GmbH

PERES

MOBILE AUTOMATION

for agricultural, construction, railway and municipal technology

VERSION OCTOBER 2022

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PERES GMBH

YOUR SYSTEM SUPPLIER FOR CONNECTION TECHNOLOGY IN HARSH ENVIRONMENTS

As a family-owned company PERES has developed, built and distributed reliable products for quality-oriented customers for more than 3 generations. PERES GmbH serves customer-specific requirements through the efficient use of electromechanical components. We use both in-house products and products developed in collaboration with customers. This is why the PERES product range of industrial connectors and cables is constantly growing.

Recently, our portfolio was expanded to include high-performance camera systems for vehicles of all kinds. This sees PERES strengthen its position as a full-service system supplier.

MORE PROTECTION AND SAFETY

HIGH QUALITY OVERMOLDING

Automating agricultural, construction, railroad and municipal technology demands high-quality connection components. The requirements for electromechanical components in these sectors are very strict. PERES GmbH has worked intensively on this product sector and enhanced proven products to offer quality-oriented users even more protection in challenging fields of application. PERES GmbH boosts the robustness and reliability of your products with high quality of overmolding. Overmolding helps to achieve a protection class of IP67 and IP69 in plugged-in condition. Two overmolding variants ensure optimal fastening of protective hoses, which additionally ensure the protection of the connection cable.

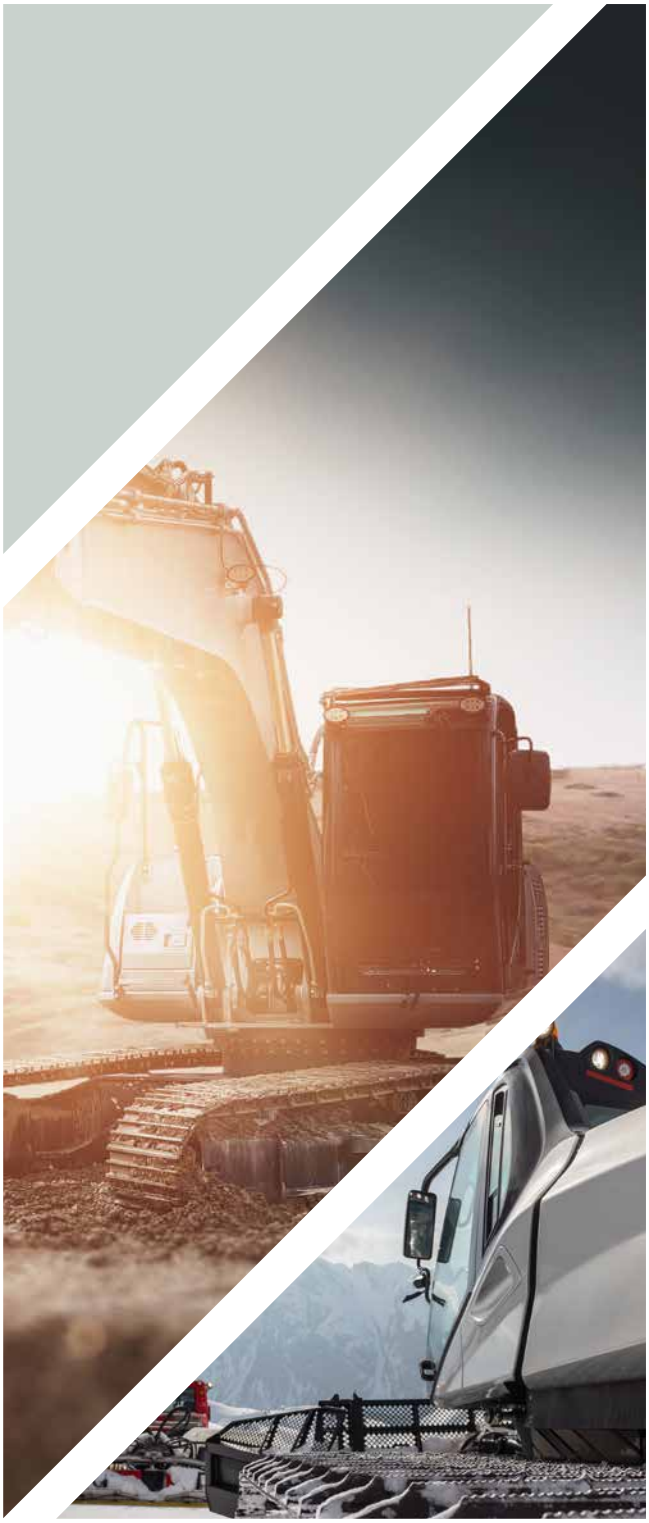
THE PERES BENEFIT

WE ORIENT OUR ACTIONS ON THE SPECIAL WISHES OF OUR CUSTOMERS

For a long time, PERES GmbH has impressed as an expert partner in automation projects, stepping beyond the role of a simple distributor.

Our goal is to inspire our customers with field proven products. from connection and joining technology. We have come a long way, so we know exactly how to implement high-quality and affordable products.

We offer all of this while at the same time providing excellent customer service and friendly support. We keep track of the latest developments in the field of electromechanical components and put our customers' wishes first. That is why our satisfied customers include brand-name companies.



With drive and innovative spirit, we accompany our customers from the development and design phase to the point of the final the implementation of their projects. Our customers' interests always take top priority for us.

CONTENT

Section 7 M12x1 series connectors

Section 8 Type S, M, L junction systems

Section 9 Vision systems

Section 10 Technical data

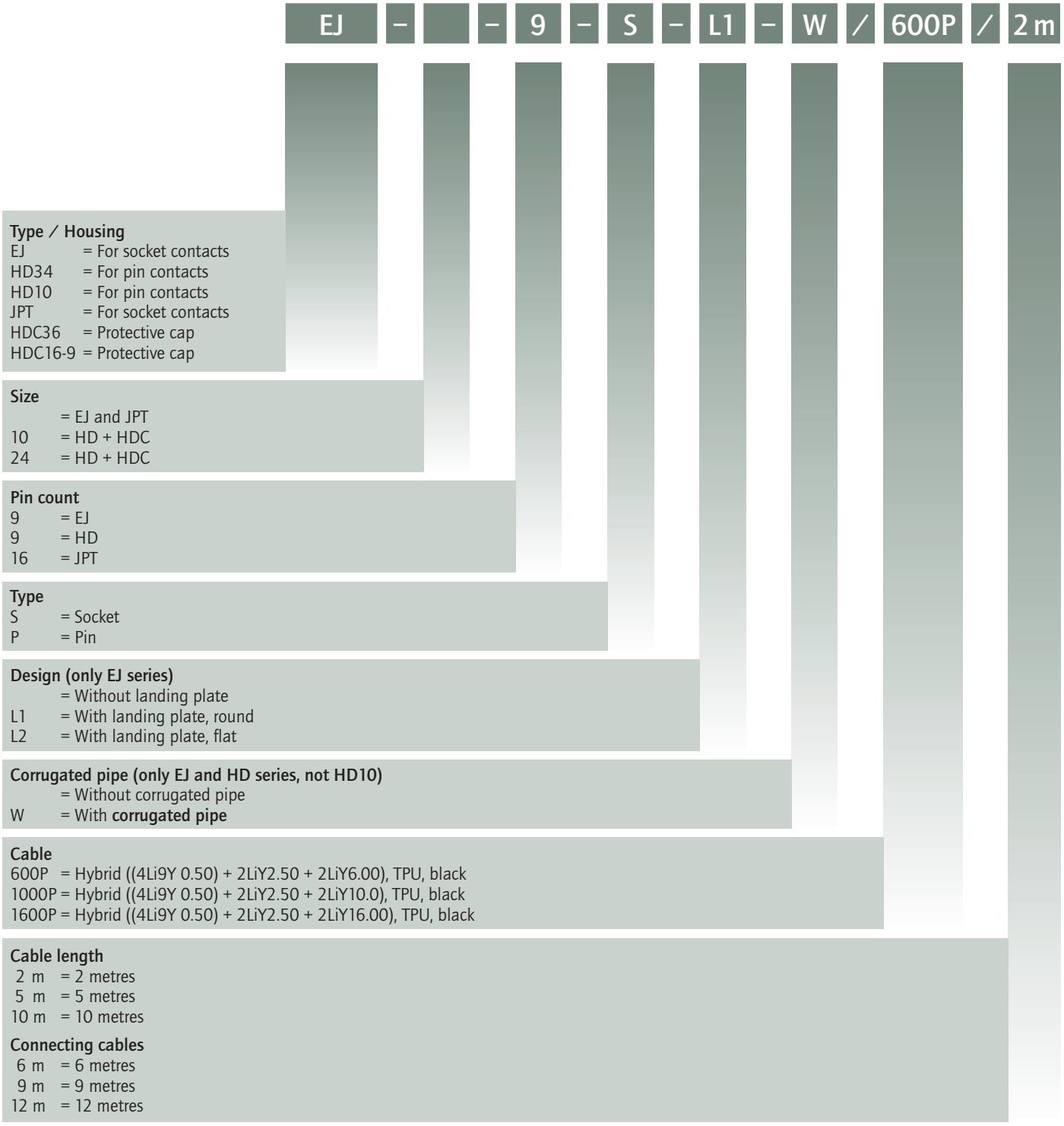
Section 1

ISOBUS and HD series connector

RS

ISOBUS and HD series connectors

Nomenclature



ISOBUS and HD series connectors
Product specification

Materials	
Contact	Copper alloy
Contact surface	EJ and HD: Ni / JPT: Sn
Insulating block	EJ: PA6.6 / HD: Aluminium/Thermoplastic / JPT: PBT ASA GF30
Overmolding	TPU, UL94 V-0, black
Landing plate (EJ)	PA6.6 UL94 V-0, black
Protective cap	EJ: PA6.6 UL94 V-0, black / HDC: Aluminium / Thermoplastic
Corrugated pipe	PA6 UL94 HB, black
Seal	Silicone

