



**ELECTRICAL  
PLUG-TYPE CONNECTIONS**



**THE COMPLETE RANGE FOR COMMERCIAL VEHICLES, PASSENGER CARS  
AND SPECIAL VEHICLES**

- DETAILED PRODUCT OVERVIEWS WITH ACCESSORIES AND WIRING  
DIAGRAMS
- ESPECIALLY STURDY PLUG SYSTEMS FOR SPECIAL APPLICATIONS



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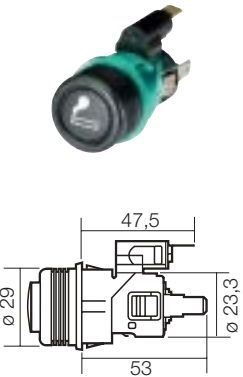


**Application:**

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 in accordance with ISO 4165 and the power sockets are used for the electrical connection of different consumers such as e.g. lights, fans, cool boxes, phones, laptops, portable refrigerators and coffee percolators.

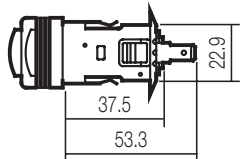

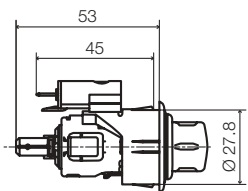

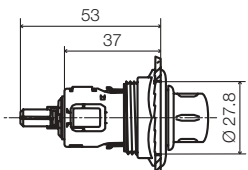
**Range advantages:**

- Simple fitting
- Different connection possibilities (screw terminals and blade couplings)
- Sockets with and without cover
- Alloy and plastic versions available
- Sockets in accordance with ISO 4165 available with polarity reversal protection through T-plug connection
- Extensions, battery monitors and adapters for consumers in the range

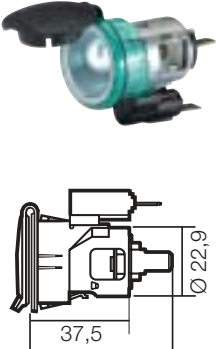
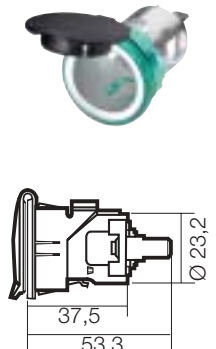
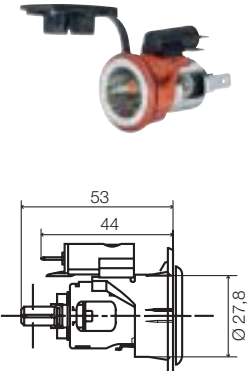
Illustration	Description	Voltage	max. load capacity as socket	Part number	PU
	<p><b>Universal cigarette lighter with light</b>                      Type of connection: blade coupling 6.3 mm, fixed using a green clamping sleeve, installation opening: Ø 28 mm, Control panel thickness: max. 2.5 mm</p>				
	Folding box	12 V	10 A	<b>8EZ 008 021-001</b>	1
	Folding box	24 V	5 A	<b>8EZ 008 021-011</b>	1

## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

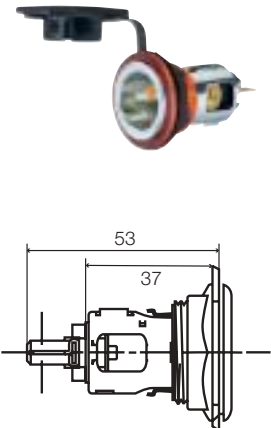
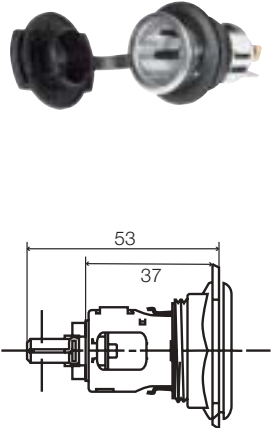
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Illustration	Description	Voltage	max. load capacity as socket	Part number	PU
 	<b>Universal cigarette lighter without light</b> Type of connection: blade coupling 6.3 mm, Fixing by means of a circlip, installation opening: Ø 23.5 mm, Control panel thickness: max. 2.5 mm				
	Folding box	12 V	10 A	<b>8EZ 008 022-001</b>	1
	Folding box	24 V	5 A	<b>8EZ 008 022-011</b>	1
 	<b>Universal cigarette lighter, SAE standard with light</b> Type of connection: blade coupling 6.3 mm, fixed using a red clamping sleeve, installation opening: Ø 28 mm, control panel thickness: max. 2.0 mm				
	Folding box	12 V		<b>8EZ 008 021-021</b>	1
	Folding box	24 V		<b>8EZ 008 021-031</b>	1
 	<b>Universal cigarette lighter, SAE standard without light</b> Type of connection: blade coupling 6.3 mm, fixed using a hexagon nut, Installation opening: Ø 28 mm, control panel thickness: max. 2.0 mm				
	Folding box	12 V		<b>8EZ 008 021-041</b>	1
	Folding box	24 V		<b>8EZ 008 021-051</b>	1

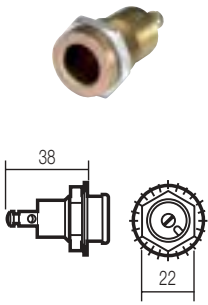
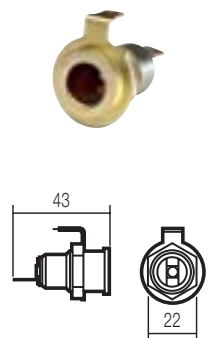
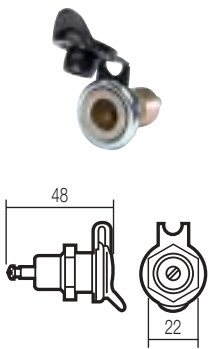
## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

Illustration	Description	Voltage	max. load capacity as socket	Part number	PU
	<p><b>Power socket with light and cover</b></p> <p>Type of connection: blade coupling 6.3 mm, fixed using a green clamping sleeve, installation opening: <math>\varnothing</math> 28 mm, control panel thickness: max. 2.5 mm, installed with 12 V bulb, an additional bulb must be ordered for 24 V application.</p>	12 V	15 A	8JB 008 023-011	1
	<p><b>Power socket without light with cover</b></p> <p>Type of connection: blade coupling 6.3 mm, fixed using a green clamping sleeve, installation opening: <math>\varnothing</math> 28 mm, Control panel thickness: max. 2.5 mm</p>	24 V	15 A	8JB 008 023-001	1
	<p><b>Power socket with light and cover</b></p> <p>Connection: Blade coupling 6.3 mm, Fixing by means of a red clamping sleeve, installation opening: <math>\varnothing</math> 28 mm, Inner diameter: 21.0 mm</p>	12 V	20 A for a cable cross-section of 2.5 mm <sup>2</sup> 15 A for a cable cross-section of 1.5 mm <sup>2</sup>	8JB 008 023-021	
	<p>Folding box</p>	24 V		8JB 008 023-031	
	<p><b>Fixing by means of a green clamping sleeve</b></p> <p>Folding box</p>	24 V		8JB 008 023-041	

2-pole plug system in accordance with ISO 4165,  
cigarette lighters, power sockets and universal connectors

Illustration	Description	Voltage	max. load capacity as socket	Part number	PU
 <p>The illustration shows a power socket with a red and black cover. Below it is a technical drawing of the socket with dimensions 53 mm for the total width and 37 mm for the mounting hole diameter.</p>	<p><b>Power socket without light with cover</b></p> <p>Connection: Blade coupling 6.3 mm, fixed using a hexagon nut, Installation opening: Ø 28 mm, Inner diameter: 21.0 mm</p>	<p>12 / 24 V</p>	<p>20 A for a cable cross- section of 2.5 mm<sup>2</sup> 15 A for a cable cross- section of 1.5 mm<sup>2</sup></p>	<p><b>8JB 008 023-051</b></p>	<p>1</p>
 <p>The illustration shows a power socket with a black cover. Below it is a technical drawing of the socket with dimensions 53 mm for the total width and 37 mm for the mounting hole diameter.</p>	<p><b>Power socket without light</b></p> <p>Connection: 2 blade couplings 6.3 mm, fixing by means of a black hexagon nut, installation opening: Ø 28 mm, Inner diameter: 21.0 mm</p>	<p>12 / 24 V</p>	<p>20 A for a cable cross- section of 2.5 mm<sup>2</sup> 15 A for a cable cross- section of 1.5 mm<sup>2</sup></p>	<p><b>8JB 008 023-067</b></p>	<p>160</p>

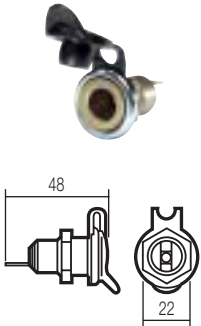
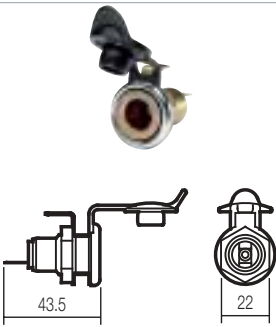
## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

Illustration	Description	Electrical connection	Part number	PU
<p><b>Sockets in accordance with ISO 4165, alloy</b>            Installation opening: <math>\varnothing</math> 18.5 mm            Control panel thickness: max. 7 mm            Load capacity: max. 8 A at 24 V</p>				
	<p><b>Standard socket</b> 2-pole</p>			
	Folding box	1 screw terminal, ground at the housing	<b>8JB 001 946-031</b>	10
	<p><b>Standard socket</b> 2-pole, with additional ground plug</p>			
	Folding box	2 blade couplings 6.3 mm	<b>8JB 001 946-041</b>	10
	<p><b>Standard socket</b> 2-pole, with cover</p>			
	Folding box	1 screw terminal, ground at the housing	<b>8JB 001 946-021</b>	10
	Pro-fit packaging	1 screw terminal, ground at the housing	<b>8JB 001 946-022</b>	1



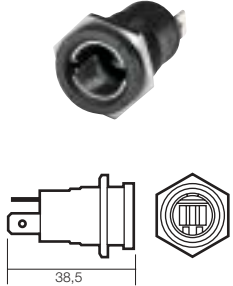
## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

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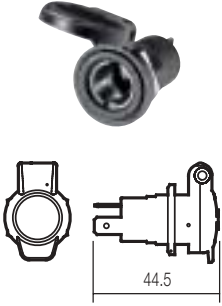

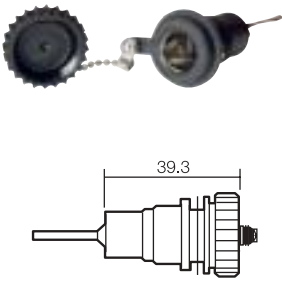
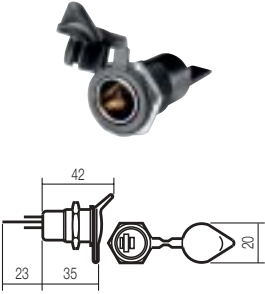
Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> 2-pole, with cover</p> <p>Folding box</p>	1 blade coupling 6.3 mm, ground at the housing	<b>8JB 001 946-011</b>	10
	<p><b>Socket</b> 2-pole, with cover, with additional ground plug</p> <p>Folding box</p>	2 blade couplings 6.3 mm	<b>8JB 001 946-051</b>	10

### Sockets in accordance with ISO 4165,

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.), installation opening:  $\varnothing$  18.5 mm, control panel thickness: max. 7 mm, load capacity: max. 16 A at 6 – 24 V

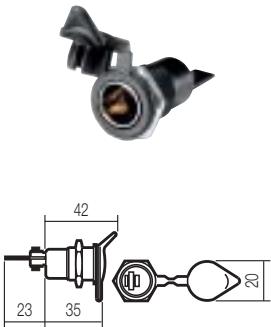

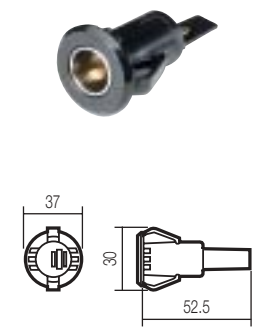
	<p><b>Socket</b> 2-pole, without cover</p> <p>Folding box</p>	2 blade couplings 6.3 mm	<b>8JB 001 946-072</b>	10
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## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors


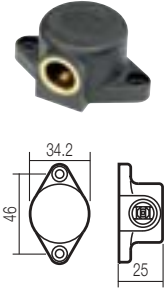
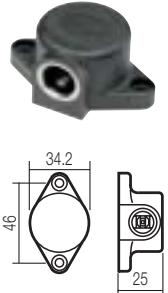
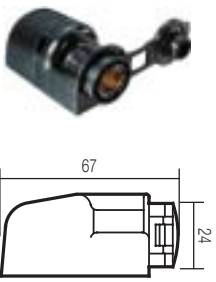
Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> 2-pole, with hinged cover, cover does not lock in place</p>			
	Folding box	2 blade couplings 6.3 mm	<b>8JB 001 946-082</b>	10
	<p><b>Socket</b> 2-pole, with arresting cover, (the cover remains in place when opened, the catch is released for insertion so that the cover automatically closes when the plug is removed.)</p>			
	Folding box	2 blade couplings 6.3 mm	<b>8JB 001 946-092</b>	10
	<p><b>Socket</b> 2-pole, waterproof in accordance with IP 67, with captive cover, 300 mm cable 2.5 mm<sup>2</sup>, excellently suited for use in boats and near motors</p> <p>Temperature range: -40 to +105 °C</p>			
	Folding box	Blade contact and ground sleeve	<b>8JB 001 946-101</b>	1
	<p><b>Socket</b> 2-pole, with cover</p>			
	Folding box	2 blade couplings 6.3 mm	<b>8JB 004 777-001</b>	5
	Pro-fit packaging	2 blade couplings 6.3 mm	<b>8JB 004 777-002</b>	1

## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

1

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> 2-pole, with cover</p> <p>Folding box</p>	<p>2 screw terminals</p>	<p><b>8JB 004 777-011</b></p>	<p>5</p>
	<p><b>Coupling</b> for setting up individual extensions for a power supply to electric appliances and lights.</p> <p>Load capacity: max. 16 A at 24 V</p> <p>Pro-fit packaging</p> <p>Folding box</p>	<p>2 blade couplings 6.3 mm</p> <p>2 blade couplings 6.3 mm</p>	<p><b>8JA 007 589-061</b></p> <p><b>8JA 007 589-062</b></p>	<p>1</p> <p>20</p>
	<p><b>Socket</b> 2-pole, without cover</p> <p>Control panel thickness: max. 3 mm Installation opening: Ø 23 mm Load capacity: max. 8 A at 6–24 V</p> <p>Folding box</p>	<p>2 blade couplings 6.3 mm</p>	<p><b>8JB 002 286-021</b></p>	<p>10</p>

## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> 2-pole, with cover</p> <p>Control panel thickness: max. 2 mm Installation opening: Ø 23 mm, Load capacity: max. 8 A at 6–24 V</p>			
	Folding box	2 blade couplings 6.3 mm	<b>8JB 002 286-031</b>	10
	<p><b>Surface-mounted socket</b> 2-pole, without cover, plastic housing</p>			
	Folding box	2 screw terminals	<b>8JB 004 123-001</b>	5
	Pro-fit packaging	2 screw terminals	<b>8JB 004 123-002</b>	1
	<p><b>Surface-mounted socket</b> 2-pole, without cover, plastic housing, version resistant to seawater</p>			
	Folding box	2 screw terminals	<b>8JB 004 123-012</b>	5
	<p><b>Surface-mounted socket</b> 2-pole, with cover, plastic housing</p>			
	Folding box	2 blade couplings 6.3 mm	<b>8JB 004 123-032</b>	5
	Pro-fit packaging	2 blade couplings 6.3 mm	<b>8JB 004 123-031</b>	1

## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

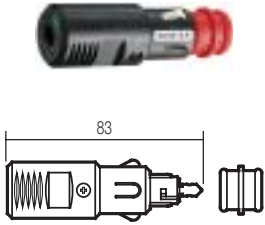
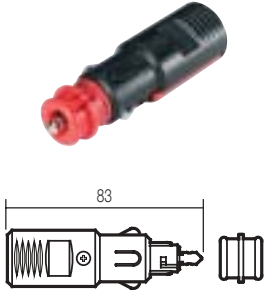

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Illustration	Description	Electrical connection	Part number	PU
<b>Plug in accordance with ISO 4165, plastic version</b>				
	<p>Plug without strain relief</p> <p>Opening for cable feed: <math>\varnothing</math> 9.2 mm Load capacity: max. 18 A at 24 V</p> <p>Folding box</p> <p>Pro-fit packaging</p>	<p>2 screw terminals up to 2.5 mm<sup>2</sup></p> <p>2 screw terminals up to 2.5 mm<sup>2</sup></p>	<p><b>8JA 002 262-001</b></p> <p><b>8JA 002 262-003</b></p>	<p>10</p> <p>1</p>
	<p>Plug with screw-type strain relief</p> <p>Opening for cable feed: <math>\varnothing</math> 9.2 mm Load capacity: max. 18 A at 24 V</p> <p>Folding box</p>	<p>2 screw terminals up to 2.5 mm<sup>2</sup></p>	<p><b>8JA 001 915-001</b></p>	<p>10</p>
	<p>Plug, without strain relief</p> <p>Opening for cable feed: <math>\varnothing</math> 7.5 mm Load capacity: max. 15 A at 24 V</p> <p>Folding box</p>	<p>2 screw terminals</p>	<p><b>8JA 001 915-022</b></p>	<p>10</p>
	<p>Plug with solder contacts and restraint-guided strain relief</p> <p>Opening for cable feed: <math>\varnothing</math> 6.5 mm Load capacity: max. 8 A at 24 V</p> <p>Folding box</p>	<p>2 solder contacts</p>	<p><b>8JA 001 915-032</b></p>	<p>10</p>

Illustration	Description	Electrical connection	Part number	PU
<b>Surface-mounted sockets for universal connectors, universal connectors and adapters</b>				
	<p><b>Surface-mounted socket</b> 2-pole, without cover, plastic housing</p> <p>Inner diameter 21 mm, for universal connectors</p> <p>Load capacity: max. 20 A at 24 V (cable cross-section 2.5 mm<sup>2</sup>) max. 15 A at 24 V (cable cross-section 1.5 mm<sup>2</sup>)</p>			
	Folding box	2 blade couplings 6.3 mm	<b>8JB 004 123-042</b>	5
	<p><b>Surface-mounted triple socket</b> 2-pole, plastic housing</p> <p>Inner diameter 21 mm, for universal connectors</p> <p>Load capacity: max. 20 A at 24 V (cable cross-section 2.5 mm<sup>2</sup>) max. 15 A at 24 V (cable cross-section 1.5 mm<sup>2</sup>)</p>			
	Polythene bag		<b>8JB 004 123-051</b>	1
<b>Universal connector for cigarette lighters and power sockets</b>				
	<p><b>Safety universal connector</b> with restraint-guided strain relief, with integrated, exchangeable 8 A fuse and release catch,</p> <p>Opening for cable feed 7 mm Load capacity: max. 8 A at 6–24 V</p>			
	Folding box	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-001</b>	10
	Pro-fit packaging	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-002</b>	1

## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

1

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Safety universal connector</b> with LED and screw-type strain relief, with integrated, exchangeable 8 A fuse and release catch</p> <p>Opening for cable feed: 7 mm Load capacity: max. 8 A at 6–24 V</p> <p>Folding box</p> <p>Pro-fit packaging</p>	<p>2 screw terminals up to 2.5 mm<sup>2</sup></p> <p>2 screw terminals up to 2.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-032</b></p> <p><b>8JA 007 589-031</b></p>	<p>10</p> <p>1</p>
	<p><b>Safety universal connector</b> with screw-type strain relief, without fuse, release catch</p> <p>Opening for cable feed 7 mm</p> <p><b>Load capacity: 8 A at 24 V</b></p> <p>Folding box</p> <p><b>Load capacity: 16 A at 24 V</b></p> <p>Folding box</p>	<p>2 screw terminals up to 2.5 mm<sup>2</sup></p> <p>2 screw terminals up to 2.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-011</b></p> <p><b>8JA 007 589-021</b></p>	<p>10</p> <p>10</p>
	<p><b>Economy universal connector</b></p> <p>Opening for cable feed: 5 x 3 mm Load capacity: max. 8 A at 6–24 V</p> <p>Folding box</p> <p>Pro-fit packaging</p>	<p>2 screw terminals up to 2.5 mm<sup>2</sup></p> <p>2 screw terminals up to 2.5 mm<sup>2</sup></p>	<p><b>8JA 002 252-103</b></p> <p><b>8JA 002 252-101</b></p>	<p>12</p> <p>1</p>


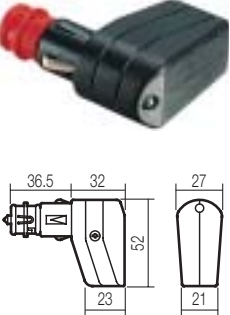


## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

Illustration	Description	Electrical connection	Part number	PU
 	<p><b>Economy universal connector</b></p> <p>Opening for cable feed: <math>\varnothing</math> 8 mm Load capacity: max. 8 A at 6–24 V</p>			
	Folding box	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 001 921-102</b>	12
 	<p><b>Economy universal connector</b> with restraint-guided strain relief</p> <p>Opening for cable feed: 5 x 3 mm</p>			
	Pro-fit packaging	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 158-003</b>	1
 	<p><b>Economy universal connector</b> with restraint-guided strain relief</p> <p>Opening for cable feed: <math>\varnothing</math> 8 mm</p>			
	Folding box	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 004 667-001</b>	10
 	<p><b>Universal angled connector</b></p> <p>with screw-type strain relief, with integrated, exchangeable 8 A fuse, can be pivoted completely through 180 degrees, with sufficient space for electronics</p> <p>(dimensions for board: 28.5 x 26.5 x 1.5 mm)</p>			
	Folding box	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-042</b>	8
	Pro-fit packaging	2 screw terminals up to 2.5 mm <sup>2</sup>	<b>8JA 007 589-041</b>	1


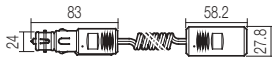

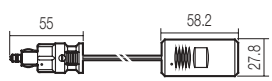

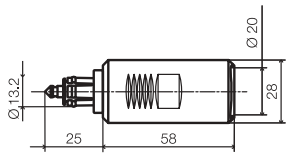

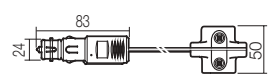


## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

1


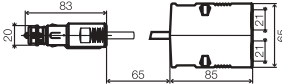

Illustration	Description	Connection/length	Part number	PU
	<p><b>Universal angled connector</b> with screw-type strain relief, with printed rocker switch 0-I and integrated, exchangeable 8 A fuse, can be pivoted completely through 180 degrees</p> <p>Folding box</p>	<p>2 screw terminals up to 1.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-152</b></p>	<p>8</p>
	<p><b>Universal angled connector</b> with screw-type strain relief with integrated 7.5 A ATO blade-type fuse and function control by means of an LED</p> <p>Folding box</p>	<p>2 screw terminals up to 1.5 mm<sup>2</sup></p>	<p><b>8JA 007 589-052</b></p>	<p>8</p>
<b>Adapters and couplings</b>				
	<p><b>Connection cable</b> for adapting standard or cigarette lighter sockets to standard connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> Safety universal connector with integrated 8 A fuse Load capacity: max. 8 A at 24 V</p> <p>Polythene bag</p>	<p>4.0 m</p>	<p><b>8KA 007 589-071</b></p>	<p>1</p>
	<p><b>Extension cable</b> for adapting standard or cigarette lighter sockets to cigarette lighter connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> Safety universal connector with integrated 8 A fuse Load capacity: max. 8 A at 24 V</p> <p>Polythene bag</p>	<p>4.0 m</p>	<p><b>8KA 007 589-081</b></p>	<p>1</p>

## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

Illustration	Description	Length	Part number	PU
 	<p><b>Helical extension cable</b> for adapting standard or cigarette lighter sockets to cigarette lighter connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup>            Safety universal connector with integrated 8 A fuse            Load capacity: max. 8 A at 24 V</p>			
	Polythene bag	0.6 – 3.0m	<b>8KA 007 589-091</b>	1
	Pro-fit packaging	0.6 – 3.0m	<b>8KA 007 589-092</b>	1
 	<p><b>Adapter lead</b> for adapting standard sockets to cigarette lighter connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup>            Load capacity: max. 8 A at 24 V</p>			
	Polythene bag	0.25 m	<b>8KA 007 589-101</b>	1
	Pro-fit packaging	0.25 m	<b>8KA 007 589-102</b>	1
 	<p><b>Adapter</b> for adapting standard sockets to cigarette lighter connectors.</p> <p>Load capacity: max. 16 A at 12 / 24 V</p>			
	Polythene bag	93 mm	<b>8KA 007 589-131</b>	1
 	<p><b>Adapter lead</b> for adapting standard or cigarette lighter sockets to 2 standard sockets</p> <p>Cable: 2 x 0.75 mm<sup>2</sup>            Safety universal connector with integrated 8 A fuse            Load capacity: max. 8 A at 24 V</p>			
	Pro-fit packaging	0.12 m	<b>8JB 008 032-001</b>	

## 2-pole plug system in accordance with ISO 4165, cigarette lighters, power sockets and universal connectors

1

Illustration	Description	Length	Part number	PU
 	<p><b>Twin coupling</b> for adapting standard or cigarette lighter sockets to 2 cigarette lighter connectors</p> <p>Cable: 2 x 0.75 mm<sup>2</sup>            Safety universal connector with integrated 16 A fuse            Load capacity: max. 2 x 8 A at 24 V</p>			
	Polythene bag	0.25 m	<b>8JA 007 589-111</b>	1
	Pro-fit packaging	0.25 m	<b>8JA 007 589-112</b>	1
 	<p><b>Twin coupling</b> for adapting standard or cigarette lighter sockets to 2 cigarette lighter connectors</p> <p>Load capacity: max.16 A at 12 / 24 V</p>			
	Polythene bag	65 mm	<b>8JA 007 589-141</b>	1
 	<p><b>Battery monitor</b> – 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.</p> <p>Cable: 2 x 0.75 mm<sup>2</sup> suitable for standard and cigarette lighter sockets, LED function control and short-circuit protection            Load capacity: max. 8 A at 12 V</p>			
	Polythene bag	1.0 m	<b>8ES 007 589-121</b>	1

**Application:**

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

**Range advantages:**

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


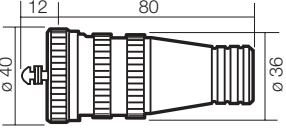

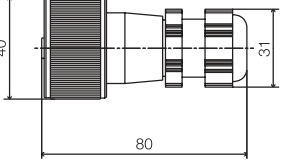

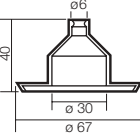

**Technical data:**

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

Rated capacity: 6 – 42 V

Current intensity: max. 16 A

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket, alloy, with captive screw-on cover Form A</b> with seal in the screw-on cover, with rubber base for cables Ø 6...8 mm</p>			
	Folding box	2 screw terminals	<b>8JB 002 281-001</b>	1
	Pro-fit packaging	2 screw terminals	<b>8JB 002 281-002</b>	1

Illustration	Description	Electrical connection	Part number	PU
 	<p><b>Coupling box, alloy, with screw-on cover Form B</b> Seal in the screw-on cover with cable protection sleeve for cables Ø 6–10 mm</p> <p>Folding box</p>	<p>2 screw terminals</p>	<p><b>8JA 001 925-001</b></p>	<p>1</p>
 	<p><b>Connector, alloy, form C</b> with union nut for cables Ø 6–10 mm</p> <p>Folding box</p>	<p>2 screw terminals</p>	<p><b>8JA 001 925-001</b></p>	<p>1</p>
 	<p><b>Accessories</b> with seal in the screw-on cover, with rubber base for cables Ø 6–8 mm</p> <p>Folding box</p>		<p><b>9GD 735 641-032</b></p>	<p>10</p>
	<p><b>Contact insert</b> for 2-pole connection in accordance with DIN 14 690 (HELLA part number: 8JA 001 925-001)</p> <p>Polythene bag</p>	<p>2 screw terminals</p>	<p><b>9MK 748 467-001</b></p>	<p>1</p>



**Application:**

The 3-pole plug system in accordance 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.

**Range advantages:**

- Simple fitting
- Wide range of different connection possibilities (screw terminals and blade couplings)
- Sturdy plastic housing with high mechanical strength

**Technical data:**

Rated capacity: 6 – 24 V  
 Current intensity: max. 16 A

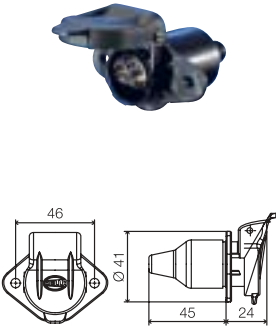
Illustration	Description	Electrical connection	Part number	PU
 <p><b>Socket</b>                      black plastic version, DIN 9680,                      with rubber grommet</p> <p>Installation opening: Ø 30 mm                      Temperature range: -25°C to +75°C                      Waterproof according to IP 54</p>	<p>Folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm                      Blade couplings</p>	<p><b>8JB 001 933-011</b></p>	<p>10</p>

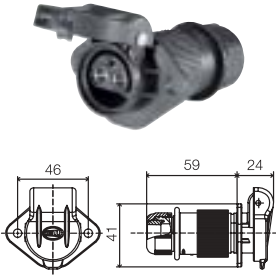
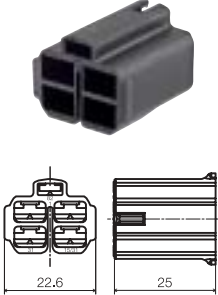



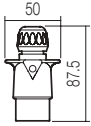

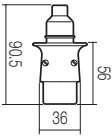

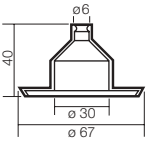
Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> DIN 9680, with screw-on cover</p> <p>Temperature range -25°C to +75°C Waterproof according to IP 54</p> <p>Folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm Blade couplings</p>	<p><b>8JB 001 933-042</b></p>	<p>10</p>
	<p><b>Female connector housing</b> for 8JB 001 933-011 and -042</p> <p>Folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm Blade couplings</p>	<p><b>9MK 180 175-001</b></p>	<p>20</p>
	<p><b>Connector</b> black plastic version, DIN 9680, with rubber seals for cables Ø 8...13 mm</p> <p>Folding box</p>	<p>4 x 6.3 mm / 1 x 4.8 mm Blade couplings</p>	<p><b>8JA 002 263-011</b></p>	<p>10</p>
	<p><b>Socket</b> black plastic version, with rubber seal in the cover Base: Ø 65 mm (round housing)</p> <p>Folding box</p>	<p>3 screw terminals</p>	<p><b>8JB 001 933-031</b></p>	<p>1</p>

Illustration	Description	Electrical connection	Part number	PU
 	<p><b>Connector</b> black plastic version, for cables Ø 6.3...8.3 mm, with union nut and rubber grommet</p> <p>Folding box</p>	3 screw terminals	8JA 002 263-031	1
 	<p><b>Connector</b> black plastic version, for cables Ø 6.3...8.3 mm, with cable grommet</p> <p>Folding box</p>	3 screw terminals	8JA 002 263-001	1
 	<p><b>Rubber base</b> for cables Ø 6.8 mm,</p> <p>Folding box</p>		9GD 735 641-032	10





**Application:**

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

**Range advantages:**

- Simple fitting
- Sturdy plastic housing with high mechanical strength

**Load capacity:**

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

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b>                      with rubber seal in the cover 90° cable outlet                      for cables Ø 7.2–9.0 mm                      Operating temperature -40°C to +85°C</p>			
<p>Folding box</p>		4 screw terminals	<b>8JB 001 944-011</b>	1
	<p><b>Connector</b>                      with screw-type strain relief for cables Ø 5–9 mm</p>			
<p>Folding box</p>		4 screw terminals	<b>8JA 001 920-011</b>	1

**Application:**

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

**Range advantages:**

- Simple fitting
- Sturdy plastic housing with high mechanical strength

**Load capacity:**

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

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

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket with cover</b> Base: Ø max. 72 mm, Temperature range: -25 °C to +75 °C</p>			
	Folding box	5 screw terminals	<b>8JB 001 940-001</b>	1
	<p><b>Connector</b> screw-type tension relief and union nut for cables up to Ø 8 mm Temperature range: -25 °C to +75 °C</p>			
	Folding box	5 screw terminals	<b>8JA 001 916-001</b>	1



**Application:**

The 7-pole plug system 12 V is the system most frequently used 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, in accordance with ISO 1724 and an auxiliary plug-type connector, type S, in accordance with ISO 3732. The auxiliary system differs from the normal system by its white housing, contact inserts and non-interchangeable contact arrangement.

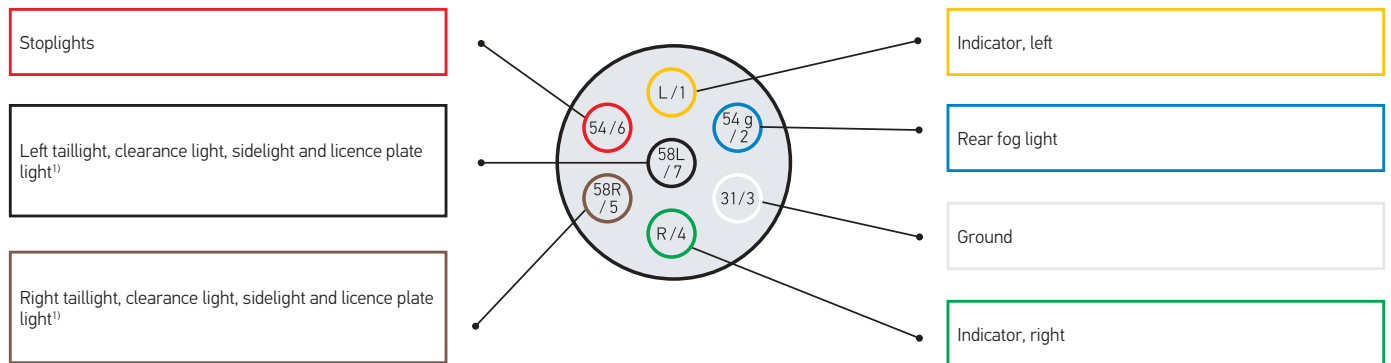
**Range advantages:**

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

**Load capacity:**

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

Assignment diagram – trailer plug fitting 12 V/7-pin N type ISO 1724



Contact assignment for normal plug-type connectors according to ISO 1724, 12 V, 7-pin N

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

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

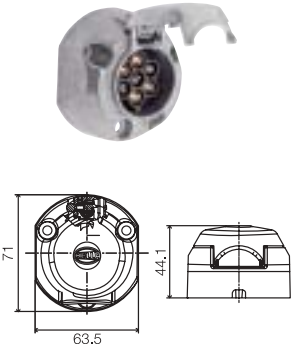
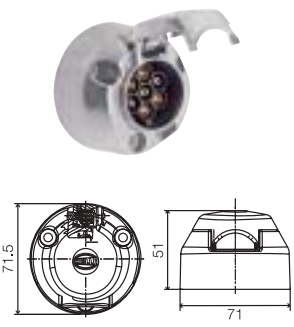
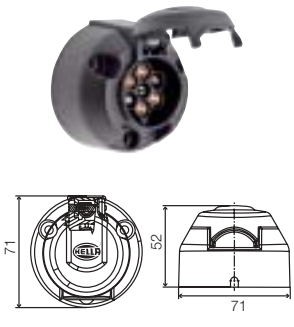
Illustration	Description	Electrical connection	Part number	PU
<p><b>7-pole plug system in accordance with ISO 1724</b>            Socket: central contact 7/58L as pin            Plug: central contact 7/58L as sleeve            Base: Ø max. 72 mm</p>				
	<p><b>Socket</b>            with cover, solid metal version            Contact insert, removable</p>			
	<p>Folding box</p>	7 screw terminals	<b>8JB 001 941-002</b>	25
	<p>Pro-fit packaging</p>	7 screw terminals	<b>8JB 001 941-001</b>	1
	<p><b>with switch-off contact for the rear fog light on the motor vehicle</b></p>			
	<p>Folding box</p>	7 screw terminals with auxiliary terminal	<b>8JB 001 941-062</b>	10
	<p><b>Socket</b>            with cover, solid metal version            Contact insert, removable</p>			
	<p>Folding box</p>	7 blade couplings 6.3 mm	<b>8JB 001 941-041</b>	25
	<p><b>Socket</b>            with cover, black plastic version            Contact insert, removable</p>			
	<p>Folding box</p>	7 blade couplings 6.3 mm	<b>8JB 006 462-001</b>	25

