable system elements for electrical and mechanical cable connections or branches. A number of different contact systems have become established over the years depending on the application and the age of the vehicle.

Advantages:

- OEM quality
- Wide assortment of products for numerous applications

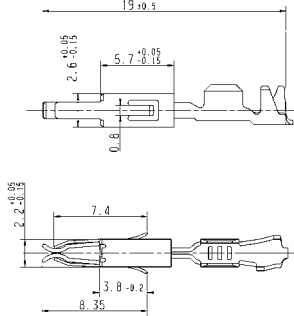
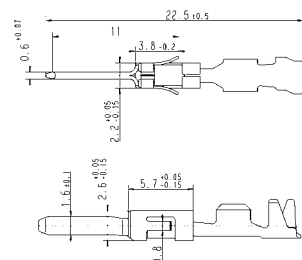
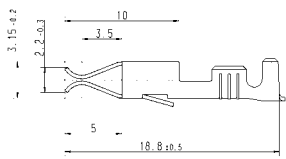
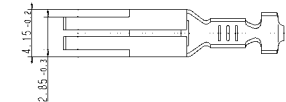
Materials and surface finishes

Material overview			
Short designation	Material	Corrosion resistance (in air)	Electrical conductivity
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

Surface treatment			
Short designation	Material	Remark	
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. Cable connectors

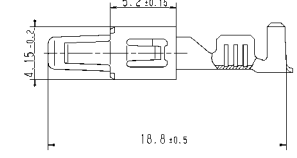
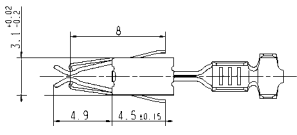
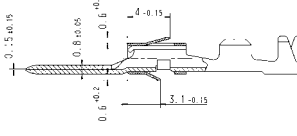
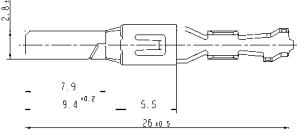
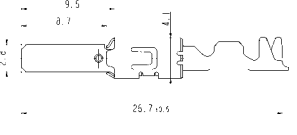
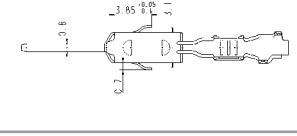
4.1 Crimp connectors

4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
Micro Timer II  	Flat receptacle	0.5–1.0	1.6 x 0.8	CuFe/Sn	B 192	8KW 863 933-003	50
	for individual conductor seal	0.5–1.0	1.6 x 0.8	CuFe/Sn	B 193	8KW 863 933-013	50
 	Blade terminal	0.5–1.0	1.6 x 0.8	CuFe/Sn	B 190	8KW 863 932-003	50
	for individual conductor seal	0.5–1.0	1.6 x 0.8	CuSn/Sn	B 191	8KW 863 932-013	50
 	Individual conductor seal	1.4–1.9		Silicone grey	B 201	9GD 863 952-012	50
	Blind plug			Silicone white	B 202	9GD 863 952-002	50
Junior Timer   	Flat receptacle with a catch spring	0.5–1.0	2.8 x 0.8	CuZn/Sn	B 175	8KW 863 926-003	50
		1.0–2.5	2.8 x 0.8	CuZn/Sn	B 176	8KW 863 926-013	50

4. Cable connectors

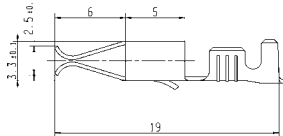
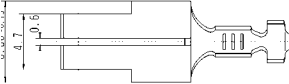
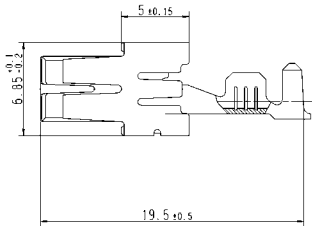
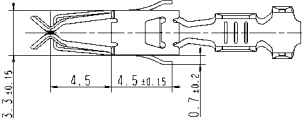
4.1 Crimp connectors

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4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
Junior Power Timer   	Flat receptacle	0.5–1.0	2.8 x 0.8	CuSn/Sn	B 194	8KW 863 934-003	50
	for individual conductor seal	0.5–1.0	2.8 x 0.8	CuSn/Sn	B 195	8KW 863 934-013	50
	Flat receptacle	1.0-2,5	2.8 x 0.8	CuSn/Sn	B 216	8KW 863 934-023	50
	Flat receptacle	1.0-2,5	2.8 x 0.8	CuSn/Sn		8KW 863 934-024	1000
  	Male blade connector with non-symmetrical steel spring	0.5–1.0	2.8 x 0.8	CuSn/Sn	B 189	8KW 863 931-003	50
	Male blade connector with symmetrical steel spring	0.5–1.0	2.8 x 0.8	CuSn/Sn	B 187	8KW 863 930-003	50
	with symmetrical steel spring for strand insulation	0.5–1.0	2.8 x 0.8	CuSn/Sn	B 188	8KW 863 930-013	50
  							

4. Cable connectors

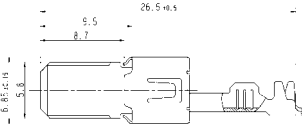
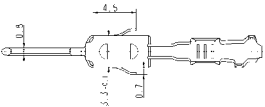
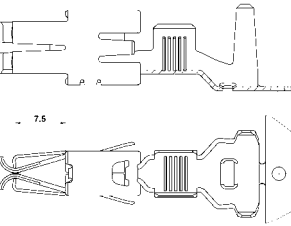
4.1 Crimp connectors

4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
	Individual wire seal	1.2–2.1 mm		Silicone blue	B 204	9GD 863 953-012	50
	Blind plug			Silicone natural	B 203	9GD 863 953-002	50
Standard Timer   	Flat receptacle with a catch spring	0.5–1.0	4.8/5.8/6.8 x 0.8	CuZn/Sn	B 173	8KW 863 925-003	50
		1.0–2.5	4.8/5.8/6.8 x 0.8	CuSn/Sn	B 174	8KW 863 925-013	50
Standard Power Timer   	Flat receptacle	0.5–1.0	4.8/5.8/6.8 x 0.8	CuFe/Sn	B 177	8KW 863 927-003	50
		1.5–2.5	4.8/5.8/6.8 x 0.8	CuFe/Sn	B 178	8KW 863 927-013	50
		2.5–4.0	4.8/5.8/6.8 x 0.8	CuFe/Sn	B 179	8KW 863 927-023	50
	for individual conductor seal	1.5–2.5	4.8/5.8/6.8 x 0.8	CuFe/Sn	B 180	8KW 863 927-033	50

4. Cable connectors

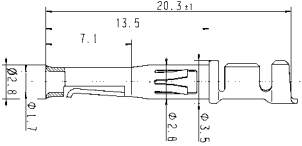
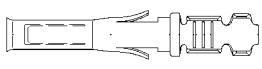
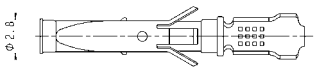
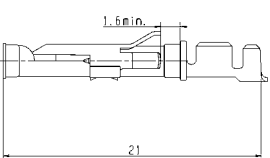
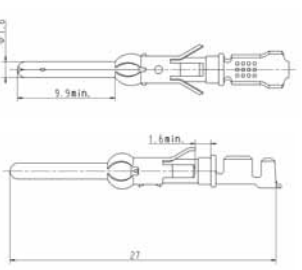
4.1 Crimp connectors

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4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
 	Male blade connector with symmetrical steel spring	0.5–1.0	5.8 x 0.8	CuFe/Sn	B 181	8KW 863 928-003	50
		1.5–2.5	5.8 x 0.8	CuFe/Sn	B 182	8KW 863 928-013	50
		2.5–4.0	5.8 x 0.8	CuFe/Sn	B 183	8KW 863 928-023	50
	Male blade connector with symmetrical steel spring for individual conductor seal	1.5–2.5	5.8 x 0.8	CuFe/Sn	B 184	8KW 863 928-033	50
 	Individual conductor seal	2.2–3.0 mm		Silicone white	B 205	9GD 863 954-012	50
	Blind plug			Silicone black	B 206	9GD 863 954-002	50
Maxi Power Timer  	Flat receptacle for individual conductor seal	2.5–4.0	9.5 x 1.2	CuNi/Sn	B 198	8KW 863 951-003	10
		4.0–6.0	9.5 x 1.2	CuNi/Sn	B 199	8KW 863 951-013	10
		6.0–10.0	9.5 x 1.2	CuNi/Sn	B 200	8KW 863 951-023	10
Maxi Power Timer  	Individual wire seal	4.7–5.3 mm		Silicone blue	B 208	9GD 863 961-012	10
		5.8–6.6 mm		Silicone light blue	B 209	9GD 863 961-022	10

4. Cable connectors

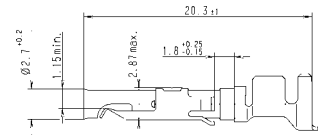
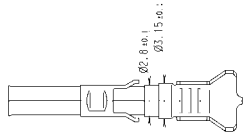
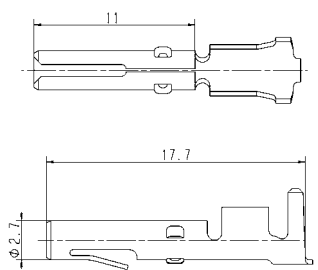
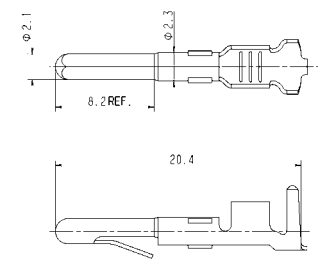
4.1 Crimp connectors

4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
Male connector-type connection CIC   	Female contact	0.5–1.5	1.6	CuZn/Sn	B 159	8KW 863 918-003	50
		1.0–2.5	1.6	CuSn/Sn	B 160	8KW 863 918-013	50
	Male pin contact	0.5–1.5	1.6	CuZn/Sn	B 161	8KW 863 919-003	50
		1.0–2.5	1.6	CuZn/Sn	B 162	8KW 863 919-013	50
Male connector-type connection Type III for M series   	Female contact	0.75–1.5	1.6	CuZn/Sn	B 196	8KW 863 945-003	50
		0.2–0.56	1.6	CuSn/Sn	B 197	8KW 863 945-013	50
	Male pin contact	0.75–1.5	1.6	CuZn/Sn	B 185	8KW 863 929-003	50
		0.2–0.56	1.6	CuSn/Sn	B 186	8KW 863 929-013	50
 							

4. Cable connectors

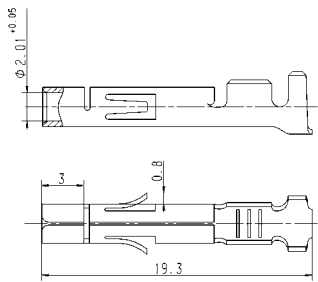
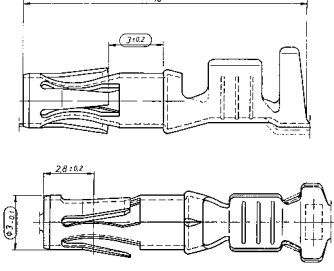
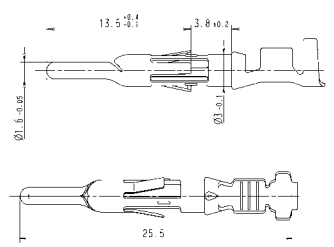
4.1 Crimp connectors

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4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
Male connector-type connection CI 2   	Female contact	0.5–1.0	1.6	CuSn/Sn	B 157	8KW 863 917-013	50
		1.0–2.5	1.6	CuSn/Sn	B 158	8KW 863 917-003	50
	Male pin contact	0.5–1.5	1.6	CuZn/Sn	B 171	8KW 863 924-003	50
		1.0–2.5	1.6	CuZn/Sn	B 172	8KW 863 924-013	50
Plug-type connector Mate'n' Lock  	Female contact	0.5–1.0	2.1	CuZn/Sn	B 155	8KW 863 916-003	50
		1.0–2.5	2.1	CuZn/Sn	B 156	8KW 863 916-013	50
	Male pin contact	0.5–1.0	2.1	CuZn/Sn	B 207	8KW 863 915-013	50
		1.0–2.5	2.1	CuZn/Sn	B 154	8KW 863 915-003	50
 							

4. Cable connectors

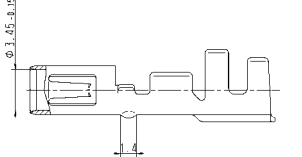
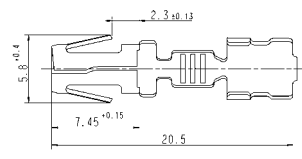
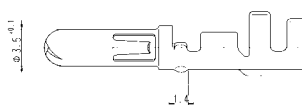
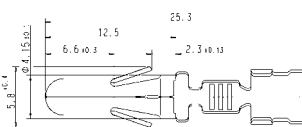
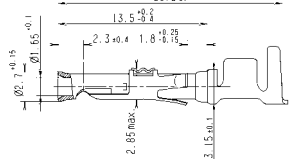
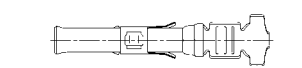
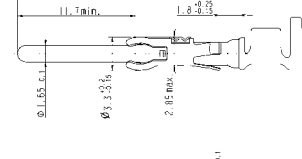
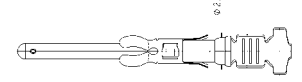
4.1 Crimp connectors

4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
Plug-type connector Universal Mate'n'Lock  	Female contact	0.5–2.1	2.1	CuSn/Sn	B 169	8KW 863 923-003	50
		1.5–2.5	2.1	CuZn/Sn	B 170	8KW 863 923-013	50
	Male pin contact	0.5–2.1	2.1	CuZn/Sn	B 167	8KW 863 922-003	50
		1.5–2.5	2.1	CuZn/Sn	B 168	8KW 863 922-013	50
Cable lug for CONI round male connector system  	Sleeve	0.75–1.5	Ø 1.6	CuZn/frSn	B 70	8KW 054 946-003	50
		1.5–2.5	Ø 1.6	CuZn/frSn	B 116	8KW 744 864-003	50
Cable lug for CONI round male connector system  	Plugs	0.75–1.5	Ø 1.6	CuSn/frSn	B 71	8KW 054 945-003	50
		1.5–2.5	Ø 1.6	CuZn/frSn	B 117	8KW 744 866-003	50