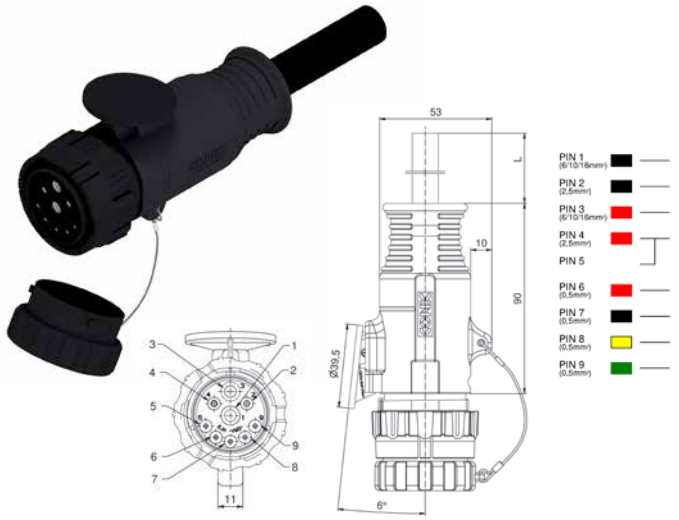
Technical data	
Rated voltage	EJ and JPT: max. 12 V DC / HD34: max. 32 V DC / HD10: 48 V AC / 60 V DC
Current carrying capacity	max.: 600P altern. 1000P altern. 1600P: 25 A at 40 °C [6 mm²] altern. 35 A at 40 °C [10 mm²] altern. 60 A at 40 °C [16 mm²] 15 A at 40 °C [2.5 mm²] 12 A at 40 °C [1.5 mm²] 5 A at 40 °C [0.5 mm²]
Degree of protection	IP67 in plugged-in condition
Ambient temperature for connector	EJ / HD: -40 °C to +85 °C / JPT: -40 °C to +80 °C
Ambient temperature for cable	HD10: Static: -40 °C to +80 °C Moving: -30 °C to +80 °C ISOBUS: Static: -40 °C to +85 °C Moving: -20 °C to +85 °C
Connection cross-section	HD10: 2 x 1.5 mm² + 3 x 0.5 mm² + 2x 2 x 0.5 mm² ISOBUS 600P altern. 1000P altern. 1600P: 2 x 6 mm² altern. 2 x 10 mm² altern. 2 x 16 mm² 2 x 2.5 mm² + 4 x 0.5 mm²
Housing	EJ / HD34 / HD10 / JPT

ISOBUS AND HD SERIES CONNECTORS
Connection cable

ISOBUS EJ socket connector

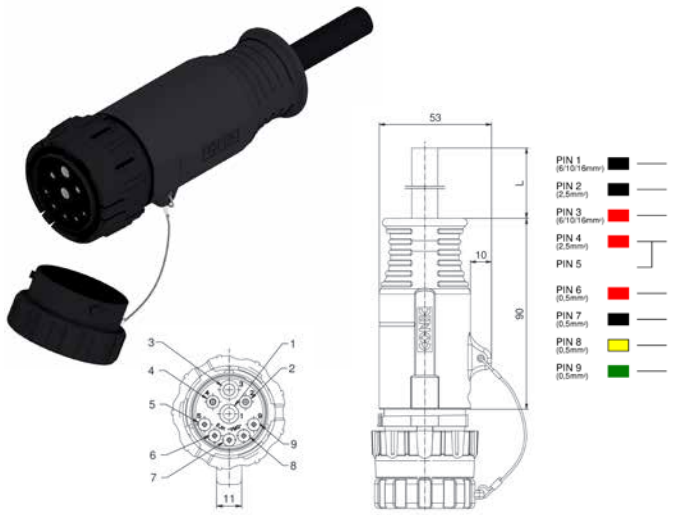
Power: 2 x 6 mm² [25 A / 600P] altern.
2 x 10 mm² [35 A / 1000P] altern.
2 x 16 mm² [60 A / 1600P] +
ECU Power: 2 x 2.5 mm² [15 A] +
CAN Bus: 4 x 0.5 mm² [5 A]

PUR hybrid cable



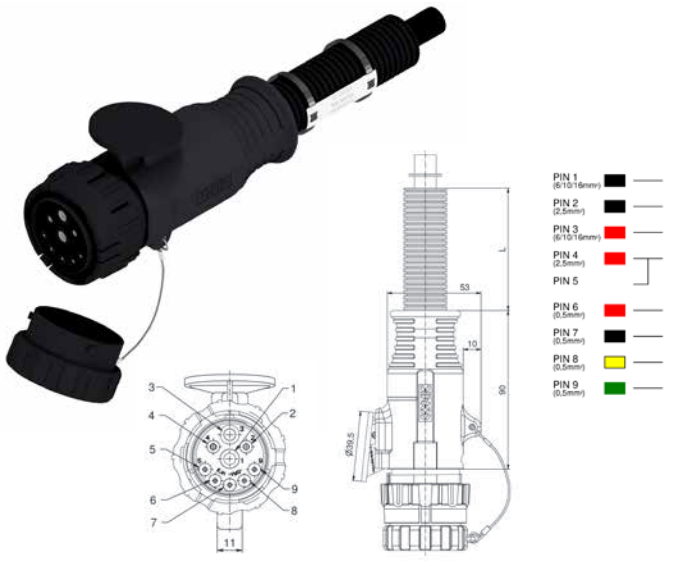
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]	Landing plate	Designation	Part. no.
9	max. 12 V DC	600P	2	2 x 6 2 x 2.5 4 x 0.5		EJ-9-S-L1/600P/2 m	55-10058
			5			EJ-9-S-L1/600P/5 m	55-10059
			10			EJ-9-S-L1/600P/10 m	55-10060
		1000P	2	2 x 10 2 x 2.5 4 x 0.5	✓	EJ-9-S-L1/1000P/2 m	55-10064
			5			EJ-9-S-L1/1000P/5 m	55-10065
			10			EJ-9-S-L1/1000P/10 m	55-10066
		1600P	2	2 x 16 2 x 2.5 4 x 0.5		EJ-9-S-L1/1600P/2 m	55-10070
			5			EJ-9-S-L1/1600P/5 m	55-10071
			10			EJ-9-S-L1/1600P/10 m	55-10072

PUR hybrid cable



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]	Landing plate	Designation	Part. no.
9	max. 12 V DC	600P	2	2 x 6 2 x 2.5 4 x 0.5		EJ-9-S/600P/2 m	55-10061
			5			EJ-9-S/600P/5 m	55-10062
			10			EJ-9-S/600P/10 m	55-10063
		1000P	2	2 x 10 2 x 2.5 4 x 0.5		EJ-9-S/1000P/2 m	55-10067
			5			EJ-9-S/1000P/5 m	55-10068
			10			EJ-9-S/1000P/10 m	55-10069
		1600P	2	2 x 16 2 x 2.5 4 x 0.5		EJ-9-S/1600P/2 m	55-10073
			5			EJ-9-S/1600P/5 m	55-10074
			10			EJ-9-S/1600P/10 m	55-10075

PUR hybrid cable with corrugated pipe



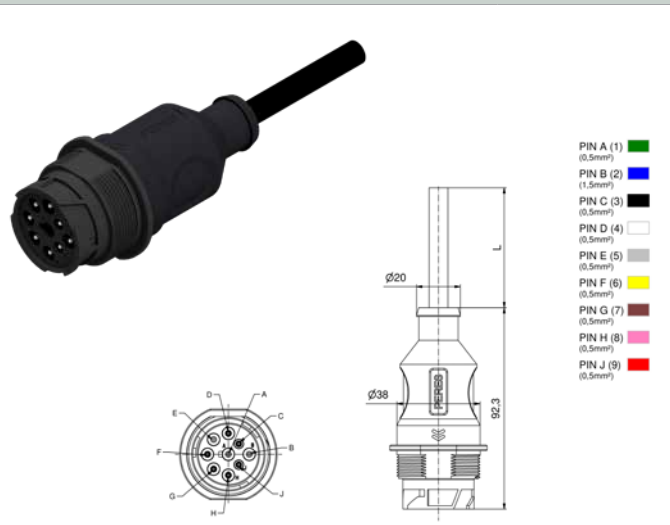
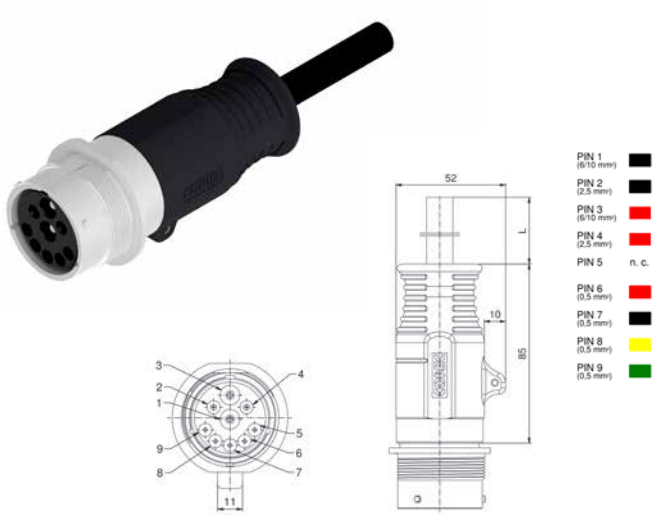
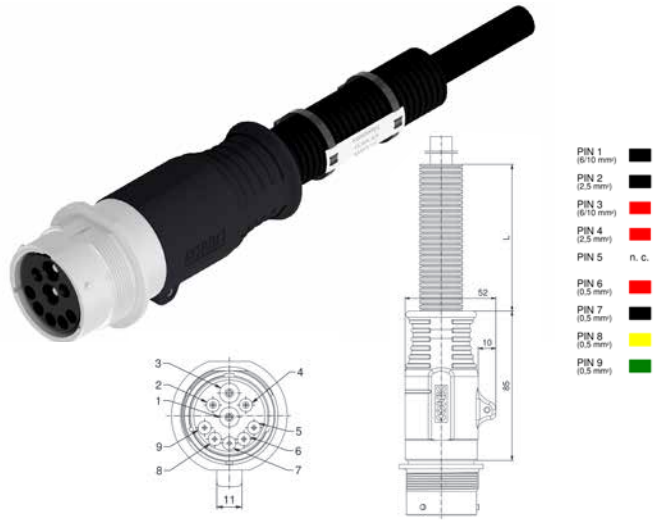
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]	Landing plate	Designation	Part. no.
9	max. 12 V DC	600P	2	2 x 6 2 x 2.5 4 x 0.5	✓	EJ-9-S-L1-W/600P/2 m	55-10100
			5			EJ-9-S-L1-W/600P/5 m	55-10101
			10			EJ-9-S-L1-W/600P/10 m	55-10102
		1000P	2	2 x 10 2 x 2.5 4 x 0.5		EJ-9-S-L1-W/1000P/2 m	55-10113
			5			EJ-9-S-L1-W/1000P/5 m	55-10114
			10			EJ-9-S-L1-W/1000P/10 m	55-10115

