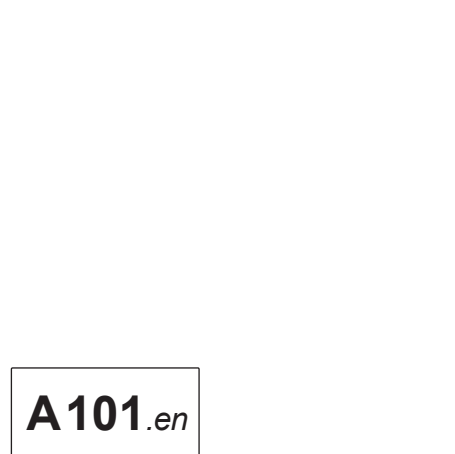
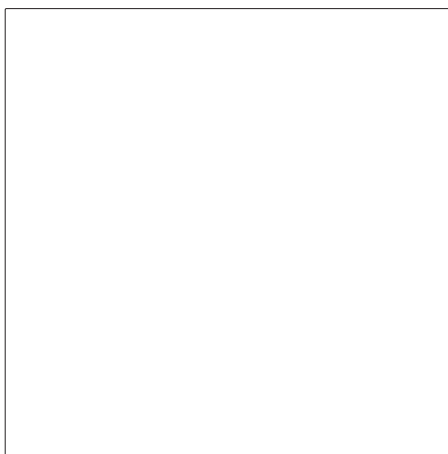
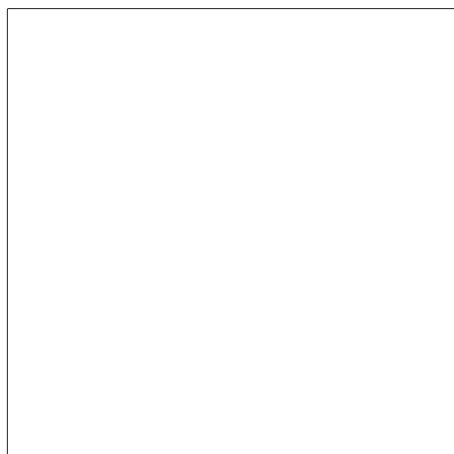
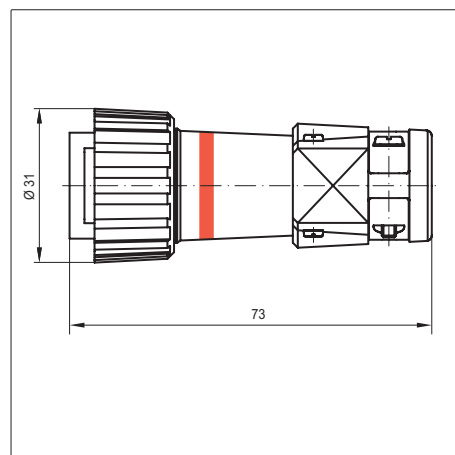
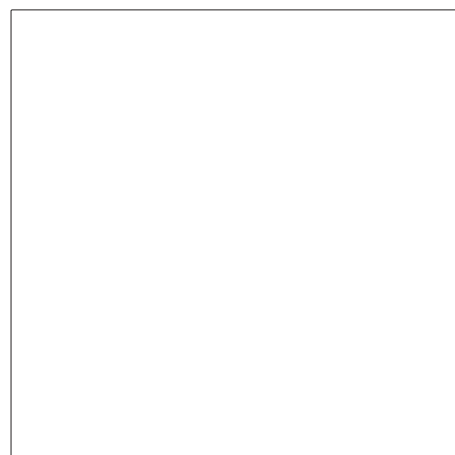


Modular circular connectors M1 Plus



Series M1 Plus Additional sealing of M1 Series connectors against water ingress

M1 Plus Series

Sealed to IP67 when not mated: By assembling additional O-rings between connector shell and contact insert as well as between contacts and contact insert, the M1 Series connectors are sealed to IP67 (immersion protected).

In general: M1 Plus Series universal industrial connectors are designed for safety and reliability in harsh ambient conditions. Vibration, dust, aggressive liquids or vapours are often the cause of failures and serious safety problems.

Thus protected, the connectors are water tight even when not mated, and ingress of water into electric equipment through the connector is not possible.

Sealed to IP67, our M1 Plus Series circular connectors are dustproof and water pressure-tight. They are also resistant to the effects of most acids and alkalines as well as the extremes of temperature.

Features

M1 Plus Series

All features of the M1 Series as listed in catalogue A10 remain valid.

In addition to that, all components of series M1 Plus will have the following additional features:

- Complete compatibility and intermateability with all M1 Series connectors
- Connector shells and contacts are delivered with seals pre-assembled
- A red colour marking on the shell distinguishes the connector as sealed to IP67 (immersion protected)
- Water tight filler plugs for unused contact cavities are available

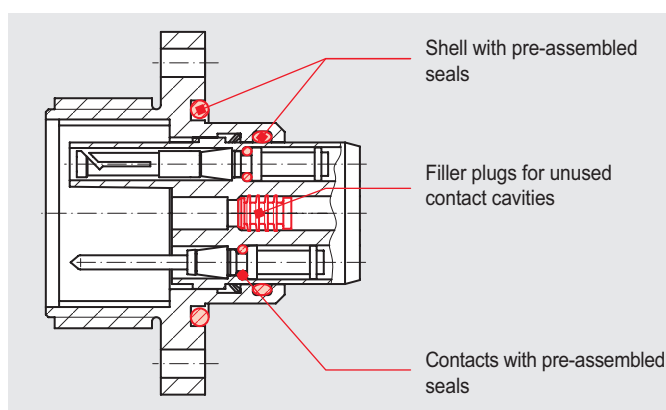


Fig.: Assembly of seals, M1 Plus Series, sectional view of a flange mount receptacle

Applications


M1 Plus Series

You can use our M1 Plus Series connectors for various applications, especially where high reliability under harsh environmental conditions is important. Typical applications are: mining, ship-building, power plant construction, mechanical and traffic engineering, environmental technology or food processing.