4. Cable connectors

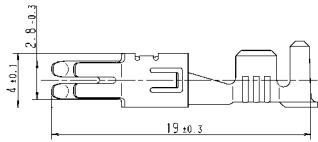
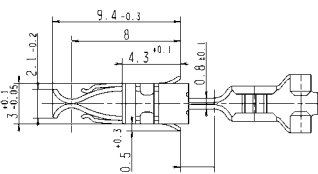
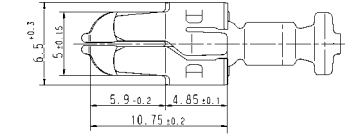
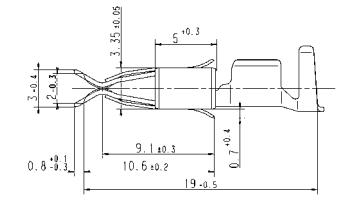
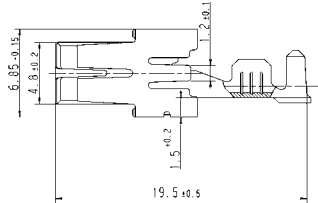
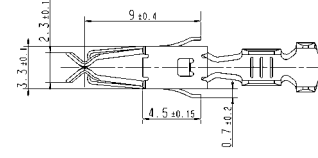
4.1 Crimp connectors

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4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
RAM round male connector system   	Sleeve	1.5–2.5	Ø 3.5	CuZn/frSn	B 72	8KW 054 948-003	50
		4.0–6.0	Ø 3.5	CuSn/frSn	B 215	8KW 054 948-013	50
	Plugs	1.5–2.5	Ø 3.5	CuSn/frSn	B 73	8KW 054 947-003	50
		4.0–6.0	Ø 3.5	CuSn/frSn	B 214	8KW 054 947-013	50
  	Sleeve	1.5–2.5	Ø 1.6	CuSn/frSn	B 74	8KW 054 950-003	50
	Plugs	1.5–2.5	Ø 1.6	CuSn/frSn	B 75	8KW 054 949-003	50
RSA round male connector system   	Sleeve	1.5–2.5	Ø 1.6	CuSn/frSn	B 74	8KW 054 950-003	50
	Plugs	1.5–2.5	Ø 1.6	CuSn/frSn	B 75	8KW 054 949-003	50
  	Sleeve	1.5–2.5	Ø 1.6	CuSn/frSn	B 74	8KW 054 950-003	50
	Plugs	1.5–2.5	Ø 1.6	CuSn/frSn	B 75	8KW 054 949-003	50

4. Cable connectors

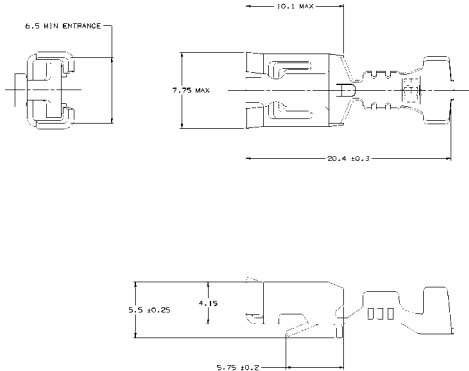
4.1 Crimp connectors

4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
MDK5 flat receptacle   	Sleeve	0.5–1.0	2.8/4.8 x 0.8	CuSn/frSn	B 76	8KW 054 942-003	50
		1.5–2.5	2.8/4.8 x 0.8	CuSn/frSn	B 77	8KW 054 941-003	50
DFK 2 flat receptacle   	Sleeve	1.5–2.5	4.8 + 6.3 x 0.8	CuSn/frSn	B 78	8KW 054 944-003	50
		2.5–4.0	4.8 + 6.3 x 0.8	CuSn/frSn	B 79	8KW 054 943-003	50
AFK 4.8 Flat receptacle (claw rotated through 90° to DFK)   	Sleeve	0.5–1.0	4.8 + 6.3 x 0.8	CuFe/frSn	B 217	8KW 172 971-002	50
		0.5 - 1.0	4.8 x 6.3 x 0.8	CuFe/frSn		8KW 172 971-003	1000

4. Cable connectors

4.1 Crimp connectors

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4.1.1 Uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
Metri Pack flat receptacle  	Sleeve	1.0 - 2.0	6.3 x 0.8	CuZn / Sn	B 241	8KW 863 904-003	50
		2.5 - 4.0	6.3 x 0.8	CuZn / Sn	B 242	8KW 863 904-013	50

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

4. Cable connectors

4.1 Crimp connectors

4.1.1 Uninsulated crimp connectors	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Contents in pcs.	Short designation	Part number	PU in pcs.
Flat receptacle  	0.5–1.0	4.8 x 0.8	CuZn/bk	100	B 94	8KW 744 828-003	100
	0.75–1.5	6.3 x 0.8	CuZn/bk	100	B 51	8KW 043 629-013	100
	1.5–2.5	6.3 x 0.8	CuZn/Ag	100	B 92	8KW 744 825-003	100
	1.5–2.5	6.3 x 0.8	CuZn/bk	100	B 52	8KW 043 630-013	100
	1.5–2.5	6.3 x 0.8	CuZn/bk	1500		8KW 043 630-014	1500
	4.0–6.0	9.5 x 1.2	CuZn/bk	50	B 95	8KW 744 787-003	50
	0.5–1.5	6.3 x 0.8	CuSn/Sn	100	B 93	8KW 744 827-003	100

4.1.1 Uninsulated crimp connectors	Cross-section mm ²	Male connector dimensions mm	Material/surface finish	Short designation	Part number	PU in pcs.
Flat receptacle with locking tag   	0.5–1.0	2.8 x 0.8	CuSn/Sn	B 100	8KW 744 817-003	100
	0.5–1.0	4.8 x 0.8	CuZn/Sn	B 64	8KW 733 815-003	100
	0.5–1.0	6.3 x 0.8	CuZn/bk	B 103	8KW 744 819-003	100
	0.5–1.0	6.3 x 0.8	CuZn/Ag	B 243	8KW 744 882-003	100
	1.5–2.5	6.3 x 0.8	CuZn/Sn	B 54	8KW 701 235-033	100
	1.5–2.5	6.3 x 0.8	CuZn/Sn		8KW 701 235-034	1500
	1.5–2.5	6.3 x 0.8	CuZn/Ag	B 104	8KW 744 820-003	100
	Solder pin	6.3 x 0.8	CuSn/frSn		8KW 719 874-007	2500
Male blade connector 	0.5–1.0	2.8 x 0.8	CuZn/bk	B 85	8KW 744 752-003	100
	0.5–1.0	6.3 x 0.8	CuZn/Sn	B 56	8KW 043 635-013	100
	1.5–2.5	6.3 x 0.8	CuZn/bk	B 86	8KW 744 823-003	100

Male blade connector with locking tag 	0.5–1.0	2.8 x 0.8	CuZn/Sn	B 90	8KW 744 834-003	100
	0.5–1.0	6.3 x 0.8	CuZn/frSn	B 88	8KW 744 832-003	100
	1.5–2.5	6.3 x 0.8	CuZn/frSn	B 57	8KW 048 056-033	100
	1.5–2.5	6.3 x 0.8	CuZn/Ag	B 89	8KW 744 833-003	100

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4.1 Crimp connectors

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4.1.1 Uninsulated crimp connectors	Cross-section mm ²	Male connector dimensions mm	Material/ surface finish	Short designation	Part number	PU in pcs.
Piggy back spade connector 	0.5–1.0	6.3 x 0.8	CuZn/bk	B 58	8KW 701 671-003	100
	1.5–2.5	6.3 x 0.8	CuZn/Sn	B 82	8KW 744 885-003	100
Male connector distributor, double 		6.3 x 0.8	CuZn/bk	B 59	8KW 043 636-003	100
Male connector distributor, triple 		6.3 x 0.8	CuZn/Sn	B 60	8KW 700 144-003	50
Coupling 45° 		6.3 x 0.8 Ø 4.2	CuZn/Sn	B 213	8KW 044 285-023	100

4. Cable connectors

4.1 Crimp connectors

Assortment case	Designation	Part number Case	PU in pcs.
Contents of assortment case of uninsulated crimp connectors 	Assortment case comprising various uninsulated connectors (quantity delivered as refill set deviates from the quantity in the original set, not all items can be refilled)	8KW 009 255-801	1

Contents of assortment case: uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Quantity in the assortment	refill	Short description	Part number	PU in pcs.
	Flat receptacle with locking tag	0.5–1.0	2.8 x 0.8	50	Spare parts	B 100	8KW 744 817-003	100
			4.8 x 0.8	50		B 64	8KW 733 815-003	100
			6.3 x 0.8	50		B 103	8KW 744 819-003	100
	Flat receptacle with locking tag	1.5–2.5	6.3 x 0.8	50		B 54	8KW 701 235-033	100
	Flat receptacle with locking tag, claw crosswise		6.3 x 0.8	20		B 105	8KW 744 821-003	100
	Male blade connector with locking tag	0.5–1.0	2.8 x 0.8	50		B 90	8KW 744 834-003	100
			6.3 x 0.8	50		B 88	8KW 744 832-003	100
	Male blade connector with locking tag	1.5–2.5	6.3 x 0.8	50		B 57	8KW 048 056-033	100
	Flat receptacle	0.5–1.0	4.8 x 0.8	50		B 94	8KW 744 828-003	100
		0.75–1.5	6.3 x 0.8	50		B 51	8KW 043 629-013	100
	Flat receptacle claw crosswise	0.5–1.5	6.3 x 0.8	20		B 93	8KW 744 827-003	100
	Flat receptacle	1.5–2.5	6.3 x 0.8	50		B 52	8KW 043 630-013	100
		4.0–6.0	9.5 x 1.2	50		B 95	8KW 744 787-003	50
	Male spade connector	1.5–2.5	6.3 x 0.8	50		B 86	8KW 744 823-003	100
	Male connector distributor, double		6.3 x 0.8	20		B 59	8KW 043 636-003	100
	Male connector distributor, triple		6.3 x 0.8	20		B 60	8KW 700 144-003	50
	Piggy back spade connector	1.5–2.5	6.3 x 0.8	20		B 82	8KW 744 885-003	100
	Male spade connector, 45°		6.3 x 0.8	20				
	Male blade connector, Ø 5.3 mm			20				
	Coupling			20				

4. Cable connectors

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4.1.2 Insulated crimp connectors with shrink-on insulation



Purpose:

insulated Duraseal crimp connectors have an adhesive-coated shrinkable nylon cap that can be used to create a waterproof join between the cable and the contact. You do this by heating the nylon cap to around 135°C using a hot air gun (or other heat source). At this temperature the material of the cap firmly grasps the cable. You can then dispense with other forms of insulation (such as heat-shrinkable tubing or insulating tape).

Code colour red = crimp connectors for cable cross-sections 0.5–1.0 mm²
code colour blue = crimp connectors for cable cross-sections 1.5–2.5 mm²
code colour yellow = crimp connectors for cable cross-sections 4.0–6.0 mm²

Advantages:

- Cable connection and sealed insulation in one integrated product
- Wide-ranging assortment including all the usual contact variants

4.1.2 Insulated crimp connectors with shrink insulation (Duraseal)	Colour	Cross-section mm ²	Insertion width mm/eyelet	Insulating material	Short designation	Part number	PU in pcs.
Flat receptacle fully insulated 	■	0.5–1.0	2.8 x 0.5	Nylon	A 161	8KW 744 761-003	25
	■	0.5–1.0	4.8 x 0.5	Nylon	A 162	8KW 744 762-003	25
	■	0.5–1.0	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
Blade terminal 	■	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
Ring connector   	■	0.5–1.0	4.3 (M4)	Nylon	A 104	8KW 732 570-003	25
	■	0.5–1.0	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
	■	1.5–2.5	5.3 (M5)	Nylon	A 107	8KW 732 573-003	25
	■	1.5–2.5	6.5 (M6)	Nylon	A 109	8KW 732 575-003	25
	■	1.5–2.5	8.4 (M8)	Nylon	A 111	8KW 732 577-003	25
	■	1.5–2.5	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
	■	4.0–6.0	6.5 (M6)	Nylon	A 110	8KW 732 576-003	25
	■	4.0–6.0	8.4 (M8)	Nylon	A 112	8KW 732 578-003	25
	■	4.0–6.0	10.5 (M10)	Nylon	A 155	8KW 744 755-003	25
Fork connector 	■	1.5–2.5	4.3 (M4)	Nylon	A 157	8KW 744 757-003	25
	■	1.5–2.5	5.3 (M5)	Nylon	A 158	8KW 744 758-003	25

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4.1 Crimp connectors

4.1.2 Insulated crimp connectors with shrink insulation (Duraseal)	Colour	Cross-section mm ²	Male connector dimensions mm	Insulating material	Short designation	Part number	PU in pcs.
Male bullet connector 		0.5–1.0	Ø 4.0	Nylon	A 165	8KW 744 765-003	25
		1.5–2.5	Ø 5.0	Nylon	A 166	8KW 744 766-003	25
Female bullet connectors fully insulated 		0.5–1.0	Ø 4.0	Nylon	A 167	8KW 744 767-003	25
		1.5–2.5	Ø 5.0	Nylon	A 168	8KW 744 768-003	25
Insulating splice 		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

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4.1 Crimp connectors

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Assortment case	Designation	Part number Case	PU in pcs.
Contents of assortment case assortment of Duraseal crimp connectors 	Case containing an assortment of Duraseal crimp connectors (quantity contained in refill set differs from the quantity in the original set)	8KW 009 253-801	1

Contents of assortment case assortment of Duraseal crimp connectors	Designation	Cross- section mm ²	Insertion width mm/eyelet	Short designation	Quantity in the assortment
	Insulating splice	0.5–1.0		A 113	15
		1.5–2.5		A 114	15
		4.0–6.0		A 115	15
	Flat receptacle	0.5–1.0	6.3 x 0.8	A 100	15
		1.5–2.5	6.3 x 0.8	A 101	15
	Blade terminal	0.5–1.0	6.3 x 0.8	A 102	15
		1.5–2.5	6.3 x 0.8	A 103	15
	Female bullet connector	1.5–2.5	Ø 5.0	A 168	15
	Male bullet connector	1.5–2.5	Ø 5.0	A 166	15
	Ring connector	1.5–2.5	M5	A 107	15
		1.5–2.5	M6	A 109	15
		1.5–2.5	M8	A 111	15
		4.0–6.0	M5	A 108	15
		4.0–6.0	M6	A 110	15
	Fork connector	1.5–2.5	M4	A 157	15
		1.5–2.5	M5	A 158	15

refill	Short description	Part number	PU in pcs.
Spare parts	A 113	8KW 732 579-003	25
	A 114	8KW 732 580-003	25
	A 115	8KW 732 581-003	25
	A 100	8KW 732 566-003	25
	A 101	8KW 732 567-003	25
	A 102	8KW 732 568-003	25
	A 103	8KW 732 569-003	25
	A 168	8KW 744 768-003	25
	A 166	8KW 744 766-003	25
	A 107	8KW 732 573-003	25
	A 109	8KW 732 575-003	25
	A 111	8KW 732 577-003	25
	A 108	8KW 732 574-003	25
	A 110	8KW 732 576-003	25
	A 157	8KW 744 757-003	25
	A 158	8KW 744 758-003	25



Purpose:

Insulated crimp connectors are crimped using a tool and the appropriately coloured end in order to get a secure, permanent contact to the cable. The insulating material is made of either PVC (max. tolerable temperature 80°C) or nylon (max. 105°C).