Subject to technical changes and errors. Other designs available on request. Version 1.2023

ISOBUS AND HD SERIES CONNECTORS
Connection cable

Pin connector HD

Power: 2 x 6 mm² [25 A / 600P] altern.
2 x 10 mm² [35 A / 1000P] altern.
2 x 16 mm² [60 A / 1600P] +
ECU Power: 2 x 2.5 mm² [15 A] +
CAN Bus: 4 x 0.5 mm² [5 A]

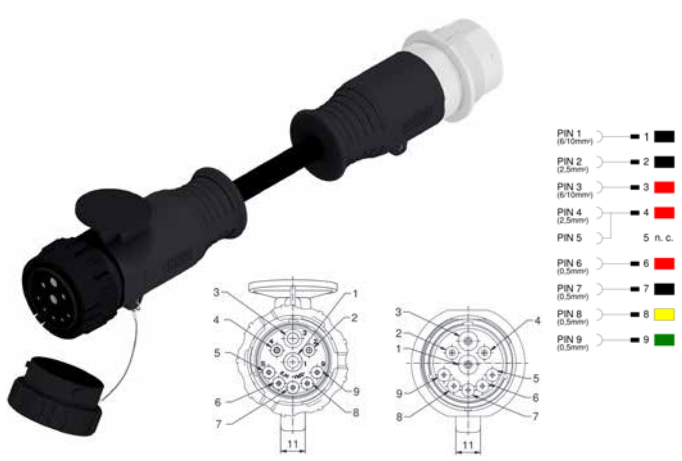
	Pin count	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Conductor cross-section [mm²]*	*Cable quality*	*Designation*	*Part. no.*
HD10- PUR hybrid cable								
	9	48 V AC / 60 V DC	12 A (1.5mm²) / 5 A (0.5mm²)	1		PUR	HD10-9.2P-A/PUR/1 m	PER1072
				2			HD10-9.2P-A/PUR/2 m	PER1073
				3			HD10-9.2P-A/PUR/3 m	PER1074
				5			HD10-9.2P-A/PUR/5 m	PER1075
				10			HD10-9.2P-A/PUR/10 m	PER1076
HD34- PUR hybrid cable								
	9	max. 32 V DC	600P	2	2 x 6 2 x 2.5 4 x 0.5		HD34-24-91-P/ 600P/2 m	55-10118
				5			HD34-24-91-P/ 600P/5 m	55-10119
				10			HD34-24-91-P/ 600P/10 m	55-10120
			1000P	2	2 x 10 2 x 2.5 4 x 0.5		HD34-24-91-P/ 1000P/2 m	55-10121
				5			HD34-24-91-P/ 1000P/5 m	55-10122
				10			HD34-24-91-P/ 1000P/10 m	55-10123
HD34 PUR hybrid cable with corrugated pipe								
	9	max. 32 V DC	600P	2	2 x 6 2 x 2.5 4 x 0.5		HD34-24-91-P-W/ 600P/2 m	55-10124
				5			HD34-24-91-P-W/ 600P/5 m	55-10125
				10			HD34-24-91-P-W/ 600P/10 m	55-10126
			1000P	2	2 x 10 2 x 2.5 4 x 0.5		HD34-24-91-P-W/ 1000P/2 m	55-10127
				5			HD34-24-91-P-W/ 1000P/5 m	55-10128
				10			HD34-24-91-P-W/ 1000P/10 m	55-10129

ISOBUS AND HD SERIES CONNECTORS
Connecting cable

EJ socket connector
Pin connector HD34

Power: 2 x 6 mm² [25 A / 600P] altern.
2 x 10 mm² [35 A / 1000P] altern.
2 x 16 mm² [60 A / 1600P] +
ECU Power: 2 x 2.5 mm² [15 A] +
CAN Bus: 4 x 0.5 mm² [5 A]
** Landing plate socket connector only*

PUR hybrid cable



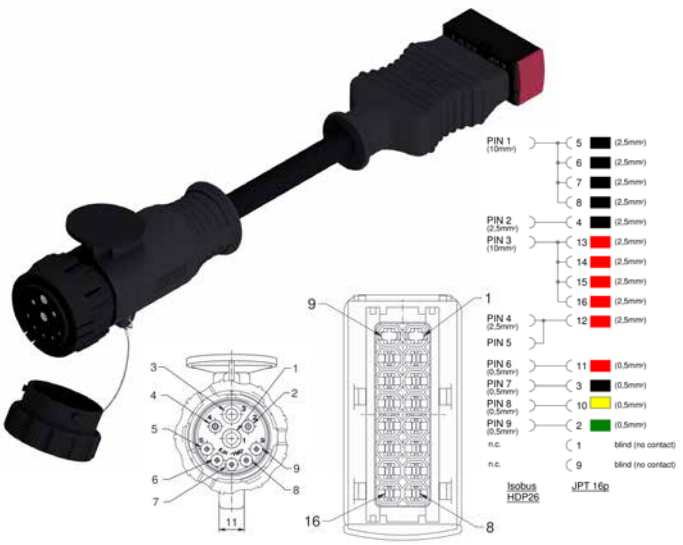
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]	Landing plate	Designation	Part. no.
9	max. 12 V DC	600P	6	2 x 6 2 x 2.5 4 x 0.5	✓*	EJ-9-S-L1-HD34-24-91-P/600P/6 m	55-10130
			9			EJ-9-S-L1-HD34-24-91-P/600P/9 m	55-10131
			12		✓*	EJ-9-S-L1-HD34-24-91-P/600P/12 m	55-10132
		1000P	6	2 x 10 2 x 2.5 4 x 0.5	✓*	EJ-9-S-L1-HD34-24-91-P/1000P/6 m	55-10133
			9			EJ-9-S-L1-HD34-24-91-P/1000P/9 m	55-10134
			12		✓*	EJ-9-S-L1-HD34-24-91-P/1000P/12 m	55-10135

PUR hybrid cable with corrugated pipe

Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]	Landing plate	Designation	Part. no.
9	max. 12 V DC	600P	6	2 x 10 2 x 2.5 4 x 0.5	✓*	EJ-9-S-L1-HD34-24-91-P-W/600P/6 m	55-10136
			9			EJ-9-S-L1-HD34-24-91-P-W/600P/9 m	55-10137
			12		✓*	EJ-9-S-L1-HD34-24-91-P-W/600P/12 m	55-10138
		1000P	6		✓*	EJ-9-S-L1-HD34-24-91-P-W/1000P/6 m	55-10139
			9			EJ-9-S-L1-HD34-24-91-P-W/1000P/9 m	55-10140
			12		✓*	EJ-9-S-L1-HD34-24-91-P-W/1000P/12 m	55-10141

EJ socket connector
Socket connector JPT

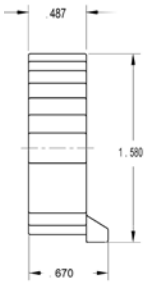
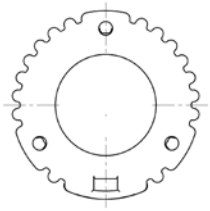
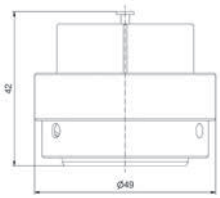
PUR hybrid cable



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]	Landing plate	Designation	Part. no.
9 / 16	max. 12 V DC	1000P	6	2 x 10 2 x 2.5 4 x 0.5	✓*	EJ-9-S-L1-JPT-16-S/1000P/6 m	55-10076
			9			EJ-9-S-L1-JPT-16-S/1000P/9 m	55-10077
			12		✓*	EJ-9-S-L1-JPT-16-S/1000P/12 m	55-10078

Subject to technical changes and errors. Other designs available on request. Version 1.2023

Dust protection cap HDC, aluminium
IP20

for pin contact HD10	Designation	Part. no.
  	HDC16-9	HDC16-9 -E004
for pin connector HD34		
 	HDC36-24	55-10142

Section 2

DT series valve connectors

DT SERIES VALVE CONNECTORS

Nomenclature

Y	DT06	–	2	S	W		–	A	–	03	/	K1	/	0.75	/	2 m

Design
Y= Y-distributor

Type / Housing
DT06 = For socket contacts
D%04 = For pin contacts
DTM06 = For miniature socket contacts
DTM04 = For miniature pin contacts

Pin count
2 = 2-pin
3 = 3-pin
4 = 4-pin
6 = 6-pin
8A = 8-pin A-keyed
12A = 12-pin A-keyed
Other keying on request