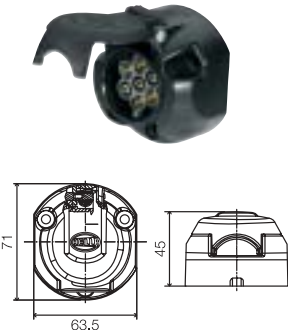



Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> with cover, black plastic version Contact insert, removable</p> <p>Folding box</p> <p>Pro-fit packaging</p> <p><b>with switch-off contact for the rear fog light on the motor vehicle</b></p> <p>Folding box</p>	<p>7 screw terminals</p> <p>7 screw terminals</p> <p>7 screw terminals</p>	<p><b>8JB 001 943-003</b></p> <p><b>8JB 001 943-001</b></p> <p><b>8JB 001 943-011</b></p>	<p>25</p> <p>1</p> <p>10</p>
	<p><b>Socket base</b> 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</p> <p>Folding box</p>		<p><b>9GD 735 641-001</b></p>	<p>10</p>
	<p><b>Socket base</b> for cables Ø 8–11 mm, with 180° cable outlet, suitable for the following sockets: 8JB 006 462-001 8JB 001 941-041</p> <p>Folding box</p>		<p><b>9GD 735 641-051</b></p>	<p>10</p>
	<p><b>Rubber base</b> 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</p> <p>Folding box</p>		<p><b>9GD 735 641-042</b></p>	<p><b>10</b></p>

Illustration	Description	Electrical connection	Part number	PU
	<b>Connector</b> Metal version, with screw-type strain relief and rubber grommet			
	Folding box	7 screw terminals	<b>8JA 001 918-002</b>	25
	Folding box	7 blade couplings 6.3 mm	<b>8JA 001 918-011</b>	25
	<b>Connector</b> Metal version, with screw-type strain relief and rubber grommet, sturdy version			
	Folding box	7 screw terminals	<b>8JA 001 918-021</b>	25
	<b>Connector</b> black plastic version, with screw-type strain relief and rubber grommet			
	Folding box	7 screw terminals	<b>8JA 001 930-003</b>	25
	Pro-fit packaging	7 screw terminals	<b>8JA 001 930-001</b>	1
Folding box	7 blade couplings 6.3 mm	<b>8JA 001 930-041</b>	25	
	<b>Connector</b> black plastic version, with screw-type strain relief and rubber grommet, sturdy version			
	Folding box	7 screw terminals	<b>8JA 001 930-021</b>	25

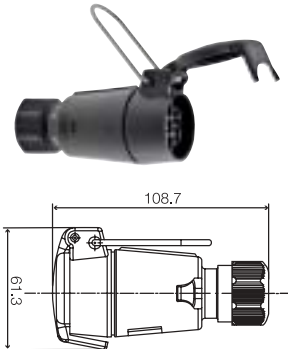
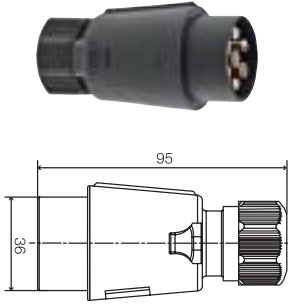

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Coupling socket</b> with cover, black plastic version, with screw-type strain relief, trailer fitting and rubber grommet for 7-wire extension cables</p>			
	Folding box	7 screw terminals	<b>8JB 001 939-001</b>	10
	<p><b>Connector</b> black plastic version, folding version with strain relief, contact insert and union nut, included individually</p>			
	Folding box	7 screw terminals	<b>8JA 005 476-002</b>	5
	Industrial packaging	7 screw terminals	<b>8JA 005 476-001</b>	100

Illustration	Description	Diameter	Part number	PU
	<p><b>Sleeve for 7-pin connector</b> not for 8JA 001 918-021 und 8JA 001 930-021</p>			
	Polythene bag	Ø 10.2 mm	<b>9GD 179 708-001</b>	10
	Polythene bag	Ø 16.2 mm	<b>9GD 179 708-011</b>	10
	Polythene bag	Ø 13.2 mm	<b>9GD 179 708-021</b>	10
	Polythene bag	Ø 2x 6.5 mm	<b>9GD 179 708-031</b>	10
	Polythene bag	Ø 8.5 mm	<b>9GD 179 708-041</b>	10

**Application:**

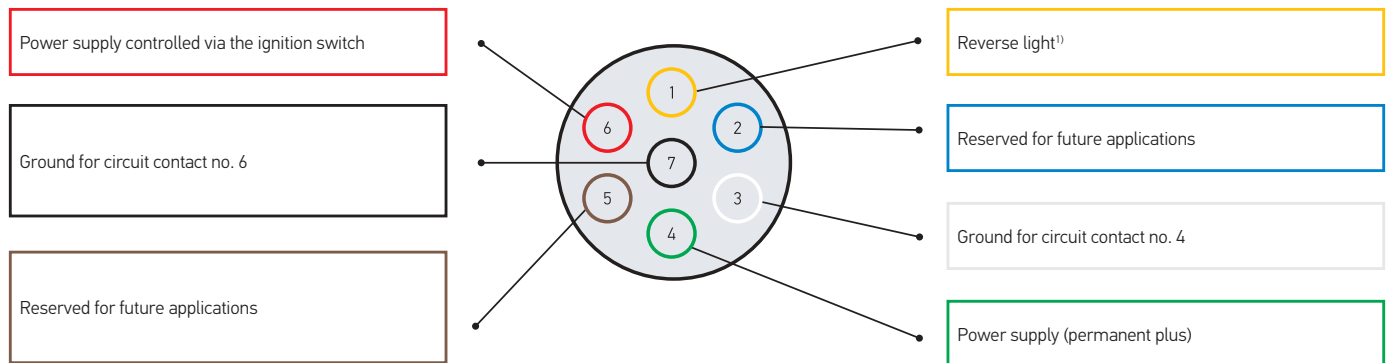
The 7-pole plug system 12 V is the system most frequently used for electrical connections between traction vehicle and trailer with 12 V vehicle electric system. The system is mainly used for applications with average requirements. The system comprises a regular plug-type connector, type N, in accordance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

**Range advantages:**

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

**Load capacity:**

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

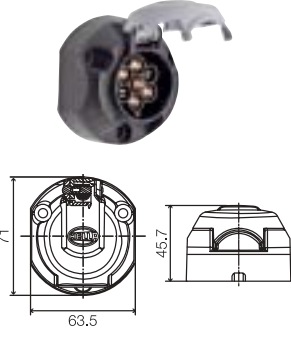
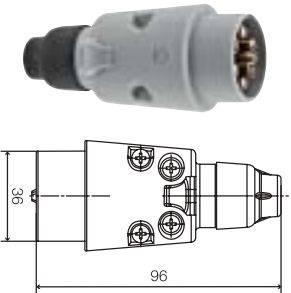
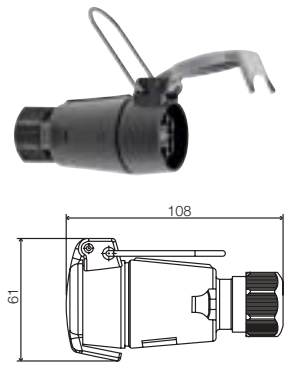


**Assignment diagram – trailer plug fitting 12 V/7-pin S type ISO 3732**

Contact assignment for auxiliary plug-type connectors according to ISO 3732, 12 V, 7-pin S

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

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



Illustration	Description	Electrical connection	Part number	PU
<p><b>7-pole plug system in accordance with ISO 3732</b>                      Socket: central contact 7/58L as sleeve                      Plug: central contact 7/58L as pin,                      Base: Ø max. 72 mm</p>				
	<p><b>Socket</b>                      black plastic version with light-grey cover, contact insert can be removed</p> <p>Folding box</p>	<p>7 screw terminals</p>	<p><b>8JB 001 943-041</b></p>	<p>25</p>
	<p><b>Connector</b>                      light-grey plastic version, with screw-type strain relief and rubber grommet</p> <p>Folding box</p>	<p>7 screw terminals</p>	<p><b>8JA 001 930-031</b></p>	<p>25</p>
	<p><b>Coupling socket</b>                      black plastic version with light-grey cover, with screw-type strain relief, trailer fitting and rubber grommet for 7-wire extension cables</p> <p>Folding box</p>	<p>7 screw terminals</p>	<p><b>8JB 006 464-001</b></p>	<p>10</p>
	<p><b>Socket base</b>                      for cables Ø 8–11 mm, with 180° cable outlet</p> <p>Folding box</p>		<p><b>9GD 735 641-001</b></p>	<p>10</p>
	<p><b>Rubber base</b>                      for cables Ø 8–11 mm, with 90° cable outlet</p> <p>Folding box</p>		<p><b>9GD 735 641-042</b></p>	<p>10</p>

**Application:**

The 13-pole 12 V plug system was developed at the end of the 1980s. The 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 waterproofness, stability, contact reliability and easy handling thanks to the bayonet closure.

**Range advantages:**

- Easy handling thanks to the bayonet closure
- Simple fitting
- Tightness in accordance with protection class IP 54K
- Sockets with rear fog light switch-off available

**Load capacity:**

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

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

Permissible temperature range: -40 to 85°C


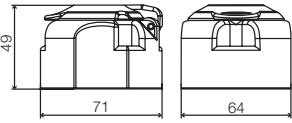
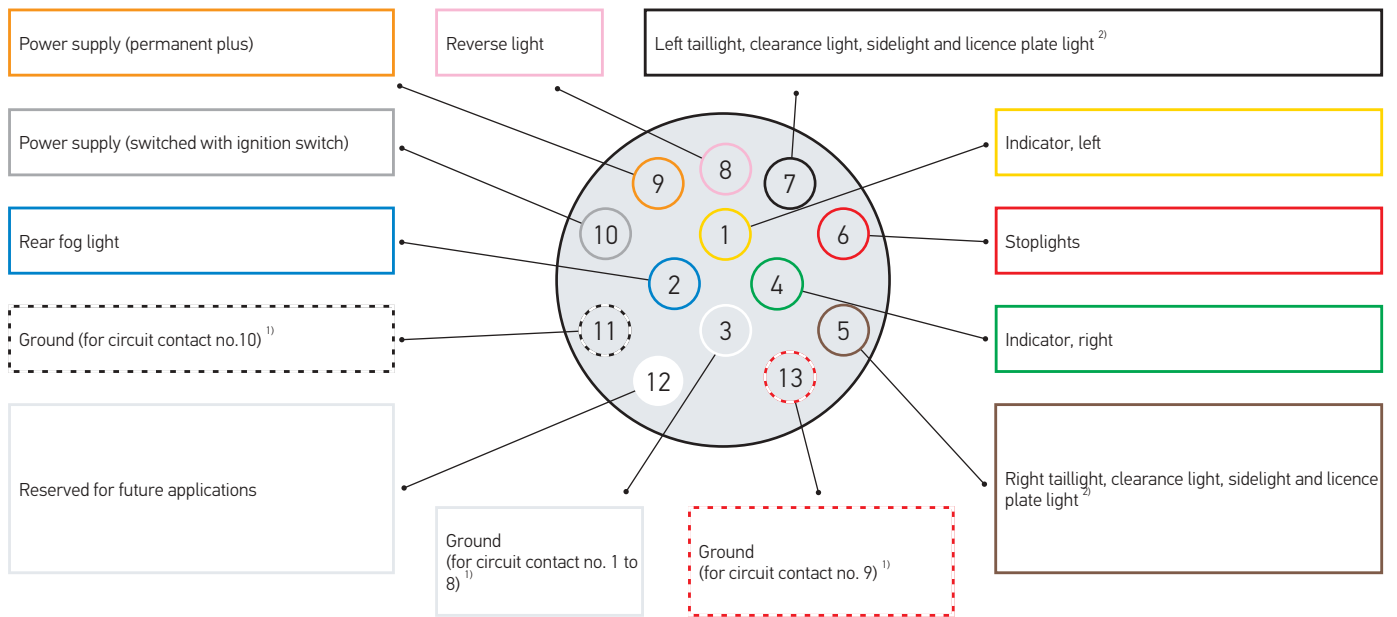
Illustration	Description	Electrical connection	Part number	PU
	<b>Socket with cover</b> black plastic version  With removable contact insert, rubber base and rubber seal in the cover			
	Folding box  With switch-off contact for the rear fog light on the motor vehicle	13 screw terminals	<b>8JB 005 949-001</b>	1
	Folding box	13 screw terminals with auxiliary terminal	<b>8JB 005 949-011</b>	1
	Pro-fit packaging	13 screw terminals with auxiliary terminal	<b>8JB 005 949-012</b>	1

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Connector</b> black plastic version with rubber seal, union nut and bayonet closure</p> <p>Folding box</p> <p>Folding box</p> <p>Pro-fit packaging</p>	<p>13 screw terminals</p> <p>13 screw terminals</p> <p>13 screw terminals</p>	<p><b>8JA 005 951-001</b></p> <p><b>8JA 005 951-027</b></p> <p><b>8JA 005 951-003</b></p>	<p>1</p> <p>16</p> <p>1</p>
	<p><b>Connector</b> black plastic version, click-version, including park socket</p> <p>Polythene bag</p>	<p>13 screw terminals</p>	<p><b>8JA 005 951-041</b></p>	<p>1</p>
	<p><b>Park socket</b> black plastic version with blue cover, for protecting the 13-pole connector when the trailer is parked</p> <p>Folding box</p>		<p><b>8HG 005 953-001</b></p>	<p>1</p>

## Assignment diagram – trailer plug fitting 12 V/13-pin ISO 11446



Contact assignment for plug-type connectors according to ISO 11446, 12 V, 13-pin

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

<sup>1)</sup> The 3 ground cables must not be connected conductively in the trailer.