The insulating sleeve is funnel-shaped to make it easier to insert the cable.

Code colour red = Crimping connector for cable cross-sections 0.5–1.0 mm²

Code colour blue = Crimping connector for cable cross-sections 1.5–2.5 mm²

Code colour yellow = Crimping connector for cable cross-sections 4.0–6.0 mm²

Advantages:

- Cable connection and insulation in one integrated product
- Wide-ranging assortment including all the usual contact variants

4.1.3 Insulated crimp connectors	Colour	Cross-section mm ²	Male connector dimensions mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
Flat receptacles   	■	0.5–1.0	2.8 x 0.5	PVC	10	A 01	8KW 705 393-812	1
	■	0.5–1.0	2.8 x 0.5	PVC	100	A 50	8KW 705 393-003	100
	■	0.5–1.0	4.8 x 0.5	PVC	100	A 51	8KW 705 392-003	100
	■	0.5–1.0	6.3 x 0.8	PVC	15	A 03	8KW 044 036-812	1
	■	0.5–1.0	6.3 x 0.8	PVC	100	A 52	8KW 044 036-003	100
	■	0.5–1.0	6.3 x 0.8	PVC	1000		8KW 044 036-004	1000
	■	1.5–2.5	4.8 x 0.5	PVC	100	A 136	8KW 744 697-003	100
	■	1.5–2.5	4.8 x 0.8	PVC	100	A 137	8KW 744 698-003	100
	■	1.5–2.5	6.3 x 0.8	PVC	15	A 04	8KW 044 022-822	1
	■	1.5–2.5	6.3 x 0.8	PVC	100	A 53	8KW 044 022-003	100
	■	1.5–2.5	6.3 x 0.8	PVC	1000		8KW 044 022-004	1000
	■	1.5–3.0	7.7 x 0.8	PVC	50	A 55	8KW 044 024-003	50
	■	4.0–6.0	6.3 x 0.8	PVC	50	A 54	8KW 044 023-003	50
	■	4.0–6.0	6.3 x 0.8	PVC	1000		8KW 044 023-004	1000
	■	4.0–6.0	9.5 x 1.2	PVC	50	A 56	8KW 700 142-003	50
Flat receptacles, fully insulated 	■	0.5–1.0	6.3 x 0.8	PVC	50	A 82	8KW 708 373-003	50
	■	0.5–1.0	6.3 x 0.8	PVC	1000		8KW 708 373-004	1000
	■	1.5–2.5	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
	■	1.5–2.5	6.3 x 0.8	PVC	1000		8KW 708 374-004	1000
	■	4.0–6.0	6.3 x 0.8	PVC	50	A 173	8KW 744 799-003	50

4. Cable connectors

4.1 Crimp connectors

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4.1.3 Insulated crimp connectors	Colour	Cross-section mm ²	Male connector dimensions mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
Blade terminal 		0.5–1.0	2.8 x 0.8	PVC	100	A 138	8KW 744 699-003	100
		0.5–1.0	6.3 x 0.8	PVC	100	A 59	8KW 702 796-003	100
		1.5–2.5	6.3 x 0.8	PVC	15	A 07	8KW 044 288-812	1
		1.5–2.5	6.3 x 0.8	PVC	100	A 60	8KW 044 288-003	100
		4.0–6.0	6.3 x 0.8	PVC	50	A 139	8KW 744 700-003	50
Male blade connectors fully insulated 		0.5–1.5	6.3 x 0.8	PVC	50	A 140	8KW 744 703-003	50
		1.5–2.5	6.3 x 0.8	PVC	50	A 141	8KW 744 704-003	50
		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 125)							
Piggy back spade connector 		0.5–1.0	6.3 x 0.8	PVC	50	A 57	8KW 700 143-003	50
		1.5–2.5	6.3 x 0.8	PVC	50	A 58	8KW 044 032-003	50
		1.5–2.5	6.3 x 0.8	PVC	1000		8KW 044 032-004	1000
Male bullet connector 		0.5–1.0	Ø 4.0	PVC	100	A 61	8KW 044 040-003	100
		0.5–1.0	Ø 4.0	PVC	1000		8KW 044 040-004	1000
		1.5–2.5	Ø 5.0	PVC	100	A 62	8KW 044 025-003	100
		4.0–6.0	Ø 5.0	PVC	50	A 143	8KW 744 733-003	50
Female bullet connectors 		0.5–1.0	Ø 4.0	PVC	10	A 10	8KW 045 145-812	1
		0.5–1.0	Ø 4.0	PVC	50	A 63	8KW 045 145-003	50
		1.5–2.5	Ø 5.0	PVC	50	A 64	8KW 044 026-003	50
		4.0–6.0	Ø 5.0	PVC	50	A 144	8KW 744 734-003	50

4.1.3 Insulated crimp connectors	Colour	Cross-section mm ²	Eyelet hole mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
Ring connector 	■	0.5–1.0	3.2 (M3)	PVC	100	A 65	8KW 044 275-003	100
	■	0.5–1.0	4.3 (M4)	PVC	100	A 67	8KW 044 276-003	100
	■	0.5–1.0	5.3 (M5)	PVC	100	A 69	8KW 044 291-003	100
	■	0.5–1.0	6.5 (M6)	PVC	100	A 116	8KW 744 772-003	100
	■	0.5–1.0	8.4 (M8)	PVC	50	A 117	8KW 744 773-003	50
	■	0.5–1.0	10.5 (M10)	PVC	50	A 118	8KW 744 774-003	50
	■	1.5–2.5	3.7	PVC	100	A 66	8KW 044 041-003	100
	■	1.5–2.5	4.3 (M4)	PVC	100	A 68	8KW 044 028-003	100
	■	1.5–2.5	5.3 (M5)	PVC	100	A 70	8KW 044 027-003	100
	■	1.5–2.5	6.5 (M6)	PVC	12	A 15	8KW 044 039-812	1
	■	1.5–2.5	6.5 (M6)	PVC	100	A 72	8KW 044 039-003	100
	■	1.5–2.5	8.4 (M8)	PVC	50	A 74	8KW 044 277-003	50
	■	1.5–2.5	10.5 (M10)	PVC	50	A 119	8KW 744 775-003	50
	■	4.0–6.0	4.3 (M4)	PVC	50	A 120	8KW 744 776-003	50
	■	4.0–6.0	5.3 (M5)	PVC	50	A 71	8KW 044 029-003	50
	■	4.0–6.0	6.5 (M6)	PVC	50	A 73	8KW 044 030-003	50
	■	4.0–6.0	8.4 (M8)	PVC	50	A 75	8KW 044 031-003	50
	■	4.0–6.0	10.5 (M10)	PVC	50	A 76	8KW 044 038-003	50

4.1.3 Insulated crimp connectors	Colour	Cross-section in mm ²	Eyelet hole mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
Open connector 	■	0.5 - 1.0	3.2 (M3)	PVC	100	A 121	8KW 744 777-003	100
	■	0.5 - 1.0	4.3 (M4)	PVC	100	A 122	8KW 744 778-003	100
	■	0.5 - 1.0	5.3 (M5)	PVC	100	A 123	8KW 744 779-003	100
	■	0.5 - 1.0	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
	■	1.5 - 2.5	6.5 (M6)	PVC	100	A 126	8KW 744 783-003	100
	■	4.0 - 6.0	5.3 (M5)	PVC	50	A 127	8KW 744 784-003	50
	■	4.0 - 6.0	6.5 (M6)	PVC	50	A 128	8KW 744 785-003	50
	■	4.0 - 6.0	8.4 (M8)	PVC	50	A 129	8KW 744 786-003	50
	■	1.5 - 2.5	5.3 (M5)	PVC	100	A 78	8KW 044 037-003	100

4. Cable connectors

4.1 Crimp connectors

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4.1.3 Insulated crimp connectors	Colour	Cross-section mm ²	Male connector dimensions mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
Insulating splice 		0.5–1.0		PVC	100	A 79	8KW 044 280-003	100
		0.5–1.0		PVC	1000		8KW 044 280-004	1000
		1.5–2.5		PVC	12	A 17	8KW 044 033-812	1
		1.5–2.5		PVC	100	A 80	8KW 044 033-002	100
		1.5–2.5		PVC	1000		8KW 044 033-004	1000
		4.0–6.0		PVC	50	A 81	8KW 044 034-003	50
Assorted cable connectors comprising: 5 x branch insulating screw connectors 8KV 744 859-003 (page 125) and blade terminals, fully insulated 8KW 744 704-003 (page 114) 		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	Cross-section mm ²	Eyelet hole mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
 		0.5–1.0	3.2 (M3)	Nylon	100	A178	8KW 178 042-002	100
		0.5–1.0	4.3 (M4)	Nylon	100	A179	8KW 178 042-012	100
		0.5–1.0	5.3 (M5)	Nylon	100	A180	8KW 178 042-022	100
		0.5–1.0	6.5 (M6)	Nylon	100	A181	8KW 178 042-032	100
		0.5–1.0	8.4 (M8)	Nylon	50	A182	8KW 178 042-042	100
		0.5–1.0	10.5 (M10)	Nylon	50	A183	8KW 178 042-052	50
		1.5–2.5	3.7	Nylon	100	A184	8KW 178 042-102	100
		1.5–2.5	4.3 (M4)	Nylon	100	A185	8KW 178 042-112	100
		1.5–2.5	5.3 (M5)	Nylon	100	A186	8KW 178 042-122	100
		1.5–2.5	6.5 (M6)	Nylon	100	A187	8KW 178 042-132	100
		1.5–2.5	8.4 (M8)	Nylon	50	A188	8KW 178 042-142	50
		1.5–2.5	10.5 (M10)	Nylon	50	A189	8KW 178 042-152	50

4. Cable connectors

4.1 Crimp connectors

4.1.3 Insulated crimp connectors	Colour	Cross-section mm ²	Eyelet hole mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
	■	4.0–6.0	4.3 (M4)	Nylon	50	A190	8KW 178 042-202	50
	■	4.0–6.0	5.3 (M5)	Nylon	50	A191	8KW 178 042-212	50
	■	4.0–6.0	6.5 (M6)	Nylon	50	A192	8KW 178 042-222	50
	■	4.0–6.0	8.4 (M8)	Nylon	50	A193	8KW 178 042-232	50
	■	4.0–6.0	10.5 (M10)	Nylon	50	A194	8KW 178 042-242	50
Open connector 	■	0.5–1.0	3.2 (M3)	Nylon	100	A201	8KW 178 045-002	100
	■	0.5–1.0	5.3 (M5)	Nylon	100	A202	8KW 178 045-012	100
	■	1.5–2.5	5.3 (M5)	Nylon	50	A203	8KW 178 045-102	50
	■	1.5–2.5	6.5 (M6)	Nylon	50	A204	8KW 178 045-112	50
	■	4.0–6.0	5.3 (M5)	Nylon	50	A205	8KW 178 045-202	50
	■	4.0–6.0	6.5 (M6)	Nylon	50	A206	8KW 178 045-212	50
	■	4.0–6.0	8.4 (M8)	Nylon	50	A207	8KW 178 045-222	50

4.1.3 Insulated crimp connectors	Colour	Cross-section mm ²	Male connector dimensions mm	Insulating material	Contents (pcs)	Short designation	Part number	PU in pcs.
Pin connector 	■	0.5–1.0	Ø 1.9	Nylon	100	A198	8KW 178 044-002	100
	■	1.5–2.5	Ø 1.9	Nylon	100	A199	8KW 178 044-012	100
	■	4.0–6.0	Ø 2.7	Nylon	50	A200	8KW 178 044-022	50
Insulating splice 	■	0.5–1.0		Nylon	100	A195	8KW 178 043-002	100
	■	1.5–2.5		Nylon	50	A196	8KW 178 043-012	50
	■	4.0–6.0		Nylon	50	A197	8KW 178 043-022	50

4. Cable connectors

4.1 Crimp connectors

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Assortment case of insulated crimp connectors	Designation	Part number Case	PU in pcs.
Contents of assortment case of insulated crimp connectors 	Assortment case comprising: various crimping connectors, a branch connector, a coupling and a crimping pliers (quantity delivered as refill set deviates from the quantity in the original set)	8KW 009 254-801	1

Contents of assortment case of insulated crimp connectors	Designation	Cross-section mm ²	Insertion width mm/eyelet	Quantity in the assortment	Refill	Short designation	Part number	PU in pcs.
Contents of assortment case of insulated crimp connectors	Female bullet connector	0.5–1.0	Ø 4.0	20	Spare parts	A 63	8KW 045 145-003	50
	Male bullet connector	0.5–1.0	Ø 4.0	20		A 61	8KW 044 040-003	100
	Flat receptacle	0.5–1.0	2.8 x 0.5	20		A 50	8KW 705 393-003	100
		0.5–1.0	6.3 x 0.8	20		A 52	8KW 044 036-003	100
	Flat receptacle fully insulated	0.5–1.0	6.3 x 0.8	20		A 82	8KW 708 373-003	50
	Flat receptacle	1.5–2.5	6.3 x 0.8	20		A 53	8KW 044 022-003	100
	Blade terminal	0.5–1.0	6.3 x 0.8	20		A 59	8KW 702 796-003	100
		1.5–2.5	6.3 x 0.8	20		A 60	8KW 044 288-003	100
	Ring connector	0.5–1.0	M4	20		A 67	8KW 044 276-003	100
		0.5–1.0	M5	20		A 69	8KW 044 291-003	100
		1.5–2.5	M4	20		A 68	8KW 044 028-003	100
		1.5–2.5	M5	20		A 70	8KW 044 027-003	100
		1.5–2.5	M6	20		A 72	8KW 044 039-003	100
		4.0–6.0	M5	20		A 71	8KW 044 029-003	50
		4.0–6.0	M6	20		A 73	8KW 044 030-003	50
	Insulating splice	1.5–2.5		20		A 80	8KW 044 033-002	100
	Open connector	1.5–2.5	M5	20		A 78	8KW 044 037-003	100
	Piggy back spade connector	1.5–2.5	2.8 x 0.5	20		A 58	8KW 044 032-003	50
	Branch cable connectors			20		I 50	8KW 705 123-002	25
	Coupling		6.3 x 0.8	20		A 84	8KW 044 035-003	25
	Crimping pliers			1			8PE 002 006-001	1



Purpose:

Cable end ferrules prevent the individual wires of multi-wire copper cables from splaying-out, so making it easier to insert them into terminals. The ferrule is compressed onto the stripped end of the connector. The shape of the resulting ferrule may differ depending on the compression tool that was used. The design and dimensions of range complies with DIN 46 228-4. The material is made of copper with nickel-coated surface and a plastic sleeve made of PVC.