Type
S = Socket contacts/pin housing
P = Pin contacts/socket housing

Version
= Cable W = angled 90°
L = Single conductor [2-pin] 1-4= Alignment of cable outlet

Connection type, conduit
= Standard
G = With M12x1 threaded connector

Circuitry
A = No circuitry
B = With suppressor diode circuitry max. 12 V AC/24 V DC
E = With varistor circuitry max. 24 V AC/30 V DC
F = With freewheel diode circuitry max. 32 V DC
G = With suppressor diode circuitry max. 22 V AC/32 V DC

Overmolding colour
= Black (no circuitry); translucent (with circuitry)
03 = Blue
04 = Green
05 = Yellow
06 = Red
07 = White

Cable material
K1 = TPU, black, extremely flexible, halogen-free, UL
A1 = PVC/single conductor
AS = Sealing cap (no contacts)*
Further cable qualities on request *with circuitry on request

Conductor cross-section
0.5 = 0.5 mm² 0.75 = 0.75 mm² 1.0 = 1.0 mm² 1.5 = 1.5 mm²

Cable length
2 m = 2 metres
5 m = 5 metres
10 m = 10 metres

Connecting cables
5 m = 5 metres
Further length variants on request

Subject to technical changes and errors. Other designs available on request. Version 1.2023

DT SERIES VALVE CONNECTORS
Product specification

Materials	
Contact	Copper alloy
Contact surface	Ni
Insulating block	Thermoplast
Overmolding	TPU, UL94
Seal	Silicone

Technical data	
Rated voltage	With LED and protective circuit [B]: max. 12 V AC/ 24 V DC With LED and protective circuit [E]: max. 24 V AC/30 V DC With LED and protective circuit [F]: max. 32 V DC With LED and protective circuit [G]: max. 22 V AC/32 V DC Without protective circuit: 48 V AC/60 V DC
Current carrying capacity	max. 8 A at 40 °C [2-3-pin] 7 A at 40 °C [4-pin] 6 A at 40 °C [6-pin, 8-pin] 5 A at 40 °C [12-pin]
Degree of protection	IP67/IP69 in plugged-in condition
Ambient temperature for connector	-40 °C to +80 °C
Ambient temperature for cable	Static: -40 °C to +80 °C Moving: -25 °C to +80 °C
Single conductor ambient temperature	Static: -40 °C to +105 °C Moving: -10 °C to +105 °C
Connection cross-section	0.5 mm² [2-, 3-, 4-pin] 0.75 mm² 1.0 mm² [2-pin, 4-pin] 1.5 mm²
Housing	German DT06/DT04
Protective circuit	Suppressor diode + 2x LED yellow Varistor + 2x LED yellow Free-wheeling diode + LED yellow

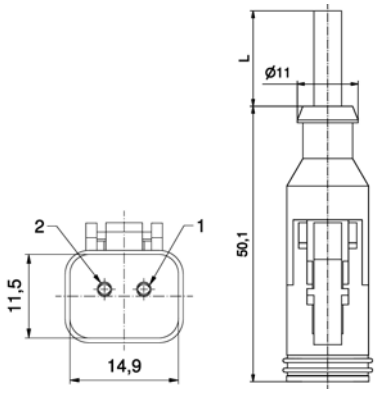
VALVE CONNECTOR
DT series

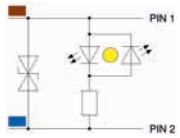
DT06, 2-pin
Socket contacts

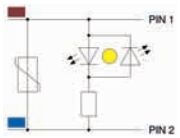
Circuitry variants DT06 (2-, 3-pin):
- *B/G= Suppressor diode + 2x LED yellow*
- *E= Varistor + 2x LED yellow*
- *F= Free-wheel diode + LED yellow*

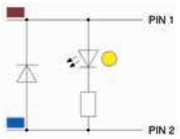
For information, see page 118 and 119
Other conductor cross-sections and cable lengths on request.

LED circuitry



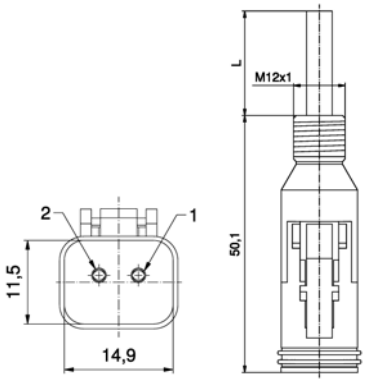


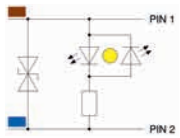


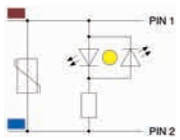


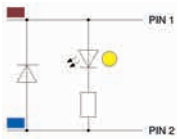
Contact assignment	*Pin count*	*Circuitry variant*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
	2	B	12 V AC / 24 V DC	8	2	PUR	2 x 0.75	DT06-2S-B/K1/0.75/2 m	55-00376
					5			DT06-2S-B/K1/0.75/5 m	55-00377
					10			DT06-2S-B/K1/0.75/10 m	55-00378
		G	8 - 22 V AC / 32 V DC	4	2			DT06-2S-G/K1/0.75/2 m	55-00760
					5			DT06-2S-G/K1/0.75/5 m	55-00761
					10			DT06-2S-G/K1/0.75/10 m	55-00762
		X	8 - 32 V DC	8	2			DT06-2S-X/K1/0.75/2 m	55-00590
					5			DT06-2S-X/K1/0.75/5 m	55-00591
					10			DT06-2S-X/K1/0.75/10 m	55-00592
		E	8 - 24 V AC / 30 V DC	4	5			DT06-2S-E/K1/0.75/2 m	55-00687
					10			DT06-2S-E/K1/0.75/5 m	55-00688
					10			DT06-2S-E/K1/0.75/10 m	55-00689
		F	10 - 32 V DC		2			DT06-2S-F/K1/0.75/2 m	55-00690
					5			DT06-2S-F/K1/0.75/5 m	55-00691
					10			DT06-2S-F/K1/0.75/10 m	55-00692

LED circuitry, M12 threaded connector







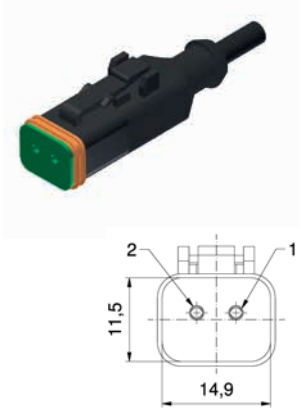
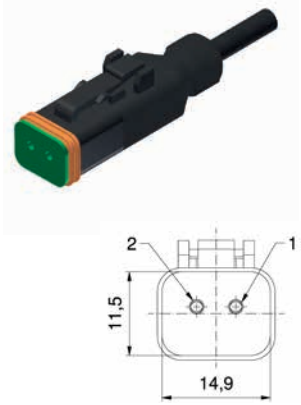


Contact assignment	*Pin count*	*Circuitry variant*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
	2	B	12 V AC / 24 V DC	8	2	PUR	2 x 0.75	DT06-2SG-B/K1/0.75/2 m	55-00379
					5			DT06-2SG-B/K1/0.75/5 m	55-00380
					10			DT06-2SG-B/K1/0.75/10 m	55-00381
		G	8 - 22 V AC / 32 V DC	4	2			DT06-2SG-G/K1/0.75/2 m	55-00763
					5			DT06-2SG-G/K1/0.75/5 m	55-00764
					10			DT06-2SG-G/K1/0.75/10 m	55-00765
		E	8 - 24 V AC / 30 V DC		2			DT06-2SG-E/K1/0.75/2 m	55-00700
					5			DT06-2SG-E/K1/0.75/5 m	55-00701
					10			DT06-2SG-E/K1/0.75/10 m	55-00702
		F	10 - 32 V DC		2			DT06-2SG-F/K1/0.75/2 m	55-00703
					5			DT06-2SG-F/K1/0.75/5 m	55-00704
					10			DT06-2SG-F/K1/0.75/10 m	55-00705

VALVE CONNECTOR
DT series

DT06, 2-pin
Socket contacts

Other conductor cross-sections and cable lengths on request.

Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
	PIN 1 PIN 2	2	48 V AC/60 V DC	8	2	PUR	2 x 0.75	DT06-2S-A/K1/0.75/2 m	55-00388
					5			DT06-2S-A/K1/0.75/5 m	55-00389
					10			DT06-2S-A/K1/0.75/10 m	55-00390
Without circuitry, M12 threaded connector									
	PIN 1 PIN 2	2	48 V AC/60 V DC	8	2	PUR	2 x 0.75	DT06-2SG-A/K1/0.75/2 m	55-00391
					5			DT06-2SG-A/K1/0.75/5 m	55-00392
					10			DT06-2SG-A/K1/0.75/10 m	55-00393

VALVE CONNECTOR
DT series

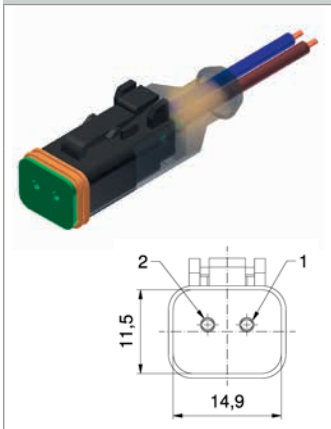
DT06, 2-pin
Socket contacts, single conductors

Circuitry variant DT06 2-pin single conductor:
- *B= Suppressor diode + 2x LED yellow*

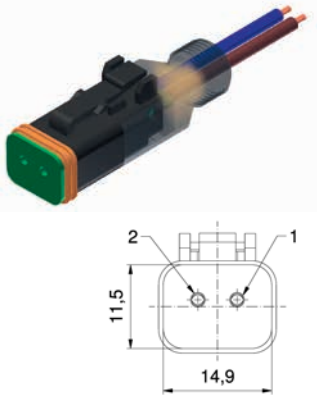
further circuitry variants on request

For information, see page 118 and 119
Other conductor cross-sections and cable lengths on request.

