

Automotive products

RADOX® cables and system solutions

Edition 2020/09

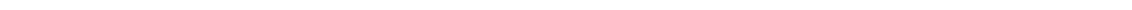


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HUBER+SUHNER

Automotive cable systems



The quality of the cabling throughout a vehicle plays a crucial role in transmitting and protecting power as it is stored in the vehicle. The cables need to be able to resist mechanical abrasion, harsh environmental conditions, moisture, temperature, aggressive fluids, as well as handle voltages up to 1000VAC/1500VDC. HUBER+SUHNER wires & cables and cable systems are designed with these challenges in mind.

When it comes to EV cable systems in the automotive sector, the main considerations are: high level of safety, reasonable costs and the correct approvals. Our in-house engineers are well experienced in the EV sector and never lose sight of the bigger picture. As a result, HUBER+SUHNER delivers complete cable system solutions that meet required automotive standards, whilst also optimising the installation processes.

Engineers work closely with our customers, always taking the latest market requirements as a starting point. A wide variety of parts in our automotive product range e.g. 3-pole connector, are tailored to specific customers and specific applications. With our global presence and many years of high voltage experience, we support new products a smooth entry into the EV market.

Benefits of using HUBER+SUHNER cable systems:

- Safe and reliable connection
- Easy assembly, saving time and money
- A smooth and effective integration with HVDU solutions
- High current carrying capacity for higher loads
- High Ingress Protection (IP) for both solid objects and liquids
- High voltage testing & validation services, both internal and external – to guarantee high product quality
- Possibility of joint development projects, allowing access to specialised engineering resources as well as RADOX technology

mHVDU – standard modular HVDU	46
chVDU – customised HVDU	48
RADOX® EV-C cable system	50
Cable assembly	53
3 pole connector	54

cHVDU – customised HVDU



Applications

- Fully customised product solution
- High flexibility and choice of electrical components

Benefits

- No limitations to size and components
- All relevant components available (capacitors, contactors, etc.)
- Suitable in harsh environments (temperature, EMC)
- Space and weight saving
- Access to broad and long-term experience of HUBER+SUHNER
- Automotive certified components
- Harmonized with other HUBER+SUHNER product portfolio

cHVDU – customised HVDU

Technical data

Electrial specifications	Customised
Voltage rating	up to 1000 VDC
Current rating – standard configuration	customer specific
Test voltage	2,150 VDC
Screen resistance	< 9 mΩ
Insulation resistance (1000 Vdc, 60 sec., 85 °C)	> 50 MΩ
Altitude	4000 m above sea level
EMC protection	LV123 and LV215
Channels (outputs fused only)	variable
HVIL	(passive) HV-interlock
Degree of customization	capacitors, contactors, relays, etc.

Mechanical data	Customised
Vibration and shock resistance	ISO 16750-3
Housing material	aluminium die-cast, aluminium alloy milled
Max. dimensions (length, width, height)	customer specific
Cable connection position	variable
Waterproof pressure equalizing membrane	yes

Environmental data	Customised
Temperature range (ambient)	-40 to +85 °C
Ingress protection	IP6K9K / IP67
Corrosion resistance	ISO 16750-4

Available for	Customised
H+S cable cross section	2.5 to 95 mm ²
Application (multifunctional)	commercial-, special- and industrial electric vehicles (incl. passenger cars)
Recommended APQP process step	B-, C-, (D-) sample