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	Cross- section mm ²	overall length/ length of metal sleeve	Contents in pcs	Short designation	Part number	PU in pcs.
	■	0.5	14.0/8.0 mm	100	A 145	8KW 744 839-003	100
	■	0.75	14.0/8.0 mm	100	A 146	8KW 744 840-003	100
	■	1	14.6/8.2 mm	100	A 147	8KW 744 841-003	100
	■	1.5	14.6/8.2 mm	100	A 148	8KW 744 842-003	100
	■	2.5	15.2/8.2 mm	100	A 149	8KW 744 843-003	100
	■	4	16.5/9.0 mm	50	A 150	8KW 744 844-003	50
	■	6	20.0/12.0 mm	100	A 151	8KW 744 845-003	100
	□	10	21.5/12.0 mm	100	A 152	8KW 744 846-003	100
	■	16	22.2/12.0 mm	50	A 153	8KW 744 847-003	50



Purpose:

Alongside the various types of crimp connectors, solder connectors are another way of joining cables. This is done by inserting the stripped ends of the conductor into the connector and then treating it with pre-heated fluid solder. When the solder has cooled down you have a secure bonded connection.

For temperature-sensitive applications for which conventional soldering is not an alternative you can use a shrink solder connector. This is heated using a hot air gun, which causes the integrated solder ring to melt and the two lateral adhesive-coated ring seals to shrink.

After heating, the connection is soldered, fully insulated and subject to no mechanical strain.

This is suitable as a high-quality connection for individual conductors or for earthing coaxial cable shields.

Advantages:

- Wide range of products for all common cable cross-sections
- Reliable connection solution even for temperature-sensitive applications

4.2.1 CWT solder connectors	Colour	Cross-section mm ²	Ø max. insulation mm	Contents in pcs.	Short designation	Part number	PU in pcs.
	transparent	2 x 0.3-0.8	1.7	50	A 177	8KW 744 890-013	50
	■	2 x 0.8-2.0	2.7	50	A 174	8KW 744 887-013	50
	■	2 x 2.0-4.0	4.5	50	A 175	8KW 744 888-013	50
	■	2 x 4.0-6.0	6	50	A 176	8KW 744 889-013	50

4.2.2 Solder connectors compliant with DIN 46211	Cross-section mm ²	Eyelet hole Ø mm	Nominal size acc. to DIN	Contents in pcs.	Short designation	Part number	PU in pcs.
	>1.0-2.5	5.3 (M5)	5-2.5	100	B 219	8KW 177 784-002	100
	>1.0-2.5	6.5 (M6)	6-2.5	100	B 220	8KW 177 784-012	100
	>2.5-6.0	6.5 (M6)	6-6	50	B 221	8KW 177 784-102	50
	>2.5-6.0	8.4 (M8)	8-6	50	B 222	8KW 177 784-112	50
	>2.5-6.0	10.5 (M10)	10-6	50	B 223	8KW 177 784-122	50
	>6.0-10.0	6.5 (M6)	6-10	25	B 224	8KW 177 784-202	25
	>6.0-10.0	8.4 (M8)	8-10	25	B 225	8KW 177 784-212	25
	>6.0-10.0	10.5 (M10)	10-10	25	B 226	8KW 177 784-222	25

4. Cable connectors

4.2 Solder connectors

4.2.2 Solder connectors compliant with DIN 46211	Cross- section mm ²	Eyelet hole Ø mm	Nominal size acc. to DIN	Contents in pcs.	Short designation	Part number	PU in pcs.
Solder connectors compliant with DIN 46211 	>10.0–16.0	6.5 (M6)	6–16	20	B 227	8KW 177 784-302	20
	>10.0–16.0	8.4 (M8)	8–16	20	B 228	8KW 177 784-312	20
	>10.0–16.0	10.5 (M10)	10–16	20	B 229	8KW 177 784-322	20
	>10.0–16.0	13.0 (M12)	12–16	20	B 230	8KW 177 784-332	20
	>16.0–25.0	8.4 (M8)	8–25	10	B 231	8KW 177 784-402	10
	>16.0–25.0	10.5 (M10)	10–25	10	B 232	8KW 177 784-412	10
	>16.0–25.0	13.0 (M12)	12–25	10	B 233	8KW 177 784-422	10
	>10.0–16.0	13.0 (M12)	12–16	20	B 230	8KW 177 784-332	20
	>25.0–35.0	8.4 (M8)	8–35	10	B 234	8KW 177 784-502	10
	>25.0–35.0	10.5 (M10)	10–35	10	B 235	8KW 177 784-512	10
	>25.0–35.0	13.0 (M12)	12–35	10	B 236	8KW 177 784-522	10
	>35.0–50.0	10.5 (M10)	10–50	5	B 237	8KW 177 784-602	5
	>35.0–50.0	13.0 (M12)	12–50	5	B 238	8KW 177 784-612	5
	>50.0–70.0	10.5 (M10)	10–70	5	B 239	8KW 177 784-702	5
	>50.0–70.0	13.0 (M12)	12–70	5	B 240	8KW 177 784-712	5



Purpose:

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.

Advantages:

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

4.3 Cable junction boxes	Description	Protective class	Di mensions	Pin	Contents in pcs.	Part number	PU in pcs.
Cable junction boxes 	Cable junction box, with threaded terminal end for cables up to 6 mm ² = Ø 4.3 mm	IP 52	125 x 73 x 43	6-pole	1	8KV 002 142-031	1
	 Cable junction box, with threaded terminal end for cables up to 6 mm ² = Ø 3.5 mm	IP 52	125 x 73 x 43	8-pole	1	8KV 002 143-031	1

4. Cable connectors

4.3 Cable junction boxes

4.3 Cable junction boxes	Description	Protective class	Dimensions	Pin	Contents in pcs.	Part number	PU in pcs.
Cable junction boxes 	Cable junction box with 8 x 2 blade terminal connections (6.3 x 0.8 mm)	IP 52	125 x 73 x 43	8-pole	1	8KV 002 144-031	1
		IP 52	125 x 73 x 43	8-pole	1	8KV 002 145-031	1
Cable junction boxes 	Cable junction box, with threaded terminal end for cables up to 6 mm² = Ø 3.5 mm	IP 52	140 x 90 x 58	16-pole	1	8KV 004 258-031	1
		IP 52	140 x 90 x 58	8-pole	1	8KV 004 259-031	1

4. Cable connectors

4.4 Other cable connectors

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4.4 Cable connectors		Colour	Cross-section mm ²	Contents in pcs.	Short designation	Part number	PU in pcs.	
Branch cable connectors 		0.3–0.75	25	I 52	8KV 715 923-003	25		
		0.8–2.0	5	I 01	8KV 705 123-813	1		
		0.8–2.0	25	I 50	8KV 705 123-002	25		
		0.8–2.0	1000		8KV 705 123-004	2500		
		3.3–5.2	10	I 51	8KV 712 169-003	10		
		0.5–1.0	50	I 61	8KV 744 858-003	50		
		1.5–2.5	50	I 62	8KV 744 859-003	50		
		4.0–6.0	25	I 63	8KV 744 860-003	25		
	Description/Colour	Dimensions	Male connector dimensions mm	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
PVC male spade branch connector 	transparent	54 x 21 x 7	6.3 x 0.8		10	I 57	8KV 002 135-821	1
Cable connectors    	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-pole	10	56	8KW 003 124-811	1
	transparent	147.8 x 28 x 7	6.3 x 0.8	12-pole	10		8KV 002 132-001	10
		142 x 42 x 7	6.3 x 0.8	12-pole	10		8KV 002 133-001	10
	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
Lustre terminals 	with solid brass terminals							
	for cables up to 2.5 mm ²			12-pole	10		8KV 002 137-001	10
	for cables up to 4 mm ²			12-pole	10		8KV 002 139-001	10
	for cables up to 10 mm ²			12-pole	10		8KV 002 140-001	10
	for cables up to 16 mm ²			12-pole	10		8KV 002 141-001	10

**Purpose:**

SUPERSEAL plug-type connectors comply with IEC 529 regulations and with DIN ISO 40050 and come with protection class IP 67, which offers the maximum level of water and dust proofing. These qualities mean that SUPERSEAL connectors will be suitable wherever adverse pressure or moisture conditions take other connector systems beyond the limits of their usefulness.

Advantages:

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

4.5.1 SUPERSEAL connectors	Description/Colour	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
SUPERSEAL connector sets 	2 each of male pin contacts 1.0–1.5 mm ² , female socket contacts 1.0–1.5 mm ² , plus 2 individual cable seals each	1-pole	10	B 03	8KW 744 805-801	1
	3 each of male pin contacts 1.0–1.5 mm ² and female socket contacts 1.0–1.5 mm ² , plus 4 individual cable seals each and 2 blind plugs	2-pole	18	B 04	8KW 744 806-801	1

4.5 Female and male connector housings

4.5.1 SUPERSEAL connectors	Description/Colour	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
	4 each of male pin contacts 1.0–1.5 mm ² and female socket contacts 1.0–1.5 mm ² , plus 6 individual cable seals each and 4 blind plugs	3-pole	26	B 05	8KW 744 807-801	1
		4-pole	34	B 06	8KW 744 808-801	1
		5-pole	42	B 07	8KW 744 809-801	1
		6-pole	50	B 08	8KW 744 810-801	1

4.5.1 SUPERSEAL connectors	Description/Colour	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
SUPERSEAL connector        	Male pin housing	1-pole	10		8JA 746 183-012	10
	Female connector housing	1-pole	10		8JA 746 184-012	10
	Male pin housing	2-pole	10		8JA 746 183-022	10
	Female connector housing	2-pole	10		8JA 746 184-022	10
	Male pin housing	3-pole	10		8JA 746 183-032	10
	Female connector housing	3-pole	10		8JA 746 184-032	10
	Male pin housing	4-pole	10		8JA 746 183-042	10
	Female connector housing	4-pole	10		8JA 746 184-042	10

4. Cable connectors

4.5 Female and male connector housings

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4.5.1 SUPERSEAL connectors	Description/Colour	Pin	Contents in pcs.	Short designation	Part number	PU in pcs.
SUPERSEAL connector    	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-pole	10		8JA 746 183-062	10
	Female connector housing	6-pole	10		8JA 746 184-062	10
    	Male pin contact	1.0–1.5 mm ²	50	B 143	8KW 744 836-002	50
	Female contact	1.0–1.5 mm ²	50	B 144	8KW 744 837-002	50
	Strand insulation	Ø 1.8–2.4 mm	50	B 145	9GD 746 185-002	50
		Ø 2.6–3.3 mm	50	B 146	9GD 746 186-002	50
	Blind plug		50	B 147	9GD 746 187-002	50

4. Cable connectors

4.5 Female and male connector housings

SUPERSEAL connectors	Designation	Part number Case	PU in pcs.
Contents of assortment case SUPERSEAL plug housing assortment 	Assortment case comprising various SUPERSEAL connectors, male/female contacts, individual cable seals and blind plugs (quantity delivered as refill set deviates from the quantity in the original set)	8JA 009 256-801	1

Contents of assortment case SUPERSEAL plug housing assortment	Designation	Cross-section mm ²	Quantity in the assortment	Refill	Short designation	Part number	PU in pcs.
	Individual wire seal	1.8–2.4	100	Spare parts	B 145	9GD 746 185-002	50
	Blind plug		100		B 147	9GD 746 187-002	50
	Male pin contact	1.0–1.5	100		B 143	8KW 744 836-002	50
	Female contact	1.0–1.5	100		B 144	8KW 744 837-002	50
	Male connector housing, 1-pole		5			8JA 746 183-012	10
	Female socket housing, 1-pole		5			8JA 746 184-012	10
	Male connector housing, 2-pole		5			8JA 746 183-022	10
	Female socket housing, 2-pole		5			8JA 746 184-022	10
	Male connector housing, 3-pole		5			8JA 746 183-032	10
	Female socket housing, 3-pole		5			8JA 746 184-032	10
	Male connector housing, 4-pole		5			8JA 746 183-042	10
	Female socket housing, 4-pole		5			8JA 746 184-042	10
	Male connector housing, 5-pole		5			8JA 746 183-052	10
	Female socket housing, 5-pole		5			8JA 746 184-052	10
	Male connector housing, 6-pole		5			8JA 746 183-062	10
	Female socket housing, 6-pole		5			8JA 746 184-062	10



Purpose:

Female and male connector housings offer an easy way of protecting uninsulated cable connections from external influences. This assortment includes housings for standardised uninsulated crimp connectors with locking tag and for the round plug systems CONI and Mate'n'Lock.