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



**Application:**

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

**Range advantages:**

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

**Load capacity:**

- Operating temperature: -25 to 75 °C
- Load capacity max. 20 A (with 2.5 mm<sup>2</sup> cable)

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> 7+6-pole, black plastic version, rubber seal in the cover, with micro-switch</p> <p>Compatible with MULTICON and WeSt connectors</p>			
	<p>Folding box</p>	13 screw terminals	<b>8JB 005 949-031</b>	1
	<p><b>Connector</b> 7+6-pole, black plastic version, with rubber seal and union nut for cables Ø 11.5 ...14.0 mm</p> <p>Compatible with WeSt sockets. Not suitable for MULTICON sockets.</p>			
	<p>Folding box</p>	13 screw terminals	<b>8JA 005 951-061</b>	1

**Application:**

- Adapter from 13-pole socket (ISO 11446) on the traction vehicle to 7-pin plug (ISO 1724) on the trailer cable.
- Adapter from 7-pole socket (ISO 1724) on the traction vehicle to 13-pin plug (ISO 11446) on the trailer cable.
- Cable connection 7-pole (ISO 1724)
- UK short adapter from 13-pole socket (ISO 11 446) on the traction vehicle to two 7-pin plugs (ISO 1724 + ISO 3732) on the trailer cables.
- Test plug for 7-pole sockets (ISO 1724) and 13-pole sockets (ISO 11 446)

Illustration	Description	Length	Part number	PU
	<p><b>Extremely short adapter</b> from 13-pole socket (ISO 11446) on the traction vehicle to 7-pin plug (ISO 1724) on the trailer cable.</p> <p>Round cover in accordance with ISO 11446 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 of the 13-pole socket (only 99 g), load capacity: max. 16 A at 12 V</p>	57 mm	<b>8JA 008 969-001</b>	1
	<p><b>Short adapter</b> from 13-pole socket (ISO 11446) on the traction vehicle to 7-pin plug (ISO 1724) on the trailer cable</p> <p>Load capacity: max. 16 A at 12 V</p>	120 mm	<b>8JA 005 952-011</b>	1
	<p>Folding box</p> <p>Pro-fit packaging</p>	120 mm	<b>8JA 005 952-013</b>	1


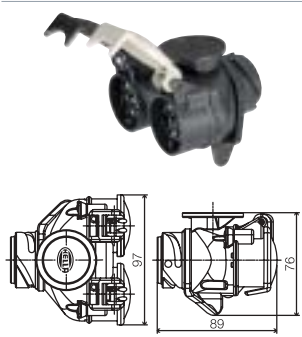
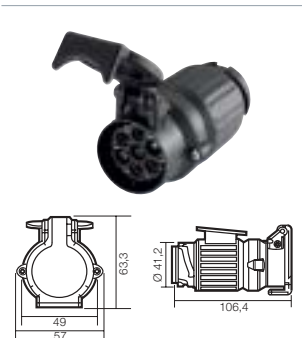





Illustration	Description	Length	Part number	PU
 <p>250</p>	<p><b>Adapter</b> from 13-pole socket (ISO 11446) on the traction vehicle to 7-pin plug (ISO 1724) on the trailer cable With trailer fitting on the 7-pole coupling socket</p> <p>Folding box</p>	0.25 m	<b>8JA 005 952-001</b>	1
 <p>97 76 89</p>	<p><b>"UK" short adapter</b> from 13-pole socket (ISO 11 446) on the traction vehicle to 2 x 7-pin plugs (ISO 1724 + ISO 3732)</p> <p>Folding box</p>	89 mm	<b>8JA 179 368-001</b>	1
 <p>63.3 49 57 106.4 Ø 41.2</p>	<p><b>Short adapter</b> from 13-pole socket (ISO 11446) on the traction vehicle to 13-pin plug (ISO 1724) on the trailer cable</p> <p>Folding box</p>	106 mm	<b>8JA 005 952-091</b>	1
 <p>55 57</p>	<p><b>Super-short adapter</b> from 7-pole socket (ISO 1724) on the traction vehicle to 13-pin plug (ISO 11446) on the trailer cable.</p> <p>Folding box</p>	57 mm	<b>8JA 008 969-011</b>	1

Illustration	Description	Length	Part number	PU
	<p><b>Mini-short adapter</b> from 7-pole socket (ISO 1724) on the traction vehicle to 13-pin plug (ISO 11446) on the trailer cable</p> <p>Folding box</p>	100 mm	8JA 008 981-001	1
	<p><b>Cable connection</b> 7-pole, 12 V, "N" (ISO 1724) sheathing: PVC cable cross-sections: 6 x 1.0 mm<sup>2</sup> + 1 x 1.5 mm<sup>2</sup> with 2 screw-on plastic connectors</p> <p>Polythene bag</p>	3 m	8KA 002 185-061	1
	<p><b>Test plug</b> for testing 7-pole sockets 12 V (ISO 1724) function display with LEDs 7-pole, 12 V</p> <p>Folding box</p>		8PD 004 508-001	1
	<p><b>Test plug</b> for testing 13-pole sockets 12 V (ISO 11446) function display with LEDs 13-pole, 12 V</p> <p>Folding box</p>		8PD 007 216-001	1





**Application:**

The 7-pole 24 V plug system 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, in accordance with ISO 1185 and an auxiliary plug-type connector, type S, in accordance with ISO 3731. The auxiliary system differs from the normal system by its white housing, contact inserts and non-interchangeable contact arrangement.

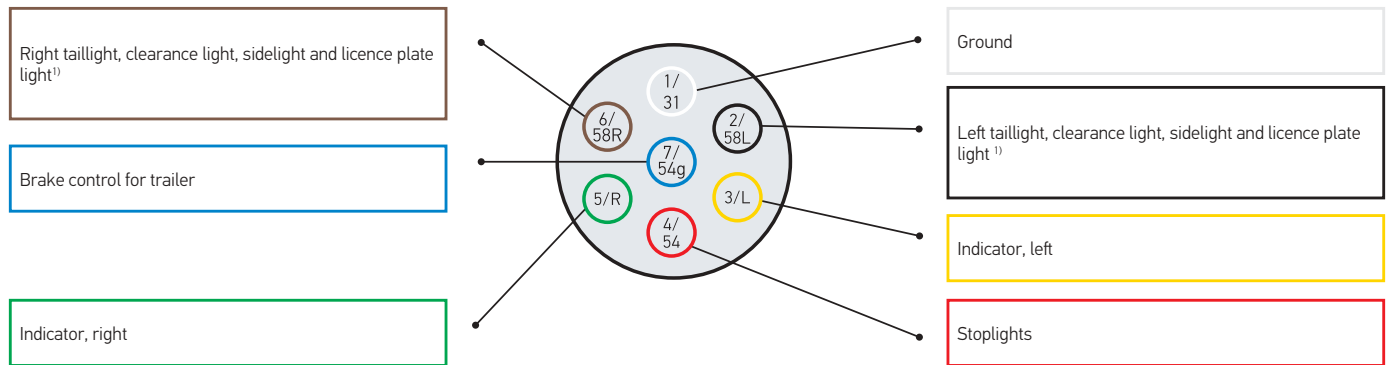
**Range advantages:**

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

**Load capacity:**

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

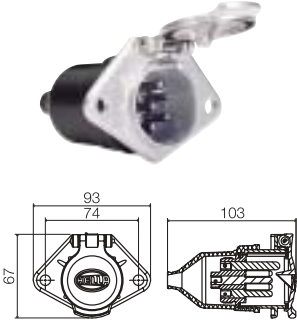

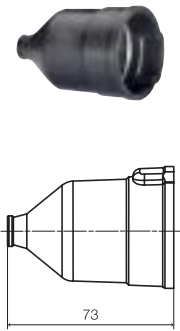
Assignment diagram – trailer plug fitting 24 V/7-pin N type ISO 1185  
 31-pin contact/socket-pin; 31-pin contact/plug-sleeve



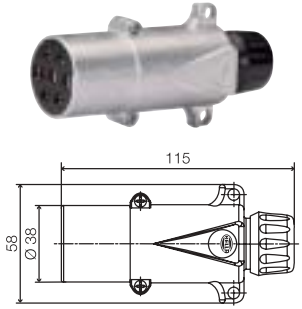
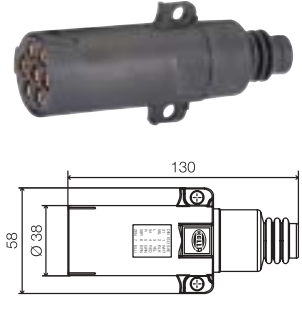
Contact assignment for normal plug-type connectors according to ISO 1185, 24 V, 7-pin N

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

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

Illustration	Description	Electrical connection	Part number	PU
	<b>Socket</b> Metal version, with cable grommet for cables $\varnothing$ 9.5 ... 12.5 mm			
	Folding box	7 screw terminals	<b>8JB 003 833-001</b>	10
	Folding box	7 blade couplings 6.3 mm	<b>8JB 003 833-031</b>	10
	Folding box	16 blade couplings 6.3 mm (5 x 2-fold/2 x 3-fold)	<b>8JB 003 833-011</b>	10
	<b>Socket</b> Plug, plastic version, with cable grommet for cables $\varnothing$ 9.5 ... 12.5 mm			
	Folding box	7 screw terminals	<b>8JB 008 085-001</b>	10
	Folding box	7 blade couplings 6.3 mm	<b>8JB 008 085-021</b>	10
	Folding box	16 blade couplings 6.3 mm (5 x 2-fold/2 x 3-fold)	<b>8JB 008 085-041</b>	10
	<b>Cable grommet</b> for cables $\varnothing$ 9.5 ... 12.5 mm.			
Folding box		<b>9GD 735 641-012</b>	10	

## 7-pole plug systems 24 V in accordance with ISO 1185 (N-type)

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Connector</b> Metal version, with high-strength cable gland, interior seal for cables Ø 9.2 ... 11.5 mm</p>			
	Folding box	7 screw terminals	<b>8JA 003 831-001</b>	10
	Folding box	7 blade couplings 6.3 mm	<b>8JA 003 831-011</b>	10
	<p><b>Connector</b> Plug, plastic version, with cable grommet for cables Ø 8.0 ... 12.0 mm</p>			
	Folding box	7 screw terminals	<b>8JA 008 084-001</b>	10
	Folding box	7 blade couplings 6.3 mm	<b>8JA 008 084-021</b>	10

**Application:**

The 7-pole 24 V plug system 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, in accordance with ISO 1185 and an auxiliary plug-type connector, type S, in accordance with ISO 3731. The auxiliary system differs from the normal system by its white housing, contact inserts and non-interchangeable contact arrangement.