LED circuitry

Contact assignment	*Pin count*	*Circuitry variant*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Conductor length =L [m]*	*Conductor quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
	2	B	12 V AC / 24 V DC	8	0.5	PVC	2 x 0.75	DT06-2SL-B/A1/0.75/0.5 m	55-00560
					2			DT06-2SL-B/A1/0.75/2 m	55-00482
					5			DT06-2SL-B/A1/0.75/5 m	55-00561

LED circuitry, M12 threaded connector

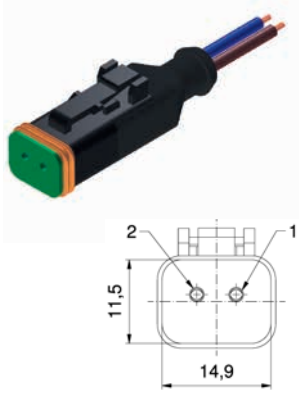
	2	B	12 V AC / 24 V DC	8	0.5	PVC	2 x 0.75	DT06-2SLG-B/A1/0.75/0.5 m	55-00562
					2			DT06-2SLG-B/A1/0.75/2 m	55-00483
					5			DT06-2SLG-B/A1/0.75/5 m	55-00563

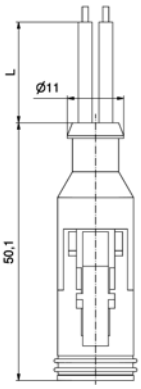
VALVE CONNECTOR
DT series

DT06, 2-pin
Socket contacts, single conductors

Other conductor cross-sections and cable lengths on request.

Without circuitry

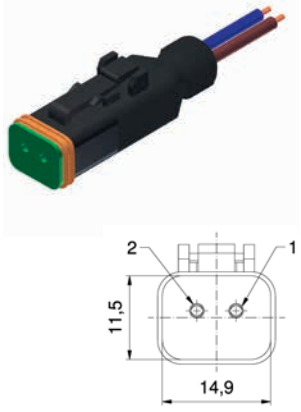


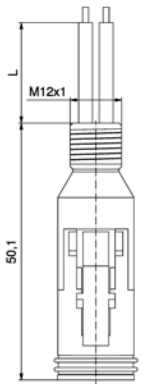


PIN 1
PIN 2

Contact assignment	*Pin count*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Conductor length =L [m]*	*Conductor quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
	2	48 V AC/60 V DC	8	0.5	PVC	2 x 0.75	DT06-2SL-A/A1/0.75/0.5 m	55-00564
				2			DT06-2SL-A/A1/0.75/2 m	55-00565
				5			DT06-2SL-A/A1/0.75/5 m	55-00566

Without circuitry, M12 threaded connector





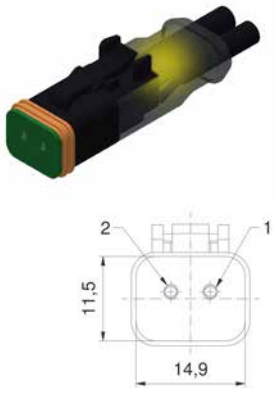
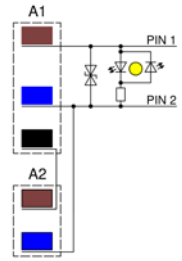
PIN 1
PIN 2

	2	48 V AC/60 V DC	8	0.5	PVC	2 x 0.75	DT06-2SLG-A/A1/0.75/0.5 m	55-00567
				2			DT06-2SLG-A/A1/0.75/2 m	55-00568
				5			DT06-2SLG-A/A1/0.75/5 m	55-00569

Valve connector
DT series

DT06, 2-pin
Socket contacts

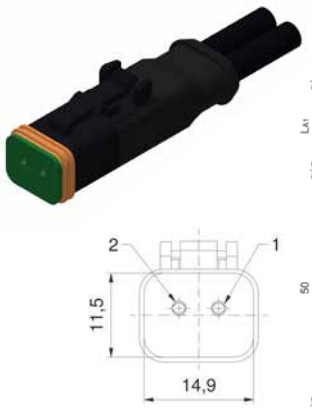
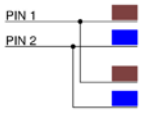
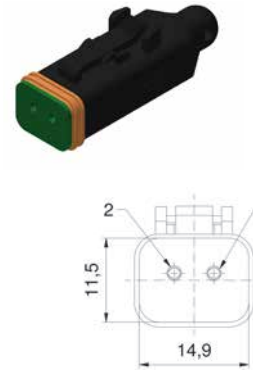
Circuitry variant DT06 2-pin
Twin output:
• B= Suppressor diode + 2x LED yellow
other wiring on request
For information, see page 118 and 119
Other conductor cross-sections and cable lengths on request.

LED circuitry, twin output	Contact assignment	Pin count	Circuitry variant	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		2	B	12 V AC / 24 V DC	8	2 x 1	PUR	3 x 0.75 + 2 x 0.75	YDT06-2S-B/K1/0.75/ 1m-K1/0.75/1 m	55-01406

Valve connector
DT series

DT06, 2-pin
Socket contacts, twin output

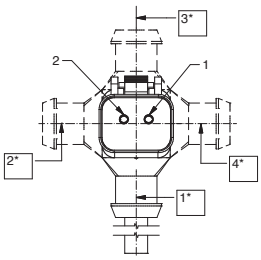
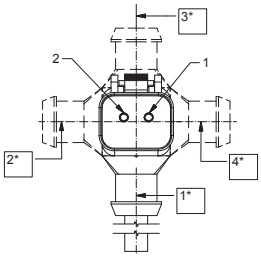
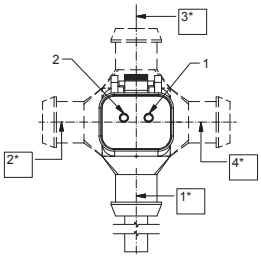
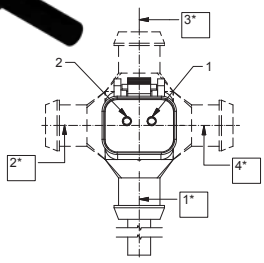
Other conductor cross-sections and cable lengths on request.

Without circuitry, twin output	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Conductor length =L [m]	Conductor quality	Conductor cross-section [mm²]	Designation	Part. no.
		2	48 V AC/60 V DC	8	2 x 1	PUR	2 x 2 x 0.75	YDT06-2S-A/K1/0.75/ 1m-K1/0.75/1 m	55-01153
End cap									
		2						DT06-2S-A/AS	55-01296

Valve connector
DT series

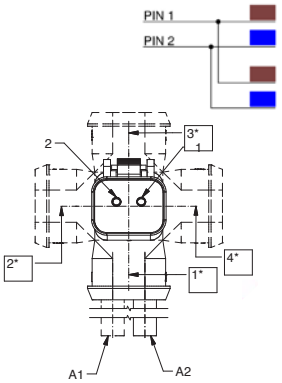
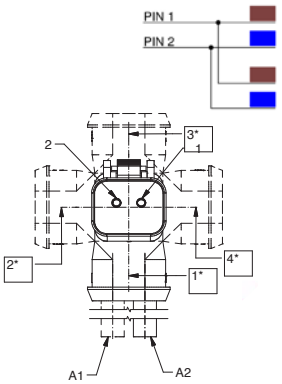
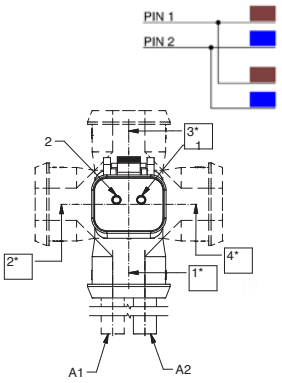
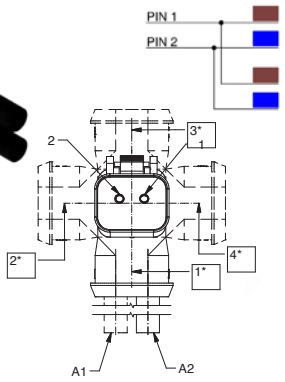
DT06, 2-pin
Socket contacts

Other conductor cross-sections and cable lengths on request.

Angled	*Pin count*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Cable cross section [mm²]*	*Designation*	*Part. no.*
 	2	48 V AC/60 V DC	8	1	PUR	2 x 0.75	DT06-2SW1-A/K1/0.75/1 m	55-01159
Angled								
 	2	48 V AC/60 V DC	8	1	PUR	2 x 0.75	DT06-2SW2-A/K1/0.75/1 m	55-01613
Angled								
 	2	48 V AC/60 V DC	8	1	PUR	2 x 0.75	DT06-2SW3-A/K1/0.75/1 m	55-01614
Angled								
 	2	48 V AC/60 V DC	8	1	PUR	2 x 0.75	DT06-2SW4-A/K1/0.75/1 m	55-01615

Valve connector
DT series

DT06, 2-pin
Socket contacts

Angled	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
 	2	48 V AC/60 V DC	8	2 X 1	PUR	2 x 2 x 0.75	YDT06-2SW1-A/K1/0.75/1 m	55-01601
Angled								
 	2	48 V AC/60 V DC	8	2 X 1	PUR	2 x 2 x 0.75	YDT06-2SW2-A/K1/0.75/1 m	55-01616
Angled								
 	2	48 V AC/60 V DC	8	2 X 1	PUR	2 x 2 x 0.75	YDT06-2SW3-A/K1/0.75/1 m	55-01617
Angled								
 	2	48 V AC/60 V DC	8	2 X 1	PUR	2 x 2 x 0.75	YDT06-2SW4-A/K1/0.75/1 m	55-01618