Advantages:

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

4.5.2 Female and male connector housings	Contacts	Pin	Contents (pcs)	Part number	PU in pcs.
Flat receptacle for female blade connectors 	1 Flat receptacle 6.3 mm	1-pole	10	8JD 008 151-001	10
	2 female spade connectors 6.3 mm	2-pole	10	8JD 008 151-011	10
	2 female spade connectors 6.3 mm	2-pole	10	8JD 008 151-021	10

4.5.2 Female and male connector housings	Contacts	Pin	Contents (pcs)	Part number	PU in pcs.
Receptacle housing for flat receptacles    	3 flat receptacles 6.3 mm	3-pole	10	8JD 008 151-031	10
	4 flat receptacles 6.3 mm	4-pole	10	8JD 008 151-041	10
	6 flat receptacles 6.3 mm	6-pole	10	8JD 008 151-051	10
	8 flat receptacles 6.3 mm	8-pole	10	8JD 008 151-061	10
Male connector for flat receptacles       	1 male spade connector 6.3 mm	1-pole	10	8JD 008 152-001	10
	2 male spade connectors 6.3 mm	2-pole	10	8JD 008 152-011	10
	2 male spade connectors 6.3 mm	2-pole	10	8JD 008 152-021	10
	3 male spade connectors 6.3 mm	3-pole	10	8JD 008 152-031	10
	4 male spade connectors 6.3 mm	4-pole	10	8JD 008 152-041	10
	6 male spade connectors 6.3 mm	6-pole	10	8JD 008 152-051	10
	8 male spade connectors 6.3 mm	8-pole	10	8JD 008 152-061	10

4. Cable connectors

4.5 Female and male connector housings

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4.5.2 Female and male connector housings	Description	Pin	Contents (pcs)	Part number	PU in pcs.
CONI round male connector system    	Male pin housing	3-pole	10	8KW 744 851-003	10
	Male pin housing	6-pole	10	8KW 744 852-003	10
	Male pin housing	12-pole	10	8KW 744 853-003	10
	Male pin housing	15-pole	10	8KW 744 886-003	10
   	Female connector housing	3-pole	10	8KW 744 854-003	10
	Female connector housing	6-pole	10	8KW 744 855-003	10
	Female connector housing	12-pole	10	8KW 744 857-003	10
	Female connector housing	15-pole	10	8KW 744 856-003	10

4.5.2 Female and male connector housings	Description	Pin	Contents (pcs)	Part number	PU in pcs.
Mate'n'Lock plug systems    	Male pin housing	3-pole	10	8JA 180 663-002	10
	Male pin housing	6-pole	10	8JA 180 663-012	10
	Male pin housing	12-pole	10	8JA 180 663-022	10
	Male pin housing	15-pole	10	8JA 180 663-032	10
   	Female connector housing	3-pole	10	8JA 180 664-002	10
	Female connector housing	6-pole	10	8JA 180 664-012	10
	Female connector housing	12-pole	10	8JA 180 664-022	10
	Female connector housing	15-pole	10	8JA 180 664-032	10

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**Purpose:**

Fixing a bundle of conductors often takes more than just a cable tie. Our cable straps with integrated edge clips offer a complete fast and easy solution with a high retaining force.

They are weatherproof, flame-resistant and resistant to dilute organic acids, oils, fuel, seawater, solvents and grease. They offer perfect support for even the tiniest cross-section bundle, so fixing calls for no additional padding other other aids.

Advantages:

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

Sample applications:

5. Insulation & bundling

5.1 Cable straps with edge clips

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5.1 Cable straps with edge clips	L x W mm	Depth of profile	Colour	Capacity in mm	Contents in pcs.	Short designation	Part number	PU in pcs.
Cable straps        	200 x 4.8	0.7 - 3.0 mm	■	Ø 48	100		8HL 185 549-001	100
	200 x 4.8	0.7 - 3.0 mm	■	Ø 48	100		8HL 185 549-011	100
	200 x 4.8	0.7 - 3.0 mm	■	Ø 48	100		8HL 185 549-021	100
	200 x 4.8	0.7 - 3.0 mm	■	Ø 48	100		8HL 185 549-031	100
	200 x 4.8	3.0 - 6.0 mm	■	Ø 48	100		8HL 185 549-041	100
	200 x 4.8	3.0 - 6.0 mm	■	Ø 48	100		8HL 185 549-051	100
	200 x 4.8	3.0 - 6.0 mm	■	Ø 48	100		8HL 185 549-061	100
	200 x 4.8	3.0 - 6.0 mm	■	Ø 48	100		8HL 185 549-071	100
	200 x 4.8	3.0 - 6.0 mm	■	Ø 48	100		8HL 185 549-081	100

**Purpose:**

Cable straps facilitate the fast attachment and bundling of cables, wiring harnesses and numerous other components. Our system, which has remained virtually unaltered for decades, is simple, cheap and universal in equal measure.

Advantages:

- Comprehensive assortment including numerous lengths and widths
- In each case either black or natural
- Additional fixing elements further broaden the range of possible applications

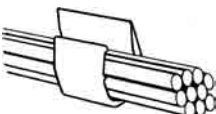
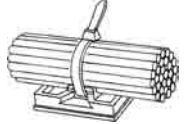
5.4 Cable straps	L x W mm	Colour	Capacity mm	Contents in pcs.	Short designation	Part number	PU in pcs.
	100 x 2.5	□	Ø 22	100	E 01	8HL 707 877-002	100
	100 x 2.5	■	Ø 22	100	E 02	8HL 717 962-001	100
	160 x 4.8	□	Ø 36	100	E 03	8HL 707 877-081	100
	160 x 4.8	■	Ø 36	100	E 04	8HL 717 962-161	100
	140 x 3.6	□	Ø 33	100	E 05	8HL 707 877-012	100
	140 x 3.6	■	Ø 33	100	E 06	8HL 717 962-011	100
	200 x 4.8	□	Ø 48	100	E 07	8HL 707 877-022	100
	200 x 4.8	■	Ø 48	100	E 08	8HL 717 962-021	100
	200 x 2.5	□	Ø 49	100	E 09	8HL 707 877-121	100
	200 x 2.5	■	Ø 49	100	E 10	8HL 717 962-131	100
	200 x 7.6	■	Ø 50	100	E 11	8HL 717 962-061	100
	200 x 3.6	□	Ø 55	100	E 12	8HL 707 877-091	100
	200 x 3.6	■	Ø 55	100	E 13	8HL 717 962-171	100
	292 x 7.6	■	Ø 77	100	E 14	8HL 717 962-111	100
	292 x 3.6	□	Ø 75	100	E 15	8HL 707 877-101	100
	292 x 3.6	■	Ø 75	100	E 16	8HL 717 962-141	100
	280 x 4.8	□	Ø 76	100	E 17	8HL 707 877-041	100
	280 x 4.8	■	Ø 76	100	E 18	8HL 717 962-031	100
	368 x 4.8	□	Ø 100	100	E 19	8HL 707 877-032	100
	368 x 4.8	■	Ø 100	100	E 20	8HL 717 962-041	100

5. Insulation & bundling

5.2 Cable straps

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5.4 Cable straps	L x W mm	Colour	Capacity mm	Contents in pcs.	Short designation	Part number	PU in pcs.
	368 x 7.6		Ø 102	100	E 21	8HL 707 877-051	100
	368 x 7.6		Ø 102	100	E 22	8HL 717 962-051	100
	430 x 4.8		Ø 120	100	E 23	8HL 707 877-141	100
	430 x 4.8		Ø 120	100	E 24	8HL 717 962-181	100
	580 x 13.0		Ø 152	50	E 25	8HL 707 877-131	50
	612 x 9.0		Ø 194	50	E 26	8HL 717 962-121	50

5.4 Cable straps	Designation	Contents (pcs)	Short designation	Part number	PU in pcs.
Accessories      	Cable clip for cables up to Ø 7.1 mm, size 25.4 x 25.4 x 10.4 mm	100	E 27	8HL 717 964-001	100
	Natural colour adhesive pad for sticking harnesses to level, smooth, grease-free body parts and walls, for additional fixing you can use an M5 bolt; (without cable straps) size 27.7 x 27.7 x 5.7 mm	100	E 29	8HL 707 879-012	100
	Expansion bolts for cable straps up to 4.8 mm, hole diameter: 6.5 mm thickness of metal plate: 0.7 - 2.5 mm	100	E 52	8HL 707 878-012	100
	Expansion bolts for cable straps up to 4.8 mm, hole diameter: 6.5 mm thickness of metal plate: 2.5 - 4.0 mm	100	E 53	8HL 707 878-022	100

**Purpose:**

Cable straps facilitate the fast attachment and bundling of cables, wiring harnesses and numerous other components. This special removable variant can be used a number of times and is ideally suitable for temporary fastenings, such as fixing irritating cable groups out of the way when servicing a vehicle.

Advantages:

- Multiple-use loadable fastener solution
- Various lengths

5.3 Removable cable straps	L x W mm	Colour	Capacity in mm	Contents in pcs.	Short designation	Part number	PU in pcs.
	150 x 7.6	■	Ø 35	50	E47	8HL 717 962-201	50
	200 x 7.6	■	Ø 50	50	E48	8HL 717 962-211	50
	250 x 7.6	■	Ø 70	50	E49	8HL 717 962-221	50
	300 x 7.6	■	Ø 90	50	E50	8HL 717 962-231	50
	400 x 7.6	■	Ø 100	50	E51	8HL 717 962-241	50

5. Insulation & bundling

5.4 Driller / 5.5 Cable clips / 5.6 Corrugated pipes

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The **driller**: Probably the fastest way to bundle and fasten cables.

5.4 Driller	Bundle Ø	Contents (pcs)	Short designation	Part number	PU in pcs.
Accessories 	10.2	100		8HL 177 884-002	100
	14.0	100		8HL 177 884-012	100
	19.0	100		8HL 177 884-022	100

Chassis cable clips for frame thickness 3–6 mm, length of clip leg: 21 mm, contains no hexavalent chromium

5.5 Cable clips	Description	Contents (pcs)	Short designation	Part number	PU in pcs.
Chassis cable clips  	Cable clip, 43 mm long	100		8HS 071 414-001	100
	Cable clip, 52.5 mm long	100		8HS 071 415-001	100

The **corrugated tubes** are used for bundling cables and protecting them from dynamic loads and other external influences. The slotted version makes it easier to thread the cable in, whereas the closed version provides better protection. The polyamide version also meets ADR requirements.

- Usage temperature: –40°C to +140°C (briefly +160°C)
- hardly flammable
- halogen-free
- UV-resistant

5.6 Corrugated pipes	Nominal ID	Inner diameter	Outer diameter	Material	Contents in pcs.	Part number	PU in pcs.
Slotted corrugates pipes 	7.5	6.7	10	PP	50	8JR 177 882-002	50
	10	9.9	13	PP	50	8JR 177 882-012	50
	13	12.7	15.8	PP	50	8JR 177 882-022	50
	17	16.6	21.2	PP	50	8JR 177 882-032	50
	22	21.3	25.4	PP	50	8JR 177 882-042	50
	26	25.8	31.2	PP	50	8JR 177 882-052	50
	37	36	42.4	PP	25	8JR 177 882-062	25

5. Insulation & bundling

5.6 Corrugated pipes / 5.7 Spiral tape

5.6 Corrugated pipes	Nominal ID	Inner diameter	Outer diameter	Material	Contents in pcs.	Part number	PU in pcs.
Corrugated tubes, non-slit 	7.5	6.7	10	PP	50	8JR 177 883-002	50
	10	9.9	13	PP	50	8JR 177 883-012	50
	13	12.7	15.8	PP	50	8JR 177 883-022	50
	17	16.6	21.2	PP	50	8JR 177 883-032	50
	22	21.3	25.4	PP	50	8JR 177 883-042	50
	26	25.8	31.2	PP	50	8JR 177 883-052	50
	37	36	42.4	PP	25	8JR 177 883-062	25
Corrugated tubes non-slit, ADR-suitable	7.5	6.7	10	PA	50	8JR 178 252-002	50
	10	9.9	13	PA	50	8JR 178 252-012	50
	13	12.7	15.8	PA	50	8JR 178 252-022	50
	17	16.6	21.2	PA	50	8JR 178 252-032	50
	22	21.3	25.4	PA	50	8JR 178 252-042	50
	37	36	42.4	PA	25	8JR 178 252-052	25

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.

5.7 Spiral tape	Bundle range in mm	Inner diameter	Outer diameter	Helical width	Contents in pcs.	Part number	PU in pcs.
 	10-50	4	5	7	10	8JR 178 587-002	10
	20-65	9	10.5	13.9	10	8JR 178 587-012	10
	25-100	15	17	18.2	10	8JR 178 587-022	10
	30-130	20	23	19.6	10	8JR 178 587-032	10



Purpose:

Adhesive insulating tape is made of non-conductive material, making it suitable for numerous application in the area of vehicle repairs without risking any deleterious effects on the onboard electrical system. Whether it be bundling, fastening, temporary insulation or simple colour coding – the traditional and well-tried all-purpose system always reliably does the trick. There are now numerous special variants that are especially suitable for some particular area of application.

Advantages:

- Varied assortment of different lengths, widths and materials
- Robust and reliable
- For numerous applications

5.8 Insulating tapes	Description/Material	Colour	Length	Width in mm	Thickness in mm	Temperature range °C	Contents in pcs.	Part number	PU in pcs.
	PVC	■	10 m	15	0.15	-10°C to +105°C	2	9MJ 707 869-852	1
	PVC	■	10 m	15	0.15	-10°C to +105°C	10	9MJ 707 869-013	10
	PVC	□	10 m	15	0.15	-10°C to +105°C	10	9MJ 707 870-013	10
	PVC	■	10 m	15	0.15	-10°C to +105°C	10	9MJ 707 871-013	10
	PVC	■	10 m	15	0.15	-10°C to +105°C	10	9MJ 707 873-013	10
	PVC	■	10 m	15	0.15	-10°C to +105°C	10	9MJ 707 874-013	10
	PVC	■	10 m	15	0.15	-10°C to +105°C	10	9MJ 707 875-013	10
	PVC	■	4.5 m	15	0.15	-10°C to +105°C	10	9MJ 707 869-003	10
	PVC	■	4.5 m	15	0.15	-10°C to +105°C	10	9MJ 707 872-003	10
	PVC	■	4.5 m	15	0.15	-10°C to +105°C	10	9MJ 707 875-003	10
	PVC	■	25 m	15	0.15	-10°C to +105°C	10	9MJ 186 375-003	10

5.8 Insulating tapes	Description/Material	Colour	Length	Width in mm	Thickness in mm	Temperature range °C	Contents in pcs.	Part number	PU in pcs.
	Self-sealing adhesive tape, tear strength >20.0 N/cm; for repairing damaged cable sheathing	■	5 m	19	1.0	-40°C to +105°C	1	9MJ 735 430-001	1
	Fabric tape (Teflon tape)	□	12 m	12	0.1	-20°C to +125°C	10	9XX 734 570-001	10
	dirt-repellent, good media resistance polyester fabric	■	25 m	19	0.17	-40°C to +125°C	1	9MJ 176 267-001	1
	Flap/abrasion protection for taping harnesses nonwoven polyester fabric	■	25 m	19	0.3	-40°C to +105°C	1	9MJ 176 269-001	1
	especially suitable for repairs and insulating work in unfavourable weather conditions PVC	■	20 m	19	0.2	-20°C to +105°C	1	9MJ 176 270-001	1
	excellent media resistance, increased stability at high and low temperatures, suitable for working in the engine compartment PVC	■	33 m	19	0.15	-40°C to +125°C	1	9MJ 176 271-001	1
	High quality all-purpose assembly adhesive tape for masking, fastening and sealing PE fabric	■	50 m	19	0.18	-40°C to +80°C	1	9MJ 186 375-011	1



Purpose:

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.