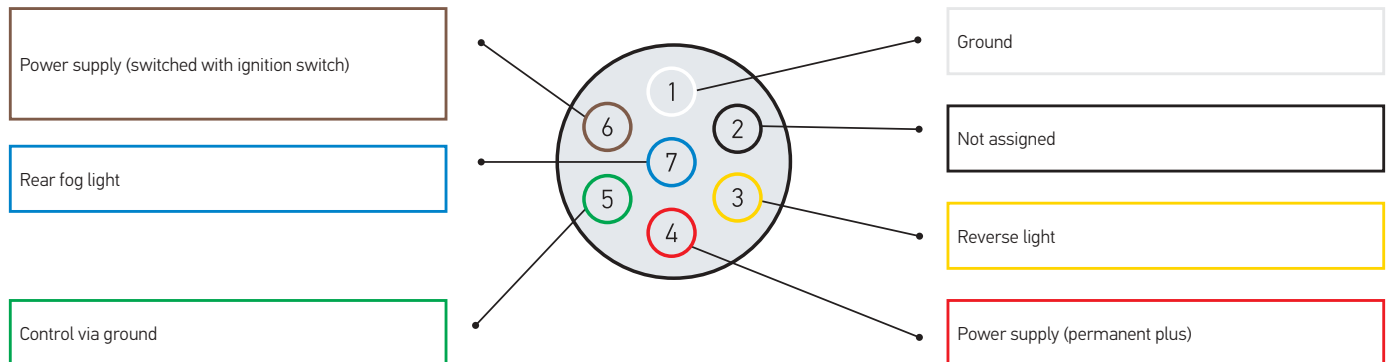
**Range advantages:**

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

**Load capacity:**

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

Assignment diagram – trailer plug fitting 24 V/7-pin S type ISO 3731  
 31-pin contact/socket-sleeve; 31-pin contact/plug-pin



Contact assignment for auxiliary plug-type connectors according to ISO 3731, 24 V, 7-pin S

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

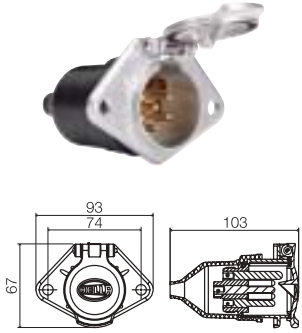
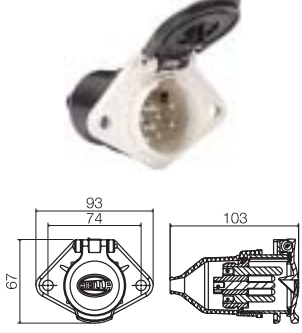
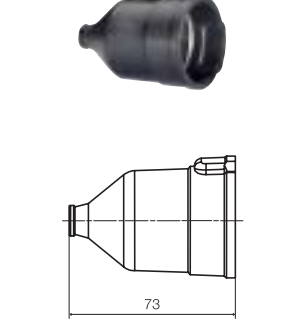
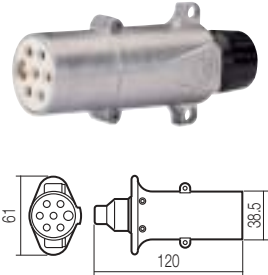
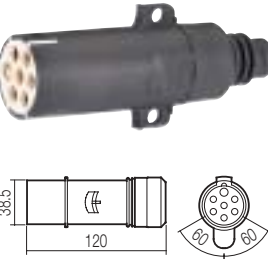
Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> Metal version, with cable grommet for cables Ø 9.5 ... 12.5 mm.</p>	<p>7 screw terminals</p> <p>7 blade couplings 6.3 mm</p> <p>16 blade couplings 6.3 mm (5 x 2-fold/2 x 3-fold)</p>	<p><b>8JB 003 834-001</b></p> <p><b>8JB 003 834-031</b></p> <p><b>8JB 003 834-021</b></p>	<p>10</p> <p>10</p> <p>10</p>
	<p><b>Socket</b> Plug, plastic version, with cable grommet for cables Ø 9.5 ... 12.5 mm</p>	<p>7 screw terminals</p> <p>7 blade couplings 6.3 mm</p> <p>16 blade couplings 6.3 mm (5 x 2-fold/2 x 3-fold)</p>	<p><b>8JB 008 085-011</b></p> <p><b>8JB 008 085-031</b></p> <p><b>8JB 008 085-051</b></p>	<p>10</p> <p>10</p> <p>10</p>
	<p><b>Cable grommet</b> for cables Ø 9.5 ... 12.5 mm.</p>		<p><b>9GD 735 641-012</b></p>	<p>10</p>

Illustration	Description	Length	Part number	PU
	<p><b>Connector</b> Metal version, with high-strength cable gland, interior seal for cables <math>\varnothing</math> 9.2 ... 11.5 mm</p>			
Folding box		7 screw terminals	<b>8JA 003 832-001</b>	10
Folding box		7 blade couplings 6.3 mm	<b>8JA 003 832-011</b>	10
	<p><b>Connector</b> Plug, plastic version, with cable grommet for cables <math>\varnothing</math> 9.5 ... 12.5 mm</p>			
Folding box		7 screw terminals	<b>8JA 008 084-011</b>	10
Folding box		7 blade couplings 6.3 mm	<b>8JA 008 084-031</b>	10



**Application:**

The 15-pole plug system 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 waterproofness, 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.

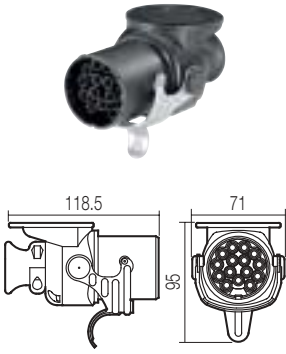
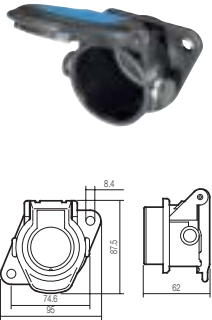



**Range advantages:**

- The system meets the high requirements on modern trailer plug-type connectors in accordance with ISO 4091
- High-grade lamella contacts with crimp connection
- Simple fitting
- Crimp connection for OE applications
- Screw-type connection for spare part applications

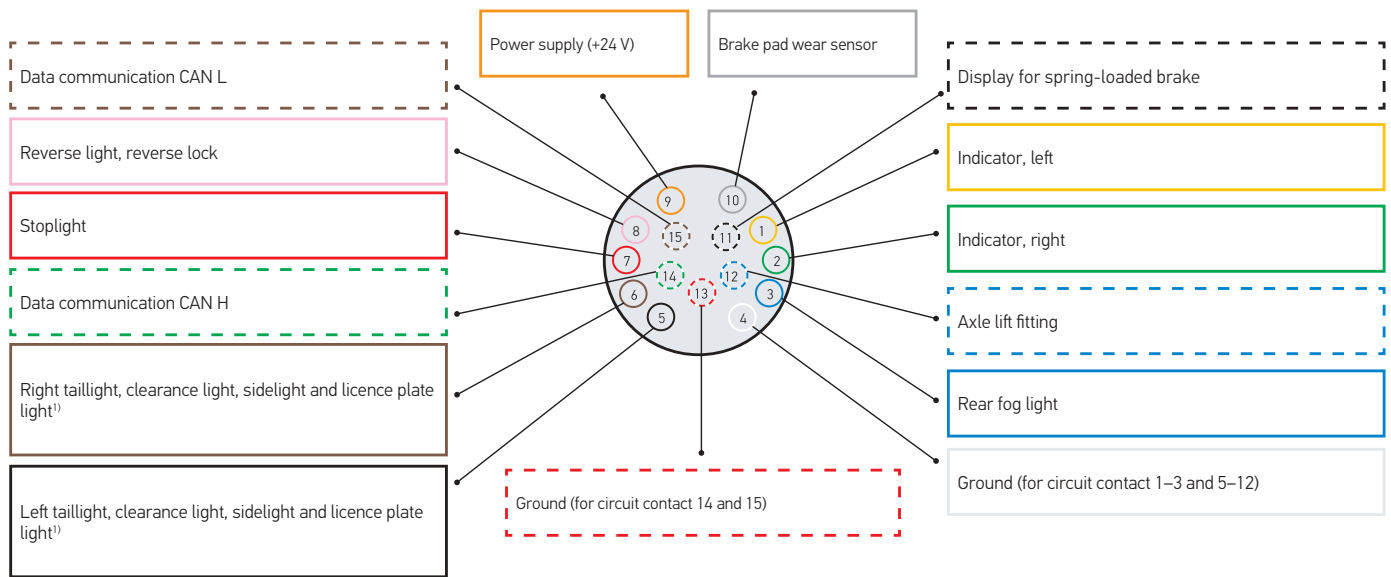
**Load capacity:**

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

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b>                      sturdy plastic version with cover, ADR/GGVS tested, with rubber seals and nickel-plated contact pins, made of glass fibre reinforced polyamide, high-strength cable gland of the cable outlet</p> <p>Installation opening: Ø 54 mm,                      for cable diameters: 12–18 mm,                      Contact pins: 12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup></p>			
	Folding box	15 screw terminals	<b>8JB 007 242-011</b>	1
	Folding box	15 crimped/solder connections	<b>8JB 007 242-021</b>	1

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Connector</b> ADR / GGVS tested, with rubber seals and nickel-plated contact bushings, made of glass fibre reinforced polyamide, mechanical strain relief, safe latching in place through non-rusting metal hoop</p> <p>for cable diameters: 12–18 mm Contact bushings: 12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup></p> <p>Folding box</p> <p>Folding box</p>	<p>15 screw terminals</p> <p>15 crimped/solder connections</p>	<p><b>8JA 007 241-021</b></p> <p><b>8JA 007 241-031</b></p>	<p>1</p> <p>1</p>
	<p><b>Park socket</b> for 15-pole 24 V connectors 8JA 007 241-021 and -031</p> <p>Installation opening: Ø 54 mm</p> <p>Folding box</p>		<p><b>8HG 007 647-001</b></p>	<p>1</p>
	<p><b>Crimped/solder contact pin set</b> (12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup>) for socket 8JB 007 242-021</p>		<p><b>9MK 726 761-811</b></p>	<p>1</p>
	<p><b>Crimped/solder contact bushings set</b> (12 x 1.5 mm<sup>2</sup> + 3 x 2.5 mm<sup>2</sup>) for connector 8JA 007 241-031</p>		<p><b>9MK 726 761-821</b></p>	<p>1</p>
	<p><b>Professional crimping tool</b> for crimp contact pins and sleeves with cross-sections of 1.5–6.0 mm<sup>2</sup></p>		<p><b>8PE 863 807-001</b></p>	<p>1</p>





Contact assignment for plug-type connectors according to ISO 12098, 24 V, 15-pin

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





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



**Applications:**

- Adapter solutions from 15-pole socket (ISO 12098) on the traction vehicle to two 7-pin sockets (ISO 1185 + ISO 3731) on the trailer
- Test plug 24 V

Illustration	Description	Length	Part number	PU
	<p><b>Adapter lead</b> from 15-pole socket (ISO 12098) on the traction vehicle to two 7-pin sockets (ISO 1185 + ISO 3731) on the trailer, with 15-pole plastic connector and 7-pole metal connectors</p> <p>Cable diameter: 8.7 mm Outer Ø of coil: 50 mm Sheathing: polyurethane</p> <p>Folding box</p>	max. 400 mm	<b>8JA 005 952-041</b>	1
	<p><b>Adapter lead</b> from 15-pole socket (ISO 12098) on the traction vehicle to two 7-pin sockets (ISO 1185 + ISO 3731) on the trailer, with 15-pole plastic connector and moulded 7-pole plastic connectors for absolute waterproofness1 (protective rating IPX9K for the cable outlet)</p> <p>Cable diameter: 8.8 mm Outer Ø of coil: 48 mm Sheathing: polyurethane</p> <p>Folding box</p>	max. 400 mm	<b>8JA 005 952-081</b>	1

Illustration	Description	Length	Part number	PU
 <p data-bbox="416 369 887 472"><b>Short adapter</b> from 15-pole socket (ISO 12 098) on the traction vehicle to two 7-pin plugs (ISO 1185 + ISO 3731) on the trailer made of glass fibre reinforced polyamide</p> <p data-bbox="416 719 512 741">Folding box</p>	155 mm	8JA 005 952-061	1	
 <p data-bbox="416 819 887 898"><b>Test plug</b> for testing 7-pin sockets according to ISO 1185/normal version</p> <p data-bbox="416 1133 512 1155">Folding box</p>	81 mm	8PD 004 508-011	1	
 <p data-bbox="416 1245 887 1323"><b>Test plug</b> for testing helical connection cables according to ISO 1185/normal version</p> <p data-bbox="416 1559 512 1581">Folding box</p>	89 mm	8PD 004 508-021	1	
 <p data-bbox="416 1671 887 1715"><b>Test plug</b> for testing ABS sockets</p> <p data-bbox="416 2018 512 2040">Folding box</p>	110 mm	8PD 004 508-031	1	



### Application:

This plug system is used with almost all commercial vehicles using ABS/EBS systems. The plug-type connectors are suitable for ADR / GGVS applications.