M1 Plus series connectors are particularly suitable under conditions where:

- there is no guarantee that the connector is protected by a protective cap
- electric equipment fitted with connectors is to be tested for a certain level of protection (e.g. IP67)

Standards

- Electrical and mechanical requirements for connectors in accordance with IEC 61984
- Degree of protection according to IEC 60529
- Flamability rating of plastics used according to UL 94-V0
-  us UL approval, UL files E242089

Competence

M1 Plus Series

For decades Schaltbau has been a well-known and competent manufacturer of products designed for use in harsh environments. Typical applications are:

- Industry
- Military communications engineering
- Traffic engineering

Based on the M Series industrial connectors which have stood the test of time, the high quality and safety typical of Schaltbau is being continued.

How to order

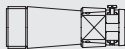



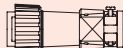



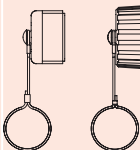
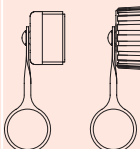





M1 Plus Series

Our M1 Plus Series connectors consist of various components which you can order individually, thus assembling a connector that suits your application to a T. The following table is a summary of all available components of our M1 Plus Series connectors. If you have any questions, do not hesitate to contact us.

Please note that according to our price list minimum order quantities apply. For orders below that minimum quantity please approach our distributors.



Sealed to IP67 even when not mated. With series M1 Plus Schaltbau extends its proven M1 series. Most connector shells and all type A contacts are sealed to IP67 (immersion protected).

Item	Depiction	Ordering code	Brief description	
Shell part 1 (Receptacle)		M11 ZB-67	Cable receptacle with strain relief Kit of loosely packed components	
		M12 M20B-67	Cable receptacle M1: Kit comprising receptacle M14 M20 and backshell	
		M13-67	Flange mount receptacle	
		M18-67	Flange mount angled receptacle	
Shell part 1 (Plugs)		M16 ZB-67	Plug with strain relief Kit of loosely packed components	
		M16 M20B-67	Plug, short, backshell included Kit of loosely packed components	
Shell part 2 (Cable support sleeve / Cable gland)		T1-4/6 T1-6/8 T1-8/10 T1-10/12 T1-12/13 T1-14.5	4 ... 6 mm cable Ø 6 ... 8 mm cable Ø 8 ... 10 mm cable Ø 10 ... 12 mm cable Ø 12 ... 13 mm cable Ø 14 ... 15 mm cable Ø	Cable support sleeve for : Cable receptacle M11 ZB-67 Plug M11 ZB-67
		M1 VM20 8-13	8 ... 13 mm cable Ø	Cable gland for : Cable receptacle M12 M20B-67 Plug M16 M20B-67
Protection cap		M1 KS M1 DS	Protection cap with cord for plugs Protection cap with cord for receptacles	
		M1 K M1 D	Protection cap with plastic strap for plugs Protection cap with plastic strap for receptacles	
Inserts	 	M1 E-6P+PE-A/B M1 E-6S+PE-A/B	6 pole + PE pin insert 6 pole + PE socket insert	
Contacts Type A		SAC-0.50-Ag-67 SAC-1.00-Ag-67 SAC-1.50-Ag-67 SAC-2.50-Ag-67	0.5 mm ² 0.75 ... 1.0 mm ² 1.5 mm ² 2.5 mm ²	The default contact fi- nish for pin and socket contacts is silver. For gold plated contacts change »Ag« to »Au« in the ordering code.
		BAC-0.50-Ag-67 BAC-1.00-Ag-67 BAC-1.50-Ag-67 BAC-2.50-Ag-67	0.5 mm ² 0.75 ... 1.0 mm ² 1.5 mm ² 2.5 mm ²	
			BS-A-MD	Filler plugs for unused contact cavities



* For AWG sizes refer to the conversion table on our homepage



Schaltbau GmbH manufactures in compliance with RoHS. The LV Series connectors are RoHS compliant.



Schaltbau GmbH has an environment management system that has been certified since 2002.



Schaltbau GmbH has a quality management system that has been certified since 1994.

Electrical Components and Systems for Railway Engineering and Industrial Applications

Connectors

- Connectors manufactured to industry standards
- Connectors to suit the special requirements of communications engineering (MIL connectors)
- Charging connectors for battery-powered machines and systems
- Connectors for railway engineering, including UIC connectors
- Special connectors to suit customer requirements

Snap-action switches

- Snap-action switches with positive opening operation
- Snap-action switches with self-cleaning contacts
- Enabling switches
- Special switches to suit customer requirements

Contactors

- Single and multi-pole DC contactors
- High-voltage AC/DC contactors
- Contactors for battery powered vehicles and power supplies
- Contactors for railway applications
- Terminal bolts and fuse holders
- DC emergency stop switches
- Special contactors to suit customer requirements

Electrics for rolling stock

- Equipment for driver's cab
- Equipment for passenger use
- High-voltage switchgear
- High-voltage heaters
- High-voltage roof equipment
- Equipment for electric brakes
- Design and engineering of train electrics to customer requirements

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