Advantages:

- Various lengths, diameters and shrinkage factors
- Wide range of applications
- Self-extinguishing

5.9 Heat shrink hoses	Shrink rate	Colour	Length	Diameter in mm	Minimum shrinkage temperature	Temperature range °C	Contents in pcs.	Part number	PU in pcs.
Heat shrink hoses off the roll 	2 : 1	■	4.0 m	Ø 25.4	120°C	-55°C to +125°C	1	9MJ 007 825-071	1
		■	5.0 m	Ø 19.1			1	9MJ 007 825-041	1
		■	6.5 m	Ø 9.5			1	9MJ 007 825-021	1
		■	6.5 m	Ø 12.7			1	9MJ 007 825-051	1
		■	7.5 m	Ø 6.4			1	9MJ 007 825-031	1
		■	9.5 m	Ø 4.8			1	9MJ 007 825-001	1
		■	11.5 m	Ø 3.2			1	9MJ 007 825-011	1
		■	12.5 m	Ø 2.4			1	9MJ 007 825-061	1
Heat shrink hose sections with pre-applied adhesive inside 	3 : 1	■	30 cm	Ø 3.0	135°C	-55°C to +85°C	20	9MJ 008 039-001	20
		■	30 cm	Ø 4.8			16	9MJ 008 039-011	16
		■	30 cm	Ø 6.0			13	9MJ 008 039-021	13
		■	30 cm	Ø 9.0			11	9MJ 008 039-031	11
		■	30 cm	Ø 12.0			9	9MJ 008 039-041	9
		■	30 cm	Ø 19.0			7	9MJ 008 039-051	7
		■	30 cm	Ø 24.0			5	9MJ 008 039-061	5

5. Insulation & bundling

5.9 Heat shrink hoses

	Colour	Length	Ø in mm	Temperature range °C	Contents in pcs.	Part number	PU in pcs.
Heat shrink hose sets Shrink factor 2:1	20 each of red, yellow, blue	50	2.4	-55°C to +125°C	60	9MJ 178 458-002	1
	30 each of black and transparent	50	2.4		60	9MJ 178 458-012	1
	20 each of red, yellow, blue	50	3.2		60	9MJ 178 458-022	1
	30 each of black and transparent	50	3.2		60	9MJ 178 458-032	1
	20 each of red, yellow, blue	50	4.8		60	9MJ 178 458-042	1
	30 each of black and transparent	50	4.8		60	9MJ 178 458-052	1
	20 each of red, yellow, blue	50	6.4		60	9MJ 178 458-062	1
	30 each of black and transparent	50	6.4		60	9MJ 178 458-072	1
	4 each of red, yellow, blue, black, transparent	100	9.5		20	9MJ 178 458-082	1
	4 each of red, yellow, blue, black, transparent	100	12.5		20	9MJ 178 458-092	1
	10 each of black and transparent	100	19.1		20	9MJ 178 458-102	1
	5 each of red, yellow, blue, black, transparent	200	9.5		25	9MJ 178 458-112	1
	black	200	5 each of 19.1 and 25.4		10	9MJ 178 458-122	1



7.1 Heat shrink hose assortment	Designation	Part number Case	PU in pcs.
Contents of assortment case of heat-shrinkable tubing 	Case containing an assortment of different heat shrink hoses with a shrink rate of 2:1, usage temperature -55 to +125°C, flame-retardant and self-extinguishing; UL224 shrinkage temperature min. 120°C	9MJ 178 458-801	1

7.1 Contents of assortment case of heat-shrinkable tubing	Colour	Ø in mm	Length	Quantity in the assortment	7.1 refill	Quantity in the assortment	Part number	PU in pcs.
	20 each of red, yellow, blue	2.4	50	60	Spare parts	60	9MJ 178 458-002	1
	30 each of black and transparent	2.4	50	60		60	9MJ 178 458-012	1
	20 each of red, yellow, blue	3.2	50	60		60	9MJ 178 458-022	1
	30 each of black and transparent	3.2	50	60		60	9MJ 178 458-032	1
	20 each of red, yellow, blue	4.8	50	60		60	9MJ 178 458-042	1
	30 each of black and transparent	4.8	50	60		60	9MJ 178 458-052	1
	20 each of red, yellow, blue	6.4	50	60		60	9MJ 178 458-062	1
	30 each of black and transparent	6.4	50	60		60	9MJ 178 458-072	1
	4 each in black, transparent red, yellow, blue,	9.5	100	20		20	9MJ 178 458-082	1
	4 each in black, transparent red, yellow, blue,	12.5	100	20		20	9MJ 178 458-092	1
	10 each of black and transparent	19.1	100	20		20	9MJ 178 458-102	1
	5 each in black, transparent red, yellow, blue,	9.5	200	25		25	9MJ 178 458-112	1
	black	5 each of 19.1 and 25.4	200	10		10	9MJ 178 458-122	1

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**Purpose:**

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**.

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	Designation	+/-	DIN	Contents in pcs.	Part number	PU in pcs.
	Form A, pole Ø 17.5 mm, for cables up to 70 mm ²	+ left	following DIN 72331	1	8KX 091 450-031	1
				25	8KX 091 450-032	25
	Form B, pole Ø 15.9 mm, for cables up to 70 mm ²	- right	following DIN 72331	1	8KX 043 021-031	1
				25	8KX 043 021-032	25
	Form C, pole Ø 17.5 mm, for cables up to 70 mm ²	+ right	following DIN 72331	1	8KX 091 451-031	1
				25	8KX 091 451-032	25
	Form D, pole Ø 15.9 mm, for cables up to 70 mm ²	- left	following DIN 72331	1	8KX 091 452-031	1
				25	8KX 091 452-032	25

6. Other products

6.1 Battery terminals

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6.1 Battery terminals	Designation	+/-	DIN	Contents in pcs.	Part number	PU in pcs.
	Form E for cables from 50–120 mm ² with lighting cable connection, pole Ø 17.5 mm	+ left	DIN 72331	10	8KX 091 453-001	10
	Form E for cables from 50–120 mm ² without lighting cable connection, pole Ø 17.5 mm	+ left	DIN 72331	10	8KX 707 911-001	10
	Form F for cables from 50–120 mm ² without lighting cable connection, pole Ø 15.9 mm	– right	DIN 72331	10	8KX 707 911-011	10
	Battery terminals for cables from 10–70 mm ²					
	Pole Ø 17.5 mm	+ terminal		10	8KX 716 405-001	10
	Pole Ø 15.9 mm	– terminal		10	8KX 716 405-011	10
	Battery terminals for cables from 50–120 mm ²					
	Pole Ø 17.5 mm with lighting cable connection	+ terminal		10	8KX 707 912-001	10
	Pole Ø 15.9 mm without lighting cable connection	– terminal		10	8KX 707 912-011	10
	Battery terminals for cables from 50–120 mm ²					
	with screw M 12 x 1.75, pole Ø 17.5 mm	+ terminal		10	8KX 707 913-011	10
	with screw M 10 x 1.5, pole Ø 15.9 mm	– terminal		10	8KX 707 913-001	10
	Ford battery terminal	+ terminal		10	8KX 742 695-032	10
		– terminal		10	8KX 742 695-022	10
	QuickLock battery pole clamp	– terminal		10	8KX 174 396-012	10
	Starter cable with battery terminal and ring tongue M8, cable cross-section: 25 mm ² , 900 mm long, pole Ø 17.5 mm	+ terminal		5	8KX 707 919-021	5



Purpose:

For decades now, these highly flexible conductors have been used in vehicles for a variety of electrical applications. As their name implies, they are used for such purposes as discharge or earthing EMC interference or static charges. Such an **earthing strap** needs to be able to safely withstand high currents, such as those occurring between the starter and the battery. Malfunctions in the electrical system are often caused by a defective or missing **earthing strap**.

Advantages:

- Construction optimally tailored to the appropriate field of application
- Dense braid facilitates reliable current discharge
- Durable specification dip-soldered with lead-free solder

6.2 Earthing straps	Designation	Cable cross-section in mm ²	Load-carrying capacity	Length in mm	Contents in pcs.	Part number	PU in pcs.
Engine earthing straps 	made of highly flexible copper braiding, pole Ø 10.5 mm	16	65 A	150	5	8KX 707 916-001	5
		16	65 A	200	5	8KX 707 916-011	5
		16	65 A	250	5	8KX 707 916-021	5
	single-layer	21	80 A	200	5	8KX 707 917-011	5
		21	80 A	250	5	8KX 707 917-021	5
		21	80 A	300	5	8KX 707 917-031	5
	2-layer	50		300	10	8KX 175 422-002	10
Suppressor earthing straps 	made of highly flexible copper braiding, pole Ø 8.5 mm	10	48 A	180	5	8KX 707 918-001	5
		10	48 A	210	5	8KX 707 918-011	5
		10	48 A	280	5	8KX 707 918-021	5
		10	48 A	400	5	8KX 707 918-031	5
Battery earthing straps  	made of highly flexible copper braiding, with brass clip, pole Ø 15.9 mm, single-layer	21	80 A	180	10	8KX 091 391-001	10
		21	80 A	250	10	8KX 091 392-001	10
		21	80 A	300	10	8KX 091 394-001	10
		21	80 A	320	10	8KX 091 395-001	10
		21	80 A	350	10	8KX 719 756-001	10
		21	80 A	400	10	8KX 719 757-001	10
		21	80 A	500	10	8KX 719 757-012	10
	2-layer	50		500	5	8KX 175 421-002	5



Purpose:

Hose and pipe clamps are typical attachments for fluid transport mechanisms. Their high tensile strength, high breaking torque and even tension distribution make our universal hose clamps particularly suitable for applications involving heavy mechanical loads. All sizes are available in a variety of alloys.

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	Designation	Clamping range for Ø in mm	Strip width mm	Contents in pcs.	Part number	PU in pcs.
Hose clamps  	Hose clamps in a slide-in container. Strip and housing in stainless steel, screw of galvanized steel This slide-in container system is a flexible and compact storage solution. The individual elements can be combined.	8–16	9	50	8HK 710 701-111	50
		12–20	9	50	8HK 710 701-121	50
		16–25	9	50	8HK 710 701-131	50
		20–32	9	50	8HK 710 701-141	50
		25–40	9	25	8HK 710 701-151	25
		32–50	9	25	8HK 710 701-161	25
	Hose clamp for fuel lines, strip and housing made of stainless steel, screw made of galvanised steel	7–11	5	100	8HK 713 394-001	100

6. Other products

6.3 Hose/pipe clamps

6.3 Hose/ pipe clamps	Designation	Clamping range for Ø in mm	Strip width mm	Contents in pcs.	Part number	PU in pcs.
	Hose clamp, strip and housing made of stainless steel, screw made of galvanised steel	8–16	9	100	8HK 713 820-001	100
		12–20	9	100	8HK 713 820-011	100
		16–25	9	100	8HK 713 820-021	100
		20–32	9	100	8HK 713 820-031	100
		25–40	9	100	8HK 713 820-041	100
		32–50	9	50	8HK 713 820-051	50
		40–60	9	50	8HK 713 820-061	50
		50–70	9	25	8HK 713 820-071	25
		60–80	9	25	8HK 713 820-081	25
		70–90	9	25	8HK 713 820-091	25
		80–100	9	25	8HK 713 820-101	25
	Hose clamp, all parts made entirely of galvanised steel	8–12	9	100	8HK 748 452-002	100
		10–16	9	100	8HK 748 452-012	100
		12–22	9	100	8HK 748 452-022	100
		16–27	9	100	8HK 748 452-032	100
		20–32	9	100	8HK 748 452-042	100
		25–40	9	100	8HK 748 452-052	100
		35–50	9	50	8HK 748 452-062	50
		50–70	9	25	8HK 748 452-072	25
		60–80	9	25	8HK 748 452-082	25
		70–90	9	25	8HK 748 452-092	25
		80–100	9	25	8HK 748 452-102	25
	Hose clamp, strip and housing made of stainless steel, screw made of galvanised steel	16–27	12	25	8HK 748 453-102	25
		20–32	12	25	8HK 748 453-112	25
		35–50	12	10	8HK 748 453-132	10
		40–60	12	10	8HK 748 453-142	10
		50–70	12	10	8HK 748 453-152	10
		60–80	12	10	8HK 748 453-162	10
		90–110	12	10	8HK 748 453-192	10
	Hose clamp, all parts made entirely of galvanised steel	16–25	12	20	8HK 710 702-101	20
		20–32	12	20	8HK 710 702-111	20
		32–50	12	10	8HK 710 702-131	10
		40–60	12	10	8HK 710 702-141	10
		50–70	12	10	8HK 710 702-151	10
		60–80	12	10	8HK 710 702-161	10
		90–110	12	10	8HK 710 702-191	10

6. Other products

6.3 Hose/pipe clamps

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6.3 Pipe clamps	Designation	Inner diameter for Ø in mm	Strip width mm	Surface finish	Contents in pcs.	Part number	PU in pcs.
	Pipe clamp 12 W1	6	12	galvanised	100	8HS 749 192-002	100
		8	12	galvanised	100	8HS 749 192-012	100
		10	12	galvanised	100	8HS 749 192-022	100
		12	12	galvanised	100	8HS 749 192-032	100
		13	12	galvanised	100	8HS 749 192-042	100
		14	12	galvanised	100	8HS 749 192-052	100
		16	12	galvanised	100	8HS 749 192-062	100
		18	12	galvanised	100	8HS 749 192-072	100
		19	12	galvanised	100	8HS 749 192-082	100
		20	12	galvanised	100	8HS 749 192-092	100
	Pipe clamp 15 W1	6	15	galvanised	100	8HS 749 193-002	100
		8	15	galvanised	100	8HS 749 193-012	100
		10	15	galvanised	100	8HS 749 193-022	100
		12	15	galvanised	100	8HS 749 193-032	100
		15	15	galvanised	100	8HS 749 193-042	100
		18	15	galvanised	100	8HS 749 193-052	100
		20	15	galvanised	100	8HS 749 193-062	100
		23	15	galvanised	50	8HS 749 193-072	50
		25	15	galvanised	50	8HS 749 193-082	50
		26	15	galvanised	50	8HS 749 193-092	50
	Pipe clamp 20 W1	18	20	galvanised	50	8HS 749 194-002	50
		20	20	galvanised	25	8HS 749 194-012	25
		25	20	galvanised	25	8HS 749 194-022	25

**Purpose:**

Unlike ordinary hose clamps, these spring band clamps possess a flexible attachment mechanism. This makes them considerably more durable in applications where they are exposed to frequent temperature fluctuations (for example fuel or air circulation). If the fluid system becomes warmer and its diameter expands, these spring band clamps also expand; similarly, if cold temperatures cause the diameter to become smaller they will contract. In this way these attachments remain optimal.