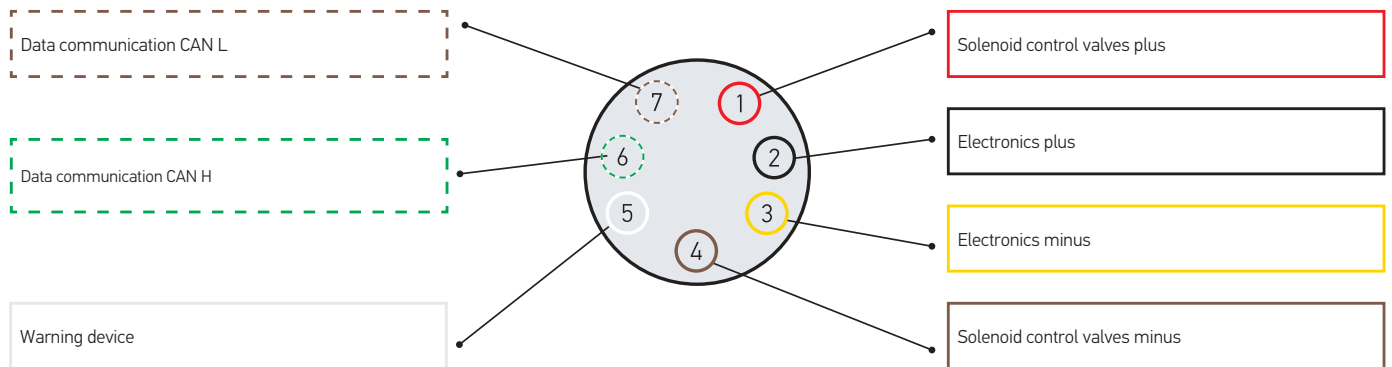
### Range advantages:

- The system meets the high requirements on modern trailer plug-type connectors in accordance with ISO 4091
- High-grade lamella contacts with crimp connection
- Simple fitting
- Crimp connection for OE applications
- Screw-type connection for spare part applications

### Load capacity:

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

Assignment diagram – trailer plug fitting ABS/EBS 24 V / 5/7-pin ISO 7638-1






Contact assignment for plug-type connectors according to ISO 7638-1, ABS/EBS 24 V

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

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

<sup>2)</sup> According to ISO 11992-1 and ISO 11992-2.

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b> with cover, ADR/GGVS tested, with rubber seals and nickel-plated contact pins, made of glass fibre reinforced polyamide, high-strength cable gland of the cable outlet</p> <p>Installation opening: Ø 54 mm for cable diameters: 9–16 mm Contact pins: 5 x 1.5 mm<sup>2</sup> + 2 x 4 mm<sup>2</sup> + 2 x 6 mm<sup>2</sup> and 2 blind plugs</p>	<p>Screw terminals</p> <p>Crimp/Solder connections</p>	<p><b>8JB 007 645-031</b></p> <p><b>8JB 007 645-021</b></p>	<p>1</p> <p>1</p>
	<p><b>Connector</b> ADR / GGVS tested, with rubber seals and nickel-plated contact bushings, made of glass fibre reinforced polyamide, mechanical strain relief, safe latching in place through non-rusting metal hoop</p> <p>for cable diameters: 11–13 mm Contact bushings: 5 x 1.5 mm<sup>2</sup> + 2 x 4 mm<sup>2</sup> + 2 x 6 mm<sup>2</sup> and 2 blind plugs</p>	<p>Screw terminals</p> <p>Crimp/Solder connections</p>	<p><b>8JA 007 644-051</b></p> <p><b>8JA 007 644-041</b></p>	<p>1</p> <p>1</p>
	<p><b>Park socket</b> for ABS/EBS 24 V connectors 8JA 007 644-041 and -051</p> <p>Installation opening: Ø 54 mm made of glass fibre reinforced polyamide</p>		<p><b>8HG 007 647-001</b></p>	<p>1</p>

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Crimped/solder contact pin set</b> (5 x 1.5 mm<sup>2</sup> + 2 x 4 mm<sup>2</sup> + 2 x 6 mm<sup>2</sup> and 2 blind plugs) for socket 8JB 007 645-021</p>		9MK 726 762-831	1
	<p><b>Crimped/solder contact bushings set</b> (5 x 1.5 mm<sup>2</sup> + 2 x 4 mm<sup>2</sup> + 2 x 6 mm<sup>2</sup> and 2 blind plugs) for connector 8JA 007 644-041</p>		9MK 726 759-831	1
	<p><b>Professional crimping tool</b> for crimp contact pins and sleeves with cross-sections of 1.5–6.0 mm<sup>2</sup></p>		8PE 863 807-001	1



**Application:**

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

**Range advantages:**

- Wide range of products for all common applications
- Cable 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

Illustration	Description	ISO	Cross-section in mm <sup>2</sup>	Material	Part number	PU
<b>Coiled connection cables, 12 V</b>						
	<p><b>7-pole</b> max. working length 4 m with 2 screw-on metal connectors</p>					
		1724, 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-021</b>	1


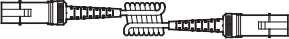





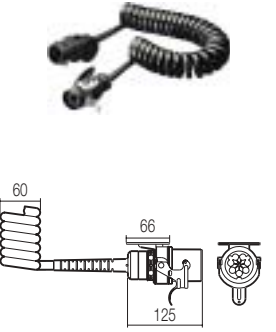
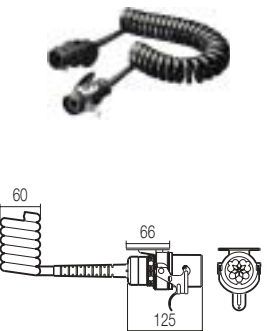

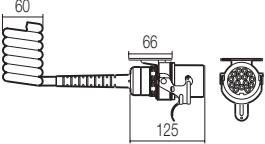

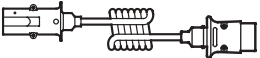
Illustration	Description	ISO	Cross-section in mm <sup>2</sup>	Material	Part number	PU
<b>Helical connection cable, 24 V</b>						
 	<b>7-pole</b> max. working length 4 m, with 2 screw-on plastic connectors					
	with anti-kink sleeves	1185 "N", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-041</b>	1
	with anti-kink sleeves	3731 "S", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-051</b>	1
 	<b>7-pole</b> max. working length 4 m, with 2 moulded plastic connectors and anti-kink protection, Cable outlet waterproof (IP X9K)					1
		1185 "N", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-031</b>	1
		3731 "S", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 007 965-011</b>	1
 	<b>7-pole</b> max. working length 4 m, with 2 screw-on metal connectors					
		1185 "N", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-071</b>	1
		3731 "S", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-081</b>	1



Illustration	Description	ISO	Cross-section in mm <sup>2</sup>	Material	Part number	PU
	<b>7-pin</b> max. working length 4 m, with 2 screw-on metal connectors, metal anti-kink protection and suspension hoop	1185 "N", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-101</b>	1
		3731 "S", 6722	6 x 1.0 + 1 x 1.5	Polyurethane	<b>8KA 004 797-111</b>	1
	<b>ABS helical connection cable,                      5-pole, 24 V</b>  max. working length 4 m, with 2 mounted ABS connectors and anti-kink sleeves  20,000 reversed bending operations guaranteed!*	7638-1	3 x 1.5 + 2 x 4.0	Hytrel	<b>8KA 007 648-001</b>	1
		7638-1	3 x 1.5 + 2 x 4.0	Polyurethane	<b>8KA 007 648-011</b>	1
	<b>EBS helical connection cable,                      7-pole</b>  max. working length 4 m, with 2 mounted EBS connectors and anti-kink sleeves  20,000 reversed bending operations guaranteed!*	7638-1	5 x 1.5 + 2 x 4.0	Hytrel	<b>8KA 007 648-021</b>	1
		7638-1	5 x 1.5 + 2 x 4.0	Polyurethane	<b>8KA 007 648-031</b>	1

\* According to ISO 4141 at least 10,000 reversed bending operations are prescribed.

Illustration	Description	ISO	Cross-section in mm <sup>2</sup>	Material	Part number	PU
 	<p><b>Helical connection cable, 15-pole, 24 V</b></p> <p>max. working length 4 m, with 2 mounted plastic connectors with blue anti-kink sleeves</p> <p>20,000 reversed bending operations guaranteed!*</p>	12098	12 x 1.5 + 3 x 2.5	Hytrel	<b>8KA 007 648-041</b>	1
		12098	12 x 1.5 + 3 x 2.5	Polyurethane	<b>8KA 007 648-051</b>	1
 	<p><b>Helical connection cable, 7-pole, 12 / 24 V "N"</b></p> <p>Normal version for FMVSS functions, with 2 screw-on metal connectors</p> <p>Cable diameter: 8.8 mm Outer diameter of coil: 48 mm</p>	1185 "N", 1724, 6722	6x1.0 + 1x1.5	Polyurethane	<b>8KA 007 648-061</b>	1

\* According to ISO 4141 at least 10,000 reversed bending operations are prescribed.



**Application:**

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 in accordance 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 in accordance 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 in accordance with ISO 4165 is used for the electrical connection of different consumers.

**Range advantages:**

- High-grade crimped/solder contacts
- Simple fitting
- Suitable for high current loads

**Load capacity:**

Rated currents:  
 max. 15 A (cable cross-section 1.5 mm<sup>2</sup>)  
 max. 100 A (cable cross-section 25 mm<sup>2</sup>)  
 max. 160 A (cable cross-section 35 mm<sup>2</sup>)  
 max. 200 A (cable cross-section 50 mm<sup>2</sup>)

Short-term currents up to 10s:  
 max. 35 A (cable cross-section 1.5 mm<sup>2</sup>)  
 max. 250 A (cable cross-section 25 mm<sup>2</sup>)  
 max. 400 A (cable cross-section 35 mm<sup>2</sup>)  
 max. 500 A (cable cross-section 50 mm<sup>2</sup>)

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket</b>                      with green cover (ISO 4165 / VGV 96 921)                      Compact flush-mounted version cover colour: RAL 6031</p> <p>Installation opening: Ø 18.5 mm                      Control panel thickness: max. 7 mm,</p> <p>Folding box</p>	<p>1 screw terminal,                      ground at the housing</p>	<p><b>8JB 001 946-001</b></p>	<p>10</p>