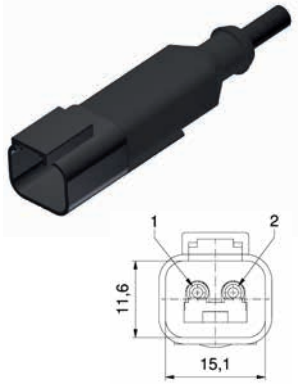
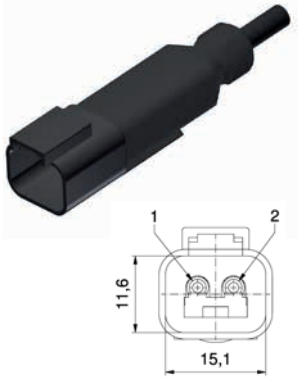
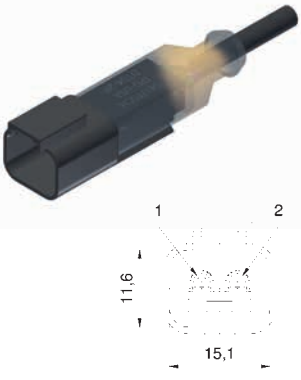
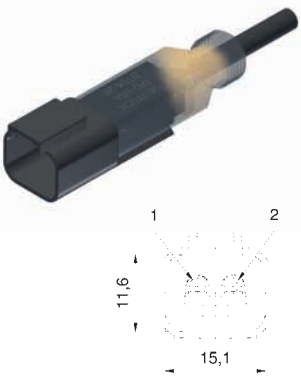
Subject to technical changes and errors. Other designs available on request. Version 1.2023

Valve connector
DT series

DT04, 2-pin
Pin contacts

Circuitry variants DT04 (2-, 3-pin) on request

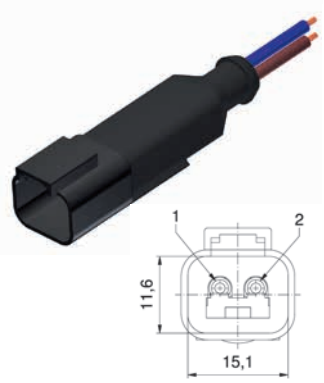
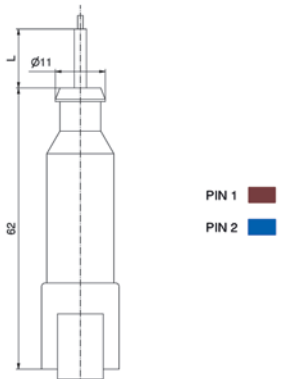
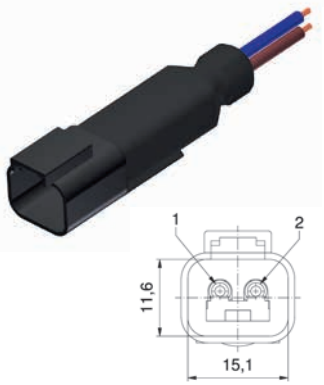
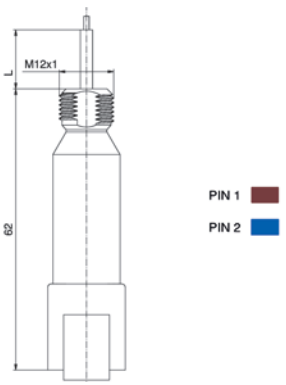
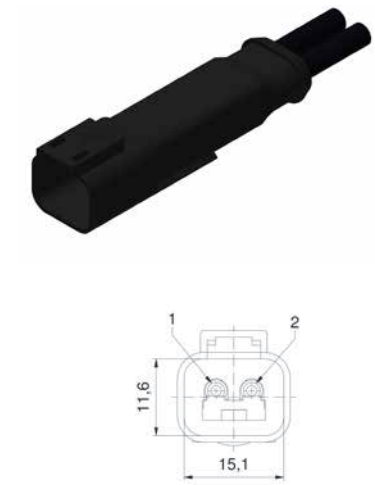
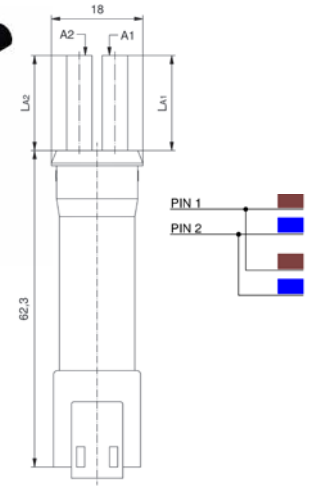
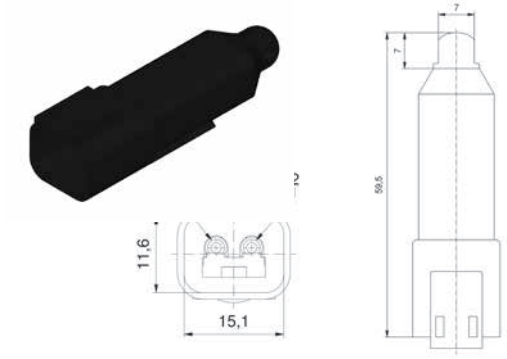
For information, see page 118 and 119
Other conductor cross-sections and cable lengths on request.

Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
	PIN 1 PIN 2	2	48 V AC/60 V DC	8	2	PUR	2 x 0.75	DT04-2P-A/K1/0.75/2 m	55-00448
					5			DT04-2P-A/K1/0.75/5 m	55-00449
					10			DT04-2P-A/K1/0.75/10 m	55-00450
Without circuitry, M12 threaded connector									
	PIN 1 PIN 2	2	48 V AC/60 V DC	8	2	PUR	2 x 0.75	DT04-2PG-A/K1/0.75/2 m	55-00451
					5			DT04-2PG-A/K1/0.75/5 m	55-00452
					10			DT04-2PG-A/K1/0.75/10 m	55-00453
LED circuitry									
	PIN 1 PIN 2	2	12 - 24 V AC/DC	8	2	PUR	2 x 0.75	DT04-2P-B/K1/0.75/2 m	55-00442
					5			DT04-2P-B/K1/0.75/5 m	55-00443
					10			DT04-2P-B/K1/0.75/10 m	55-00444
LED circuitry, M12 threaded connector									
	PIN 1 PIN 2	2	12 - 24 V AC/DC	8	2	PUR	2 x 0.75	DT04-2PG-B/K1/0.75/2 m	55-00445
					5			DT04-2PG-B/K1/0.75/5 m	55-00446
					10			DT04-2PG-B/K1/0.75/10 m	55-00447

Valve connector
DT series

DT04, 2-pin
Pin contacts

Other conductor cross-sections and cable lengths on request.

Without circuitry, single conductor	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Conductor length =L [m]	Conductor quality	Conductor cross-section [mm²]	Designation	Part. no.
		2	48 V AC/60 V DC	8	0.5	PVC	2 x 0.75	DT04-2PL-A/A1/0.75/0.5 m	55-00576
					2			DT04-2PL-A/A1/0.75/2 m	55-00577
					5			DT04-2PL-A/A1/0.75/5 m	55-00578
Without circuitry, M12 threaded connector, single conductor									
		2	48 V AC/60 V DC	8	0.5	PVC	2 x 0.75	DT04-2PLG-A/A1/0.75/0.5 m	55-00579
					2			DT04-2PLG-A/A1/0.75/2 m	55-00580
					5			DT04-2PLG-A/A1/0.75/5 m	55-00581
Without circuitry, twin output									
		2	48 V AC/60 V DC	8	2x 1	PUR	2 x 2 x 0.75	YDT04-2P-A/K1/0.75/ 1m-K1/0.75/1 m	55-01319
End cap									
		2						DT04-2P-A/AS	55-01297

Subject to technical changes and errors. Other designs available on request. Version 1.2023

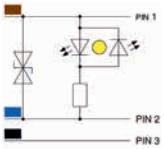
VALVE CONNECTOR
DT series

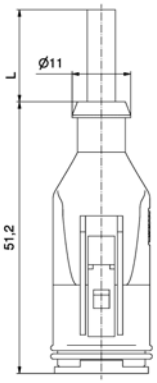
DT06, 3-pin
Socket contacts

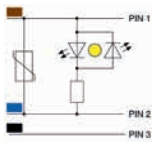
Circuitry variants DT06 (2-, 3-pin):
- *B/G= Suppressor diode + 2x LED yellow*
- *E= Varistor + 2x LED yellow*
- *F= Free-wheel diode + LED yellow*

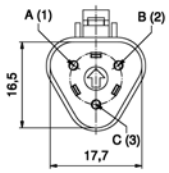
For information, see page 118 and 119
Other conductor cross-sections and cable lengths on request.