Advantages:

- Strong, durable attachment solution for fluid systems
- Optimal support at all times thanks to dynamic spring properties
- Wide ranging assortment including all the usual sizes for automobiles
- as per DIN 3021

6.4 Spring band clamps



Depicted example spring band clamp, type "FBS"

Designation	Rated diameter in mm	Strip width mm	Contents in pcs.	Part number	PU in pcs.
Spring band clamps	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
Spring band clamps	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

6. Other products

6.4 Spring band clamps

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6.4 Spring band clamps	Designation	Rated diameter in mm	Strip width mm	Contents in pcs.	Part number	PU in pcs.
 Depicted example: spring band clamp, type "FBSR"	Spring band clamps	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
Spring band clamps		50	12	10	8HK 187 228-501	10
		55	12	10	8HK 187 228-551	10

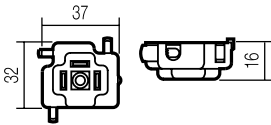


Purpose:

Pin bases for bulbs are used for special applications including auxiliary lights on agricultural and construction machinery. In addition they are used for repair alternatives for headlights based on current vehicle value, when the base has melted to the bulb or corrosion has occurred causing transition resistance.

Advantages:

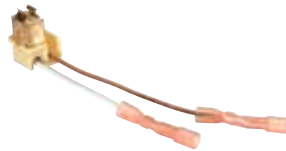
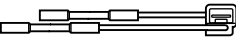
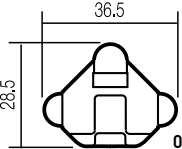
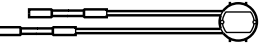
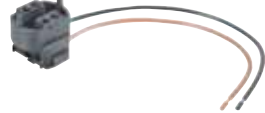
- Time-saving repairs for the garage or end consumer
- H1 and H7 pin base with high-quality pre-fitted cables including butt joints

6.5 Pin base	Description	Connection	Part number	PU in pcs.
Plugs  	Plug for H4 or RL bulbs, 3-pole, clamped cable connection can be loosened by pressing buttons			
	without earth cable	up to max. 2.5	8JA 001 909-001	10
	with earth cable (130 mm)	up to max. 2.5	8JA 001 909-011	10

6. Other products

6.5 Pin base for headlights

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6.5 Pin base	Description	Connection	Part number	PU in pcs.
Pin base for headlights  	Plug with pre-fitted cables and butt joints for H1 bulbs length of brown cable (earth): 60 mm length of white cable: 40 mm cable connections crimped	up to max. 1.0	8KB 863 949-001	1
Plugs  	Plug for H4 or RL bulbs, 3-pole, can be loosened by pressing buttons, with earth cable (130 mm)	up to max. 2.5	8JA 001 914-011	10
Plugs  	Plug with pre-fitted cables and butt joints for H7 bulbs Length of brown cable (earth): 120 mm length of white cable: 100 mm cable connections crimped	up to max. 1.0	8KB 863 949-011	1
Plugs  	Plug with pre-fitted cables and pre-cut cable ends length of black cable: 150 mm length of brown cable (earth): 130 mm	up to max. 1.0	8KB 193 607-001	1
		up to max. 1.0	8KB 193 607-002	10

**Purpose:**

Allows the use of 12 V trailers on vehicles with 24 V operating voltage. The integrated voltage converter makes operation possible without a separate charge compensation device. The trailer connection device has 7 channels for the trailer lighting functions. Functional failure of a 12 V trailer indicator is indicated by the standard series telltale light C2.

Known vehicle restrictions:

not for Mercedes Benz Atego series MP2, not for DAF 75.360 CF

Load-carrying capacity:

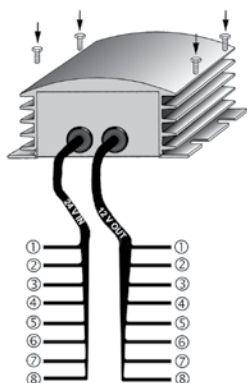
Rated voltage: 24 V/12 V.
 power per switch channel: 2 x 21 W
 power per direction indicator: 1 x 21 W
 operating temperature: -30°C to +80°C
 polarity reversal protection: permanently protected
 protection class: IP 5K9K as per DIN 50021-55
 type approval: e1/CE

6.6
 Trailer connection units
Description**Part number****PU
in pcs.****Cable colour:****24 V traction vehicle ISO 12 098**

- 1 yellow = indicator, left
- 2 green = indicator, right
- 3 blue = rear fog light
- 4 white = earth
- 5 black = taillight, left
- 6 brown = taillight, right
- 7 red = brake light
- 8 grey = reversing light

12 V trailer**ISO 11446 and ISO 1724**

- 1 yellow = indicator, left
- 2 blue = rear fog light
- 3 white = earth
- 4 green = indicator, right
- 5 brown = taillight, right
- 6 red = brake light
- 7 black = taillight, left
- 8 grey = reversing light



Voltage converter, 24 V/12 V

5DS 008 125-011

1



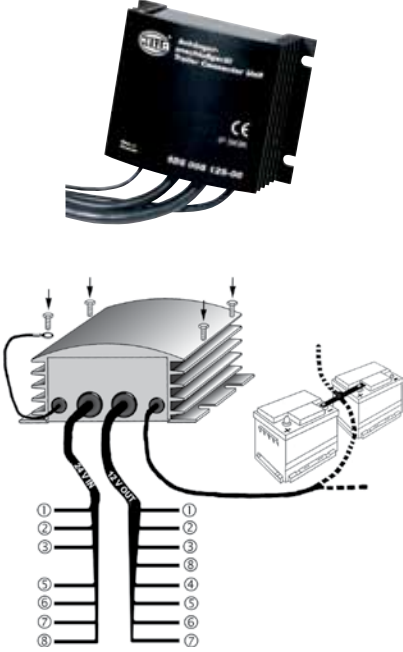
Purpose:

Allows the use of 12 V trailers on vehicles with 24 V operating voltage. The trailer connection device requires a separate charge compensation device or a separate voltage converter 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
power per switch channel: 2 x 21 W
power per direction indicator: 21 W
voltage drop of switch channels: 200 mV
operating temperature: -30°C to +80°C
polarity reversal protection: permanently protected
protection class: IP 5K9K as per DIN 50021-55
type approval: e1/CE

6.6 Voltage converter	Description	Part number	PU
	Cable colour: 24 V traction vehicle ISO 12 098 1 yellow = indicator, left 2 green = indicator, right 3 blue = rear fog light 5 black = taillight, left 6 brown = taillight, right 7 red = brake light 8 grey = reversing light 12 V trailer ISO 11446 and ISO 1724 1 yellow = indicator, left 2 blue = rear fog light 3 white = earth 4 green = indicator, right 5 brown = taillight, right 6 red = brake light 7 black = taillight, left 8 grey = reversing light	5DS 008 125-001	1

**Purpose:**

The charge compensation device determines the voltages of the two 12 V batteries. If the battery on the earth side has a lower voltage, the charge compensation device ensures a compensatory current flow. An LED indicates when the device is working. This means that 12 V consumers can be connected to the earth side of the battery.

The load balancing device is designed for the the average current drawn by all 12 V consumers. In the case of a conventional voltage converter, the device design must correspond to the maximum current drain of all 12 V consumers.

Add the average current consumption of all 12 V consumers.

Load-carrying capacity:

Rated voltage: 24 V
 equalizing current: 8 A
 quiescent current: 15 mA
 switch-on voltage: 27 V
 deactivation difference voltage: 0.5 V
 operating temperature: -25°C to +65°C
 polarity reversal protection and short-circuit-proof.
 protection class: IP 5K9K

6.6
Charge compensation device

Description**Part number****PU****Load compensation device**

for vehicles with 24 V on-board electrical systems

The connection uses three cables:
 one connected to 24 V, one to earth and one to the centre tap of the
 batteries (see sketch).



Charge compensation device "Plus"

8ES 008 124-001

1

Chapter overview		Page
7.	Product range and accessories	
7.1	Assortment case	162-167
7.2	Accessories	168

**Purpose:**

The HELLA assortments contain a selection of the most popular products in each area – tidily and compactly arranged in a high-quality fully transportable case. Four such cases can be integrated into the practical "handy box", which offers numerous attachment options and comes with a carrying handle (for further information: see page 168).

Advantages:

- All the important sizes and current ratings tidily arranged in one place
- Modular case design offers numerous possibilities for free expansion and rearrangement (for further information: see page 168)

7.1 Assortment case	Designation	Part number Case	PU in pcs.
Fuse assortment case 	The assortment comprises ATO (25 for each current rating) and MINI blade fuses (20 for each current rating) plus one MINI/ATO blade fuse tester/gripper. Quantity delivered as refill set deviates from the quantity in the original set.	8JS 009 257-801	1

7.1 Contents of fuse assortment case	Designation	Ampere	Colour	Quantity in the assortment	7.1 refill	Short designation	Part numbers of fuses	PU in pcs.
	ATO blade fuse	2 A	■	25	Spare parts	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

7.1 Assortment case

7.1 Assortment case	Designation	Part number Case	PU i n pcs.
Contents of assortment case of uninsulated crimp connectors 	Assortment case comprising various uninsulated connectors (quantity delivered as refill set deviates from the quantity in the original set, not all items can be refilled)	8KW 009 255-801	1

7.1 Contents of assortment case: uninsulated crimp connectors	Designation	Cross-section mm ²	Male connector dimensions mm	Quantity in assortment	7.1 refill	Short description	Part number	PU in pcs.
	Flat receptacle with locking tag	0.5–1.0	2.8 x 0.8	50	Spare parts	B 100	8KW 744 817-003	100
			4.8 x 0.8	50		B 64	8KW 733 815-003	100
			6.3 x 0.8	50		B 103	8KW 744 819-003	100
	Flat receptacle with locking tag	1.5–2.5	6.3 x 0.8	50		B 54	8KW 701 235-033	100
	Female spade connector with locking tag, claw across		6.3 x 0.8	20		B 105	8KW 744 821-003	100
	Male blade connector with locking tag	0.5–1.0	2.8 x 0.8	50		B 90	8KW 744 834-003	100
			6.3 x 0.8	50		B 88	8KW 744 832-003	100
	Male blade connector with locking tag	1.5–2.5	6.3 x 0.8	50		B 57	8KW 048 056-033	100
	Flat receptacle	0.5–1.0	4.8 x 0.8	50		B 94	8KW 744 828-003	100
		0.75–1.5	6.3 x 0.8	50		B 51	8KW 043 629-013	100
	Flat receptacle claw crosswise	0.5–1.5	6.3 x 0.8	20		B 93	8KW 744 827-003	100
	Flat receptacle	1.5–2.5	6.3 x 0.8	50		B 52	8KW 043 630-013	100
4.0–6.0		9.5 x 1.2	50	B 95	8KW 744 787-003	50		
Blade terminal	1.5–2.5	6.3 x 0.8	50	B 86	8KW 744 823-003	100		
	Male connector distributor, double		6.3 x 0.8	20	B 59	8KW 043 636-003	100	
	Male connector distributor, triple		6.3 x 0.8	20	B 60	8KW 700 144-003	50	
	Piggy back spade connector	1.5–2.5	6.3 x 0.8	20	B 82	8KW 744 885-003	100	
	Male spade connector, 45°		6.3 x 0.8	20				
	Male blade connector, Ø 5.3 mm			20				
	Coupling			20				

7. Product range and accessories

7.1 Assortment case

Assortment case	Designation	Part number Case	PU in pcs.
Contents of assortment case assortment of Duraseal crimp connectors 	Case containing an assortment of Duraseal crimp connectors (quantity contained in refill set differs from the quantity in the original set)	8KW 009 253-801	1

Contents of assortment case assortment of Duraseal crimp connectors	Designation	Cross- section mm ²	Insertion width mm/eyelet	Short designation	Quantity in the assortment
Insulating splice		0.5–1.0		A 113	15
		1.5–2.5		A 114	15
		4.0–6.0		A 115	15
Flat receptacle		0.5–1.0	6.3 x 0.8	A 100	15
		1.5–2.5	6.3 x 0.8	A 101	15
Blade terminal		0.5–1.0	6.3 x 0.8	A 102	15
		1.5–2.5	6.3 x 0.8	A 103	15
Female bullet connector		1.5–2.5	Ø 5.0	A 168	15
Male bullet connector		1.5–2.5	Ø 5.0	A 166	15
Ring connector		1.5–2.5	M5	A 107	15
		1.5–2.5	M6	A 109	15
		1.5–2.5	M8	A 111	15
		4.0–6.0	M5	A 108	15
		4.0–6.0	M6	A 110	15
Fork connector		1.5–2.5	M4	A 157	15
		1.5–2.5	M5	A 158	15

Refill	Short description	Part number	PU in pcs.
Spare parts	A 113	8KW 732 579-003	25
	A 114	8KW 732 580-003	25
	A 115	8KW 732 581-003	25
	A 100	8KW 732 566-003	25
	A 101	8KW 732 567-003	25
	A 102	8KW 732 568-003	25
	A 103	8KW 732 569-003	25
	A 168	8KW 744 768-003	25
	A 166	8KW 744 766-003	25
	A 107	8KW 732 573-003	25
	A 109	8KW 732 575-003	25
	A 111	8KW 732 577-003	25
	A 108	8KW 732 574-003	25
	A 110	8KW 732 576-003	25
	A 157	8KW 744 757-003	25
	A 158	8KW 744 758-003	25

