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Connectors

HV series

High power connectors
for DC applications

Flyer A88.en



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HV series High power connectors for DC applications

Schaltbau's newly developed HV series connectors feature solid power and signal contacts and are suitable for a wide range of high-current applications. The robust connectors have a modular design and protection against accidental contact. They are IP69K certified and designed for a high number of mating cycles. The HV connectors are perfect for

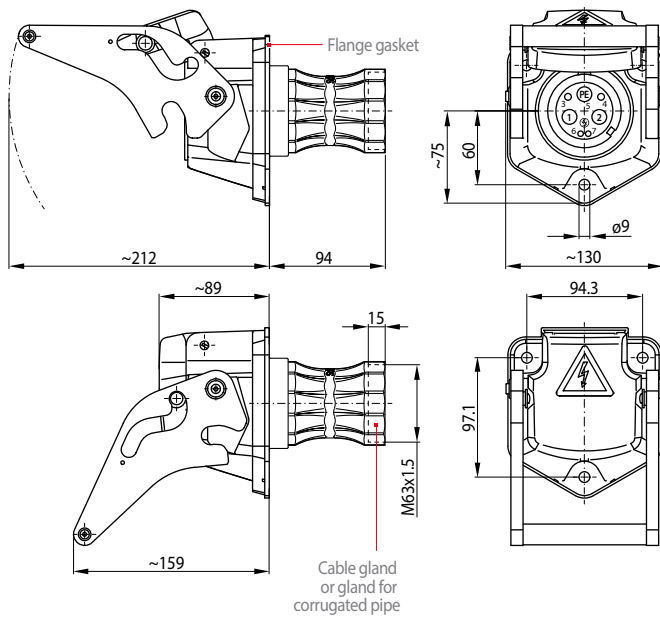
- **Wide power range:** Rated voltages up to 1,000 volts and rated currents up to 470 amps. Main contacts in the plug and socket housing safely protected against accidental contact.
- **Rugged housing:** One-handed operation – thanks to the sliding mechanism on the handle of the socket housing. This saves effort and ensures safe locking and unlocking of the plug in the socket.
- **Feedback plug inserted:** Optional switching element in the socket housing signals a correctly plugged-in connector.

high power rating. Places of application can be the energy transmission between rail cars or equally the connection of track and trailer on heavy e-vehicles. Other applications include the connection of powerful battery packs – here the HV series is used as a high-performance charging connector.

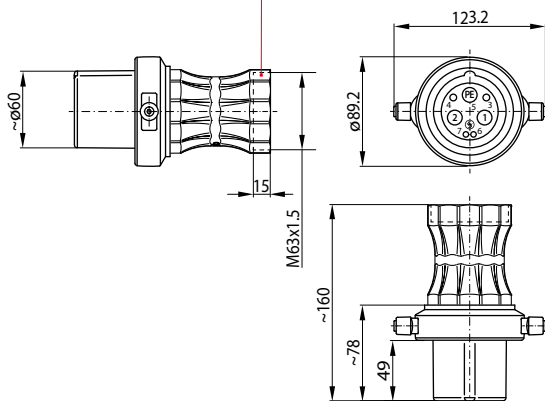
- **Modularity:** Solid power contacts for different connection cross-sections up to 95 mm² and 4 universally applicable signal contacts are available. Also configured with cable or individual conductors in a robust corrugated pipe.
- **Flammability:** Meets the requirements of UL94-V0 and the following fireprotection standards EN 45545.

Dimension diagram

• Socket

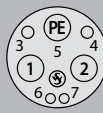
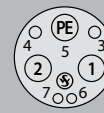


• Plug



Dimensions in mm

Specifications

HV series	Socket	Plug
Number of contacts max.	2-pole + PE + 2 + 2	
Contact arrangement	Socket contacts	Pin contacts
View direction: front view		
Contacts		
Power contacts	① + ②	
Diameter, Cross-section		ø10 mm, 35 / 50 / 70 / 95 mm ²
Terminal type, surface		Crimp, silver
PE contact	PE	
Diameter, Cross-section		ø10 mm, 35 / 50 mm ²
Terminal type, surface		Crimp, silver
Signal contacts	③ + ④	
Diameter, Cross-section		ø4 mm, 0.5 / 0.75...1 / 1.5 / 2.5 / 4 / 6 / 10 mm ²
Terminal type, surface		Crimp, silver
Signal contacts	⑥ + ⑦	
Diameter, Cross-section		ø3 mm, 0.5 / 0.75...1 / 1.5 / 2.5 mm ²
Terminal type, surface		Crimp, silver (gold optional)
Mating sequence	PE > ① + ② > ③ + ④ > ⑥ + ⑦	
Rated voltage U_e		
Power contacts	① + ②	1,000 V DC
Signal contacts	③ + ④ / ⑥ + ⑦	60 V DC
Pollution degree		PD2
Overvoltage category		OV2
Rated current I_e		
Power contacts	① + ②	470 A max. @ 95 mm ²
Signal contacts	③ + ④ / ⑥ + ⑦	30 A max. @ 10 mm ² / 5 A max. @ 1.5 mm ²
Switching element	1x in socket shell, S870 series, SPDT, 10 A (see catalogue D70.en)	
Housing material		
Socket shell	Aluminium die-cast, black	
Plug shell	Polyamid PA 6.6, black	
Inserts	Polyamide PA 6.6, black	
Seals	Silicone	
Degree of protection	IEC 60529	IP69K: When mated, socket with closed lid, plug in dummy socket
Mechanical endurance	> 10,000 mating cycles	
Operating temperature range	-40° C ... +85° C	