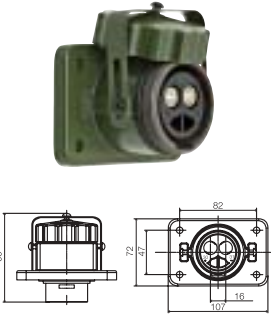
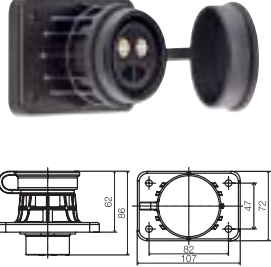
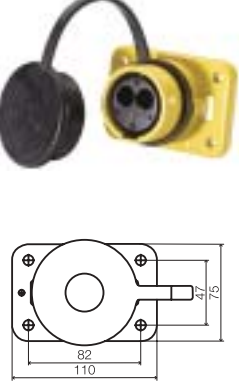
Illustration	Description	Electrical connection	Part number	PU
	<p><b>Socket, aluminium</b> 2-pole with green screw-on cover (VG 96 917-3 Form A). Seal in the screw-on cover, additional sealing ring between thread and screw-type cover.</p> <p>Permissible operating temperature: -40°C ... +85°C Protection class: IP X4 (connection when inserted) Contacts: CuZn, silver-plated</p>			
Folding box		2 crimped/solder socket contacts for cables up to 50 mm <sup>2</sup>	<b>8JB 001 935-031</b>	1
Folding box		2 crimped/solder socket contacts for cables up to 35 mm <sup>2</sup>	<b>8JB 001 935-051</b>	1
	<p><b>Socket, plastic</b> black, 2-pole with black rubber cap (insertion compatible with VT 96 917).</p> <p>Permissible operating temperature: -40°C ... +85°C Protection class: IP X6 with cap closed Contacts: CuZn, silver-plated</p>			
Folding box		2 crimped/solder socket contacts for cables up to 35 mm <sup>2</sup>	<b>8JB 001 935-041</b>	1
	<p><b>Socket, metal</b> yellow, 2-pole with black rubber cap (insertion compatible with VT 96 917)</p>			
Folding box		2 crimped/solder socket contacts for cables up to 50 mm <sup>2</sup>	<b>8JB 010 806-001</b>	1

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Connector</b> 2-pole (insertion compatible with VT 96 917), black</p> <p>Permissible operating temperature: -40°C ... +85°C Contacts: CuZn, silver-plated</p> <p>Metal version</p> <p>Plastic version</p>	<p>2 crimped/solder pin contacts for cables up to 35 mm<sup>2</sup></p> <p>2 crimped/solder pin contacts for cables up to 35 mm<sup>2</sup></p>	<p><b>8JA 001 931-041</b></p> <p><b>8JA 001 931-081</b></p>	<p>1</p> <p>1</p>
	<p><b>Connector, metal</b> 2-pole with green threaded ring (VG 96 917-3 Form E)</p> <p>Permissible operating temperature: -40°C ... +85°C Protection class: IP X4 (connection when inserted) Contacts: CuZn, silver-plated</p> <p>Folding box</p> <p>Folding box</p>	<p>2 crimped/solder pin contacts for cables up to 35 mm<sup>2</sup></p> <p>2 crimped/solder pin contacts for cables up to 50 mm<sup>2</sup></p>	<p><b>8JA 001 931-051</b></p> <p><b>8JA 001 931-071</b></p>	<p>1</p> <p>1</p>
	<p><b>Connector, metal</b> 2-pole with green plastic-coated threaded ring (VG 96917 Form E)</p> <p>Permissible operating temperature: -40°C ... +85°C Protection class: IP X4 (connection when inserted) Contacts: CuZn, silver-plated</p> <p>Folding box</p>	<p>2 crimped/solder pin contacts for cables up to 50 mm<sup>2</sup></p>	<p><b>8JA 001 931-061</b></p>	<p>1</p>

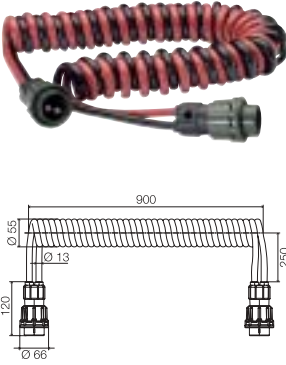
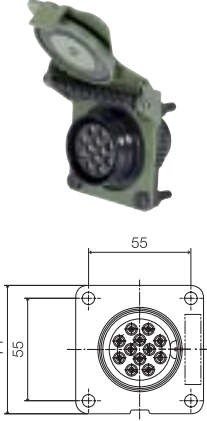
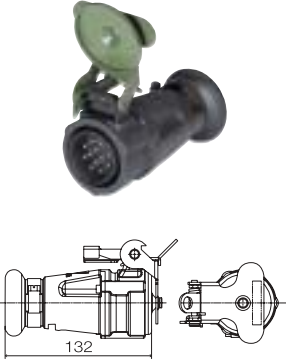


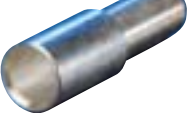
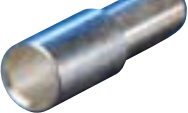
Illustration	Description	Electrical connection	Part number	PU
	<p><b>Helical connection cable</b>            2-pole,            max. working length 4 m,            Cross-section 2 x 35 mm<sup>2</sup>,            with 2 mounted connectors with threaded ring (VG 96917)</p> <p>Permissible operating temperature: -40°C ... +85°C            Rated current 300 A (at ambient temperature of 20°C)</p>		8KA 010 807-001	1
	<p><b>Socket</b>            12-pole with green cover (VG 96 923 A-12 S),            with thread and screw-on cap</p> <p>Permissible operating temperature: -40°C ... +85°C            Protection class: IP 68            Compatible cross-sections: 12 x 1.5 mm<sup>2</sup>,            for cable diameters 18 ... 23.5 mm<sup>2</sup>            Contacts: CuZn, silver-plated</p>	12 solder contact sleeves	8JB 001 934-021	1
	<p><b>Connector</b>            12-pole with green cover (VG 96 923)</p> <p>Permissible operating temperature: -40°C ... +85°C            Protection class: IP 54 (connection when inserted)            Compatible cross-sections: 12 x 1.5 mm<sup>2</sup>,            for cable diameter 24 mm<sup>2</sup>            Contacts: CuZn, silver-plated</p>	12 solder contact pins  12 solder contact sleeves	8JA 002 264-051  8JA 002 264-061	1  1

Illustration	Description	Electrical connection	Part number	PU
	<p><b>Crimped contact bushing</b> for cables up to 50 mm<sup>2</sup> for item: 8JB 001 935-031</p>	<p>Crimped contact bushing 50 mm<sup>2</sup></p>	<p><b>9MK 748 466-011</b></p>	<p>1</p>
	<p><b>Crimped contact bushing</b> for cables up to 35 mm<sup>2</sup> for item: 8JB 001 935-041, 8JB 001 935-051</p>	<p>Crimped contact bushing 35 mm<sup>2</sup></p>	<p><b>9MK 748 466-021</b></p>	<p>1</p>
	<p><b>Crimped contact pin</b> for cables up to 50 mm<sup>2</sup> for item: 8JB 001 931-071</p>	<p>Crimped contact pin 50 mm<sup>2</sup></p>	<p><b>9MK 748 465-011</b></p>	<p>1</p>
	<p><b>Crimped contact pin</b> for cables up to 35 mm<sup>2</sup> for items: 8JA 001 931-041, 8JA 001 931-051, 8JA 001 931-061, 8JA 001 931-081</p>	<p>Crimped contact pin 35 mm<sup>2</sup></p>	<p><b>9MK 748 465-021</b></p>	<p>1</p>



**Application:**

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.

**Range advantages:**

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

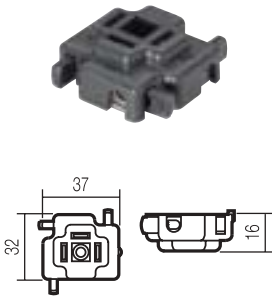
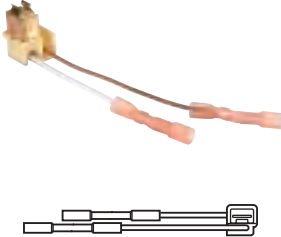
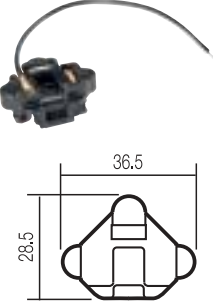
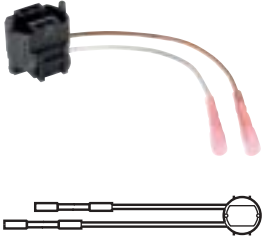
Illustration	Description	Electrical connection	Part number	PU
	<p><b>Connector</b> for H4 or RL bulbs, 3-pole, clamped cable connection can be loosened by pressing buttons</p>			
	<p>without ground cable</p> <p>with ground cable (130 mm)</p>	<p>up to max. 2.5</p> <p>up to max. 2.5</p>	<p><b>8JA 001 909-001</b></p> <p><b>8JA 001 909-011</b></p>	<p>10</p> <p>10</p>



Illustration	Description	Electrical connection	Part number	PU
	<p><b>Pin base for headlights</b>                      Connector with high-quality pre-fitted cables and butt joints for H1 bulbs</p> <p>Cable length brown (ground): 60 mm                      Cable length white: 40 mm                      Cable connection through crimping</p>	<p>up to max. 1.0</p>	<p><b>8KB 863 949-001</b></p>	<p>1</p>
	<p><b>Connector</b>                      for H4 or RL bulbs,                      3-pole, can be loosened by pressing buttons,                      with ground cable (130 mm)</p>	<p>up to max. 2.5</p>	<p><b>8JA 001 914-011</b></p>	<p>10</p>
	<p><b>Connector</b>                      with high-quality pre-fitted cables and butt joints for H7 bulbs</p> <p>Cable length brown (ground): 120 mm                      Cable length white: 100 mm                      Cable connection through crimping</p>	<p>up to max. 1.0</p>	<p><b>8KB 863 949-011</b></p>	<p>1</p>



**Application:**

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 capacity:**

Rated voltage: 24 V/12 V.  
 Capacity per switch channel: 2 x 21 W  
 Capacity per indicator: 1 x 21 W  
 Operating temperature: -30 °C to +80 °C  
 Polarity reversal protection: permanently resistant to polarity reversal  
 Protective class: IP 5K9K in accordance with DIN 50021-55  
 Type approvals: e1/CE

Illustration	Description	Part number	PU
	<p><b>Cable colour:</b>  <b>24 V traction vehicle ISO 12 098</b>                      1 yellow = indicator light, left                      2 green = indicator light, right                      3 blue = rear fog light                      4 white = ground                      5 black = taillight, left                      6 brown = taillight, right                      7 red = stoplight                      8 grey = reversing light</p> <p><b>12 V trailer</b>  <b>ISO 11446 or ISO 1724</b>                      1 yellow = indicator light, left                      2 blue = rear fog light                      3 white = ground                      4 green = indicator light, right                      5 brown = taillight, right                      6 red = stoplight                      7 black = taillight, left                      8 grey = reversing light</p> <p>Voltage converter, 24 V/12 V</p>	<p>5DS 008 125-011</p>	<p>1</p>



**Application:**

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: 8ES 008 124-001.

**Load capacity:**

- Rated voltage: 24 V/12 V
- Quiescent current: 8 mA
- Control current for the switch channels: 2.5 mA
- Capacity per switch channel: 2 x 21 W
- Capacity per indicator: 21 W
- Voltage loss of the switch channels: 200 mV
- Operating temperature: -30 °C to +80 °C
- Polarity reversal protection: permanently resistant to polarity reversal
- Type of protection: IP 5K9K in accordance with DIN 50021-55
- Type approvals: e1/CE

Illustration	Description	Part number	PU
	<p><b>Cable colour:</b>  <b>24 V traction vehicle ISO 12 098</b>                      1 yellow = indicator light, left                      2 green = indicator light, right                      3 blue = rear fog light                      5 black = taillight, left                      6 brown = taillight, right                      7 red = stoplight                      8 grey = reversing light</p> <p><b>12 V trailer</b>  <b>ISO 11446 or ISO 1724</b>                      1 yellow = indicator light, left                      2 blue = rear fog light                      3 white = ground                      4 green = indicator light, right                      5 brown = taillight, right                      6 red = stoplight                      7 black = taillight, left                      8 grey = reversing light</p> <p>Voltage converter, 24 V/12 V</p>	<p>SDS 008 125-001</p>	<p>1</p>



**Application:**

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

The design of the charge compensation device depends on the average current drain of 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 capacity:**

- Rated voltage: 24 V
- Compensating current: 8 A
- Quiescent current: 15 mA
- Switch-on voltage: 27 V
- Switch-off differential voltage: 0.5 V
- Operating temperature: -25 °C to +65 °C
- Polarity reversal protection and short-circuit-proof.
- Protective category: IP 5K9K

Illustration	Description	Part number	PU
	<p><b>Charge compensation device</b> for vehicles with 24 V operating voltage</p> <p>Connection is via 3 cables: One cable to the 24 V, one to ground and one to the centre tap of the batteries (see sketch).</p> <p>Charge compensation device "Plus"</p>	8ES 008 124-001	1









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