7.1 Assortment case

7.1 Assortment case of insulated crimp connectors	Designation	Part number Case	PU in pcs.
Contents of assortment case of insulated crimp connectors 	Assortment case comprising: various crimping connectors, a branch connector, a coupling and crimping pliers (quantity contained in refill set is different from the quantity in the original set)	8KW 009 254-801	1

7.1 Contents of assortment case of insulated crimp connectors	Designation	Cross-section mm ²	Insertion width mm/eyelet	Quantity in the assortment	7.1 refill	Short designation	Part number	PU in pcs.
	Female bullet connector	0.5–1.0	Ø 4.0	20	Spare parts	A 63	8KW 045 145-003	50
	Male bullet connector	0.5–1.0	Ø 4.0	20		A 61	8KW 044 040-003	100
	Flat receptacle	0.5–1.0	2.8 x 0.5	20		A 50	8KW 705 393-003	100
		0.5–1.0	6.3 x 0.8	20		A 52	8KW 044 036-003	100
	Flat receptacle fully insulated	0.5–1.0	6.3 x 0.8	20		A 82	8KW 708 373-003	50
	Flat receptacle	1.5–2.5	6.3 x 0.8	20		A 53	8KW 044 022-003	100
	Blade terminal	0.5–1.0	6.3 x 0.8	20		A 59	8KW 702 796-003	100
		1.5–2.5	6.3 x 0.8	20		A 60	8KW 044 288-003	100
	Ring connector	0.5–1.0	M4	20		A 67	8KW 044 276-003	100
		0.5–1.0	M5	20		A 69	8KW 044 291-003	100
		1.5–2.5	M4	20		A 68	8KW 044 028-003	100
		1.5–2.5	M5	20		A 70	8KW 044 027-003	100
		1.5–2.5	M6	20		A 72	8KW 044 039-003	100
		4.0–6.0	M5	20		A 71	8KW 044 029-003	50
		4.0–6.0	M6	20		A 73	8KW 044 030-003	50
	Insulating splice	1.5–2.5		20		A 80	8KW 044 033-002	100
	Open connector	1.5–2.5	M5	20		A 78	8KW 044 037-003	100
	Piggy back spade connector	1.5–2.5	2.8 x 0.5	20		A 58	8KW 044 032-003	50
	Branch cable connectors			20		I 50	8KW 705 123-002	25
	Coupling		6.3 x 0.8	20		A 84	8KW 044 035-003	25
	Crimping pliers			1			8PE 002 006-001	1

7. Product range and accessories

7.1 Assortment case

7.1 SUPERSEAL connectors	Designation	Part number Case	PU in pcs.
7.1 Contents of assortment case SUPERSEAL plug housing assortment 	Assortment case comprising various SUPERSEAL connectors, male/female contacts, individual cable seals and blind plugs (quantity delivered as refill set deviates from the quantity in the original set)	8JA 009 256-801	1

7.1 Contents of assortment case SUPERSEAL plug housing assortment	Designation	Cross-section mm ²	Quantity in the assortment	7.1 refill	Short designation	Part number	PU in pcs.
	Individual wire seal	1.8–2.4	100	Spare parts	B 145	9GD 746 185-002	50
	Blind plug		100		B 147	9GD 746 187-002	50
	Male pin contact	1.0–1.5	100		B 143	8KW 744 836-002	50
	Female contact	1.0–1.5	100		B 144	8KW 744 837-002	50
	Male connector housing, 1-pole		5			8JA 746 183-012	10
	Female socket housing, 1-pole		5			8JA 746 184-012	10
	Male connector housing, 2-pole		5			8JA 746 183-022	10
	Female socket housing, 2-pole		5			8JA 746 184-022	10
	Male connector housing, 3-pole		5			8JA 746 183-032	10
	Female socket housing, 3-pole		5			8JA 746 184-032	10
	Male connector housing, 4-pole		5			8JA 746 183-042	10
	Female socket housing, 4-pole		5			8JA 746 184-042	10
	Male connector housing, 5-pole		5			8JA 746 183-052	10
	Female socket housing, 5-pole		5			8JA 746 184-052	10
	Male connector housing, 6-pole		5			8JA 746 183-062	10
	Female socket housing, 6-pole		5			8JA 746 184-062	10

7.1 Assortment case

7.1 Heat shrink hose assortment	Designation	Part number Case	PU in pcs.
Contents of assortment case heat shrink hose assortment 	Case containing an assortment of different heat shrink hoses with a shrink rate of 2:1, usage temperature -55 to +125°C, flame-retardant and self-extinguishing; UL224 shrinkage temperature min. 120°C	9MJ 178 458-801	1

7.1 Contents of assortment case of heat- shrinkable tubing	Colour	Ø	Length	Quantity in the assortment	7.1 refill	Quantity in the assortment	Part number	PU in pcs.
	20 each of red, yellow, blue	2.4	50	60	Spare parts	60	9MJ 178 458-002	1
	30 each of black and transparent	2.4	50	60		60	9MJ 178 458-012	1
	20 each of red, yellow, blue	3.2	50	60		60	9MJ 178 458-022	1
	30 each of black and transparent	3.2	50	60		60	9MJ 178 458-032	1
	20 each of red, yellow, blue	4.8	50	60		60	9MJ 178 458-042	1
	30 each of black and transparent	4.8	50	60		60	9MJ 178 458-052	1
	20 each of red, yellow, blue	6.4	50	60		60	9MJ 178 458-062	1
	30 each of black and transparent	6.4	50	60		60	9MJ 178 458-072	1
	4 each of red, yellow, blue, black and transparent	9.5	100	20		20	9MJ 178 458-082	1
	4 each of red, yellow, blue, black and transparent	12.5	100	20		20	9MJ 178 458-092	1
	10 each of black and transparent	19.1	100	20		20	9MJ 178 458-102	1
	5 each of red, yellow, blue, black and transparent	9.5	200	25		25	9MJ 178 458-112	1
	black	5 each of 19.1 and 25.4	200	10		10	9MJ 178 458-122	1

**Purpose:**

HELLA's handy box is a practical transport frame for up to four HELLA assortment cases.

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



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



- Can also be fastened to the wall (e.g. for fastening/arranging in vehicle equipment or workshop use).

**Assortment case:**

- Inserts can be used to subdivide the assortment case into variously sized sections as desired.
- Including sliding locks and ergonomic handle
- Latching system in the base prevents the contents from slipping



7.2 Accessories	Designation	Part number	PU in pcs.
Handy box 	For the assortment case (without case) Dimensions: (H x W x D, in mm): 310 x 376 x 265)	9XX 863 801-001	1
Assortment case 	(empty, with no inserts) Dimensions: (H x W x D, in mm): 57 x 338 x 261	9XX 863 802-001	1
Insert 7-1 for the assortment case 	Dimensions: ((H x W x D, in mm): 47 x 79 x 109 max. Each case can hold 8 inserts	9XX 863 800-021	1
Insert 8-1 for the assortment case 	Dimensions: ((H x W x D, in mm): 47 x 45 x 79 max. Each case can hold 16 inserts	9XX 863 800-011	1
Insert 9-1 for the assortment case 	Dimensions: ((H x W x D, in mm): 47 x 39 x 55 max. Each case can hold 32 inserts	9XX 863 800-001	1

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8. Tools

8.1 Basic crimping and release tool

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8.1 Release set	Designation		Part number Case	PU in pcs.
Basic release set 	The basic release set consists of 9 release tools and 3 extension sockets		8PE 863 807-811	1
Inserts for basic release set*	Designation	Vehicle manufacturer	Part number	PU in pcs.
	Release tool for contacts with a cross section of 1.5 mm² and an extension socket	BMW, DaimlerChrysler, Fiat, MAN, Opel, Porsche, Seat, Skoda, VW/Audi	HE01	1
	Release tool for contacts with a cross section of 3.5 mm² and an extension socket	BMW, DaimlerChrysler, Fiat, MAN, Opel, Porsche, Seat, Skoda, VW/Audi	HE02	1
	Release tool for contacts with a cross section of 3.5 mm² and an extension socket	Ford, Opel, PSA, Renault	HE05	1
	Release tool for connectors with one release channel of 2.8 and 5.8 mm²	BMW, DaimlerChrysler, Ford, MAN, Opel, Porsche, PSA, Renault, Seat, Skoda, VW/Audi	HE53	1
	Extraction tool for micro timers II and III with a cross-section of 1.6 mm²	DaimlerChrysler, VW/Audi	HE56	1
	Extraction tool for maxi-power timers with a cross-section of 9.5 mm²	All vehicle marques	HE59	1
	Release tool for pit-pod contacts	Fiat, Ford, Mazda, Opel, PSA, Renault, Saab, VW/Audi	HE62	1
	Release tool for micro timer I and ABS plug-in housing with a cross section of 1.6 mm²	Fiat, Ford, Mazda, Opel, PSA, Renault, Saab, VW/Audi	HE53	1
	Release tool for connectors with two release channels of 2.8 and 5.8 mm²	BMW, DaimlerChrysler, Fiat, Ford, MAN, Opel, PSA, Renault, Saab, VW/Audi	HE91	1

* Inserts cannot be ordered separately

* Inserts cannot be ordered separately

**Purpose:**

The special profile geometry of the **"Profi" crimping tool** facilitates especially precise radial contact processing. The patented fixing concept of this crimping set guarantees perfect positioning of the tool heads.

The handle of the pliers also incorporates an additional clip'n'strip unit making this tool set truly "universal".

The whole kit is rounded off by a modular set of release blades on the back of the case.

Advantages:

- High-quality all-in solution
- Broad coverage with five different crimping heads, four release blades and the clip'n'strip unit
- Three different individually extensible configurations
- Ergonomic soft-handgrip with slip guard
- Optimized mechanical power transmission facilitates long-term unfatiguing use
- Made of hardened tool steel with special surface finishing of particularly stressed elements

8.2 Professional crimping and release tool	Designation	Part number Case	PU in pcs.
Crimping tool and release set	Crimping tool and release set "Profi type I"	8PE 863 807-821	1
Contents of crimping tool and release set "Profi type I"	Designation	Part number	PU in pcs.
 	Basic pliers without inserts	8PE 863 807-021	1
	"Clip'n'strip" stripping tool	8PE 863 807-201	1

8. Tools

8.2 Professional crimping and release tool

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Contents of crimping tool and release set "Profi type I"	Designation	Part number	PU in pcs.
	Insert 441 0.5 – 6.0 mm ² For DIN cable lugs and insulated crimp connectors	8PE 863 807-211	1
	Insert red / yellow / blue 0.35 – 6.0 mm ² For fully insulated butt-joint connectors	8PE 863 807-221	1
	Insert JPT / TAB 2.8 / MCP 2.8 0.35 – 2.5 mm ²	8PE 863 807-231	1
	Universal insert 0.25 – 6.0 mm ² For uninsulated blade terminals and flat receptacles	8PE 863 807-251	1
	Basic grip for release	8PE 863 807-301	1
	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 Crimping pliers set	Designation	Part number Case	PU in pcs.
Crimping pliers set 	Crimping pliers "Profi type II"	8PE 863 807-831	1

Contents of crimping tool and release set "Profi type II"	Designation	Part number	PU in pcs.
    	Basic pliers without inserts	8PE 863 807-021	1
	"Clip'n'strip" stripping tool	8PE 863 807-201	1
	Insert 441 0.5 – 6.0 mm ² For DIN cable lugs and insulated crimp connectors	8PE 863 807-211	1
	Insert red / yellow / blue 0.35 – 6.0 mm ² For fully insulated butt-joint connectors	8PE 863 807-221	1
	Insert AE 21 0.14 – 10 mm ² For insulated and uninsulated end sleeves	8PE 863 807-241	1

8.2 Professional crimping and release tool

8.2 Crimping tool and release set	Designation	Part number Case	PU in pcs.
Crimping pliers set 	Crimping pliers set "Profi type III"	8PE 863 807-841	1

Contents of crimping tool and release set "Profi type III"	Designation	Part number	PU in pcs.
	Basic pliers without inserts	8PE 863 807-021	1
	"Clip'n'strip" stripping tool	8PE 863 807-201	1
	Insert 441 0.5 – 6.0 mm ² For DIN cable lugs and insulated crimp connectors	8PE 863 807-211	1
	Insert red / yellow / blue 0.35 – 6.0 mm ² For fully insulated butt-joint connectors	8PE 863 807-221	1
	Universal insert 0.25 – 6.0 mm ² For uninsulated blade terminals and flat receptacles	8PE 863 807-251	1
	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

**Purpose:**

Thanks to the positioning aid integrated into the tool head these **"Superseal" pliers** can offer maximum precision. By combining crimping and stripping in a single action it saves you valuable time.

The modular design facilitates separate replacement of basic pliers and tool head.

Advantages:

- High quality modular tool design
- Linear/parallel crimp technology with integrated contact positioning aid
- Ergonomic soft-handgrip with slip guard
- Optimized mechanical power transmission facilitates long-term unfatiguing use
- Made of hardened tool steel with special surface finishing of particularly stressed elements

8.3 Superseal crimping pliers	Designation	Part number Case	PU in pcs.
Crimping pliers 	Superseal crimping pliers	8PE 863 807-851	1
Single parts	Designation	Part number	PU in pcs.
	Basic pliers	8PE 863 807-011	1
	Tool head for Superseal	8PE 863 807-401	1



Purpose:

Each of the application-specific tools is designed for a particular purpose. All types are solidly built and guarantee a clean and precise result.

Advantages:

- Specialized tools for a number of purposes

4.6 Squeezing and crimping pliers	Description	Contents (pcs)	Part number	PU in pcs.
	Special crimping pliers "Profi I" for insulated crimping connectors, cable cross-sections from 0.5–6.0 mm ² (red, blue, yellow)	1	8PE 002 007-001	1
	Special crimping pliers "Profi II" for uninsulated crimping connectors, cable cross-sections from 0.5–6.0 mm ² . Not suitable for crimping butt joints with insulation.	1	8PE 002 007-011	1
	Special crimping pliers "Expert" for insulated crimping connectors, cable cross-sections from 0.5–6.0 mm ² (red, blue, yellow) suitable for cutting bolts with ISO threads from M2.6–M3.5 and shortening and stripping 0.75–6.0 mm ² cables	1	8PE 002 006-001	1
	Handgrip "Quick Link" pliers for two-pole "Click-in" contact system (common e.g. in trailer and semitrailer construction)	1	8PE 008 932-001	1
	Professional crimping pliers "ABS-G system" Linear crimp design for crimp male contacts and receptacles with cross-sections 1.5 – 6.0 mm ² (pages 71 and 75)	1	8PE 863 807-001	1

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