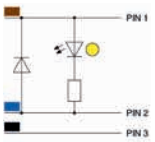
LED circuitry





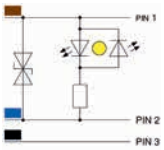


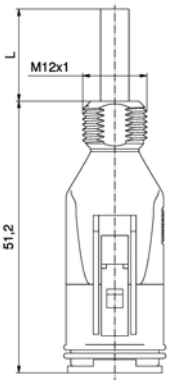


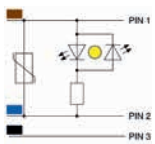


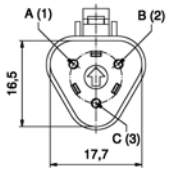
Pin count	Circuitry variant	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
3	B	12 V AC / 24 V DC	8	2	PUR	3 x 0.75	DT06-3S-B/K1/0.75/2 m	55-00850
				5			DT06-3S-B/K1/0.75/5 m	55-00851
				10			DT06-3S-B/K1/0.75/10 m	55-00852
	G	8 - 22 V AC / 32 V DC	4	2			DT06-3S-G/K1/0.75/2 m	55-00772
				5			DT06-3S-G/K1/0.75/5 m	55-00773
				10			DT06-3S-G/K1/0.75/10 m	55-00774
	E	8 - 24 V AC / 30 V DC	4	2			DT06-3S-E/K1/0.75/2 m	55-00720
				5			DT06-3S-E/K1/0.75/5 m	55-00721
				10			DT06-3S-E/K1/0.75/10 m	55-00722
	F	10 - 32 V DC		2			DT06-3S-F/K1/0.75/2 m	55-00751
				5			DT06-3S-F/K1/0.75/5 m	55-00752
				10			DT06-3S-F/K1/0.75/10 m	55-00753

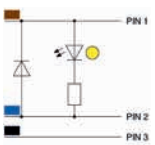
LED circuitry, M12 threaded connector











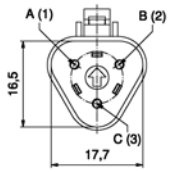
Pin count	Circuitry variant	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
3	B	12 V AC / 24 V DC	8	2	PUR	3 x 0.75	DT06-3SG-B/K1/0.75/2 m	55-00853
				5			DT06-3SG-B/K1/0.75/5 m	55-00854
				10			DT06-3SG-B/K1/0.75/10 m	55-00855
	G	8 - 22 V AC / 32 V DC	4	2			DT06-3SG-G/K1/0.75/2 m	55-00775
				5			DT06-3SG-G/K1/0.75/5 m	55-00776
				10			DT06-3SG-G/K1/0.75/10 m	55-00777
	E	8 - 24 V AC / 30 V DC	4	2			DT06-3SG-E/K1/0.75/2 m	55-00723
				5			DT06-3SG-E/K1/0.75/5 m	55-00724
				10			DT06-3SG-E/K1/0.75/10 m	55-00725
	F	10 - 32 V DC		2			DT06-3SG-F/K1/0.75/2 m	55-00754
				5			DT06-3SG-F/K1/0.75/5 m	55-00755
				10			DT06-3SG-F/K1/0.75/10 m	55-00756

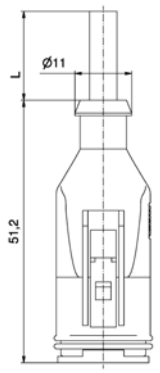
Valve connector
DT series

DT06, 3-pin
Socket contacts

Other conductor cross-sections and cable lengths on request.

Without circuitry

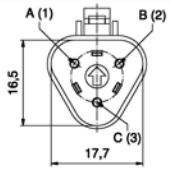


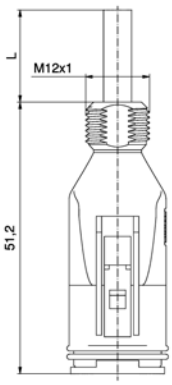


Contact assignment

Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
3	48 V AC/60 V DC	8	2	PUR	3 x 0.75	DT06-3S-A/K1/0.75/2 m	55-00826
			5			DT06-3S-A/K1/0.75/5 m	55-00827
			10			DT06-3S-A/K1/0.75/10 m	55-00828

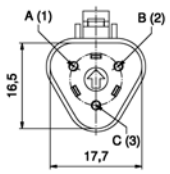
Without circuitry, M12 threaded connector

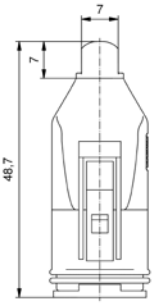




Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
3	48 V AC/60 V DC	8	2	PUR	3 x 0.75	DT06-3SG-A/K1/0.75/2 m	55-00829
			5			DT06-3SG-A/K1/0.75/5 m	55-00830
			10			DT06-3SG-A/K1/0.75/10 m	55-00831

End cap





Pin count	Designation	Part. no.
3	DT06-3S-A/AS	55-01356

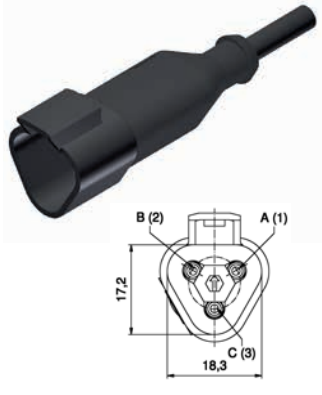
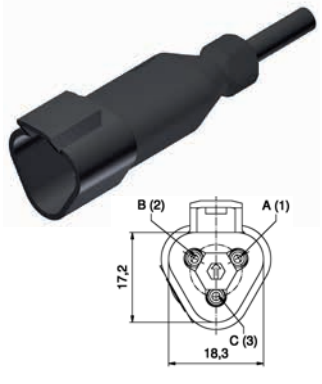
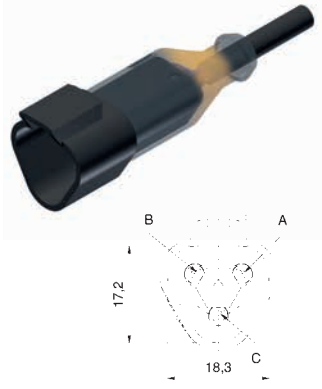
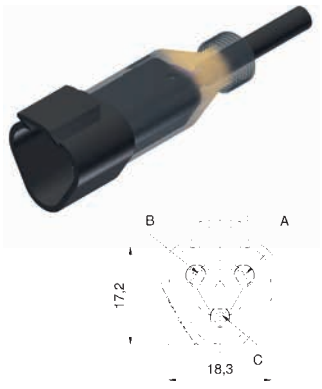
Valve connector
DT series

DT04, 3-pin
Pin contacts

Circuitry variants DT04 (2-, 3-pin) on request

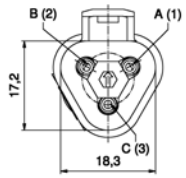
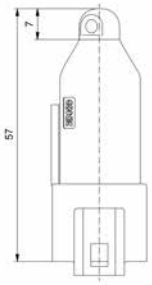
For information, see page 118 and 119

Other conductor cross-sections and cable lengths on request.

Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
	PIN 1 PIN 2 PIN 3	3	48 V AC/60 V DC	8	2	PUR	3 x 0.75	DT04-3P-A/K1/0.75/2 m	55-00832
					5			DT04-3P-A/K1/0.75/5 m	55-00833
					10			DT04-3P-A/K1/0.75/10 m	55-00834
Without circuitry, M12 threaded connector									
	PIN 1 PIN 2 PIN 3	3	48 V AC/60 V DC	8	2	PUR	3 x 0.75	DT04-3PG-A/K1/0.75/2 m	55-00835
					5			DT04-3PG-A/K1/0.75/5 m	55-00836
					10			DT04-3PG-A/K1/0.75/10 m	55-00837
LED circuitry									
	PIN 1 PIN 2 PIN 3	3	12 V AC / 24 V DC	8	2	PUR	3 x 0.75	DT04-3P-B/K1/0.75/2 m	55-00423
					5			DT04-3P-B/K1/0.75/5 m	55-00424
					10			DT04-3P-B/K1/0.75/10 m	55-00425
LED circuitry, M12 threaded connector									
	PIN 1 PIN 2 PIN 3	3	12 V AC / 24 V DC	8	2	PUR	3 x 0.75	DT04-3PG-B/K1/0.75/2m	55-00426
					5			DT04-3PG-B/K1/0.75/5 m	55-00427
					10			DT04-3PG-B/K1/0.75/10 m	55-00428

Valve connector
DT series

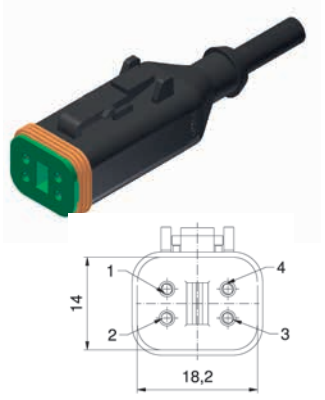
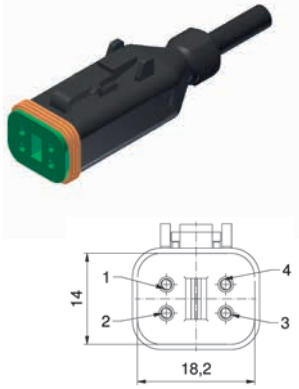
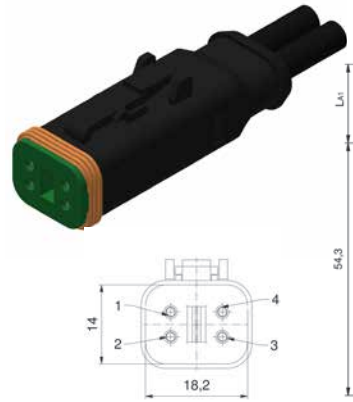
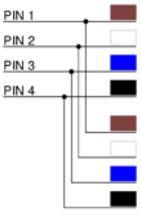
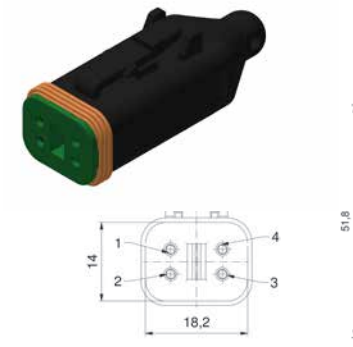
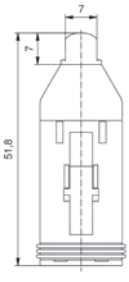
DT04, 3-pin
Pin contacts

End cap	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]		
  	3						DT04-3P-A/AS	55-01357

Valve connector
DT series

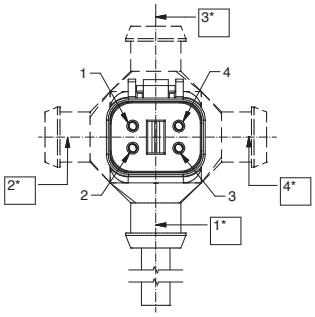
DT06, 4-pin
Socket contacts

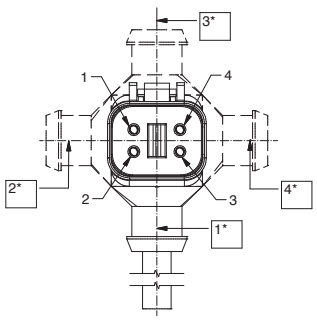
Other conductor cross-sections and cable lengths on request.

Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		4	48 V AC/60 V DC	7	2	PUR	4 x 0.75	DT06-4S-A/K1/0.75/2 m	55-00838
					5			DT06-4S-A/K1/0.75/5 m	55-00839
					10			DT06-4S-A/K1/0.75/10 m	55-00840
Without circuitry, M12 threaded connector									
		4	48 V AC/60 V DC	7	2	PUR	4 x 0.75	DT06-4SG-A/K1/0.75/2 m	55-00841
					5			DT06-4SG-A/K1/0.75/5 m	55-00842
					10			DT06-4SG-A/K1/0.75/10 m	55-00843
Without circuitry, twin output									
		4	48 V AC/60 V DC	7	2 X 1	PUR	2 x 4 x 0.75	YDT06-4S-A/K1/0.75/ 1m-K1/0.75/1 m	55-01155
End cap									
		4						DT06-4S-A/AS	55-01358

Valve connector
DT series

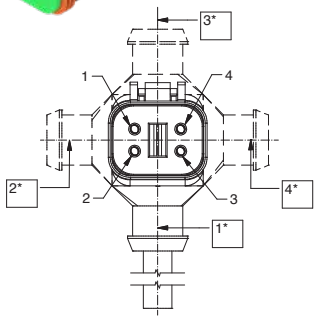
DT06, 4-pin
Socket contacts

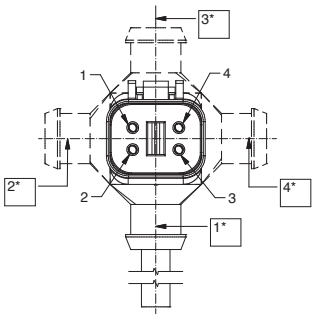
Angled	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
 	4	48 V AC/60 V DC	7	1	PUR	4 x 0.75	DT06-4SW1-A/K1/0.75/1 m	55-01161

Angled	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
 	4	48 V AC/60 V DC	7	1	PUR	4 x 0.75	DT06-4SW2-A/K1/0.75/1 m	55-01619

Valve connector
DT series

DT06, 4-pin
Socket contacts

Angled	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
  PIN 1 PIN 2 PIN 3 PIN 4	4	48 V AC/60 V DC	7	1	PUR	4 x 0.75	DT06-4SW3-A/K1/0.75/1 m	55-01620

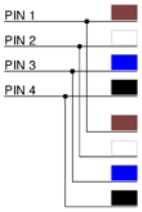
Angled	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
  PIN 1 PIN 2 PIN 3 PIN 4	4	48 V AC/60 V DC	7	1	PUR	4 x 0.75	DT06-4SW4-A/K1/0.75/1 m	55-01621

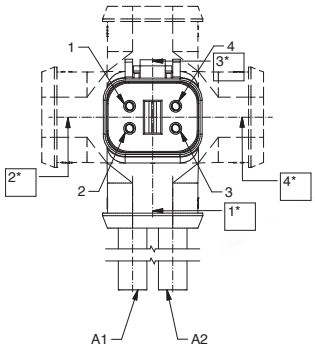
Valve connector
DT series

DT06, 4-pin
Socket contacts

Other conductor cross-sections and cable lengths on request.

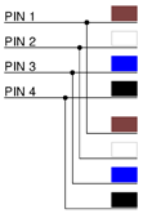
Angled

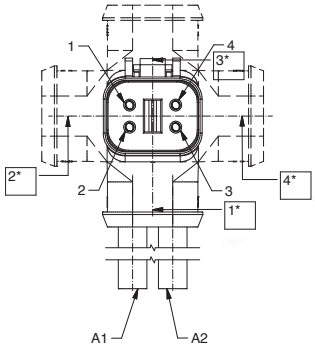




Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
4	48 V AC/60 V DC	7	2 X 1	PUR	2 x 4 x 0.75	YDT06-4SW1-A/K1/0.75/1 m	55-01602

Angled





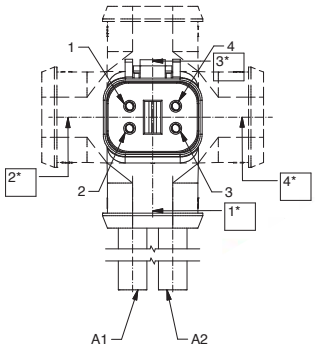
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
4	48 V AC/60 V DC	7	2 X 1	PUR	2 x 4 x 0.75	YDT06-4SW2-A/K1/0.75/1 m	55-01622

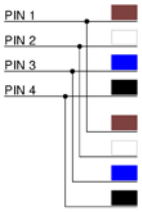
Valve connector
DT series

DT06, 4-pin
Socket contacts

Other conductor cross-sections and cable lengths on request.

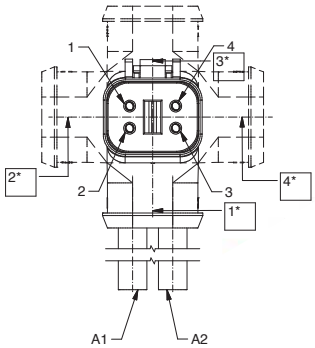
Angled

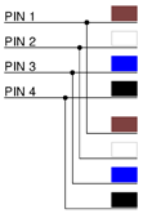




Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
4	48 V AC/60 V DC	7	2 X 1	PUR	2 x 4 x 0.75	YDT06-4SW3-A/K1/0.75/1 m	55-01623

Angled



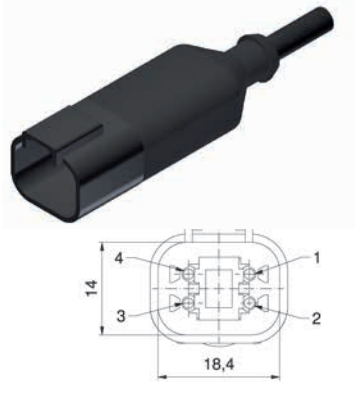
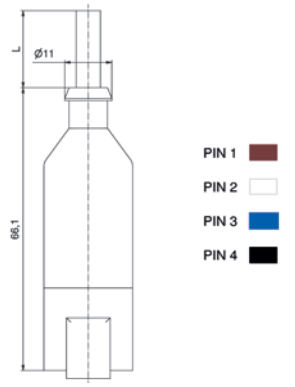
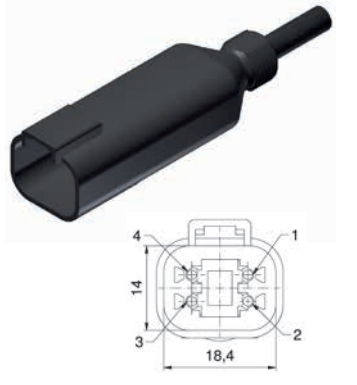
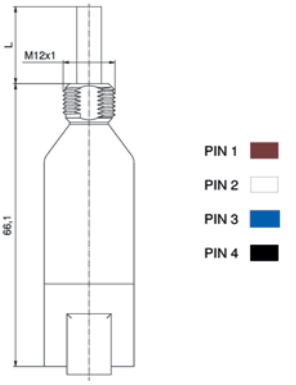
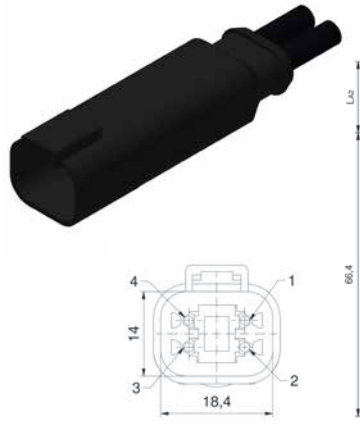
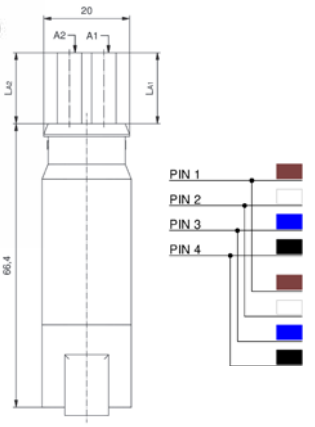
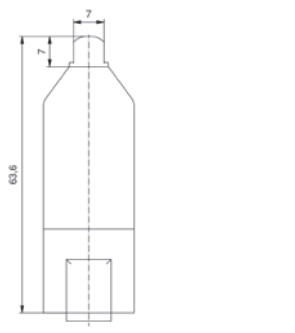


Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
4	48 V AC/60 V DC	7	2 X 1	PUR	2 x 4 x 0.75	YDT06-4SW4-A/K1/0.75/1 m	55-01624

Valve connector
DT series

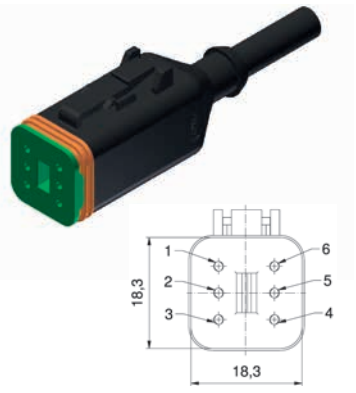
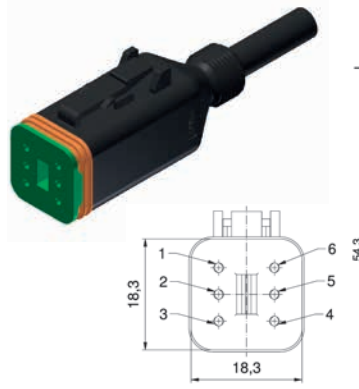
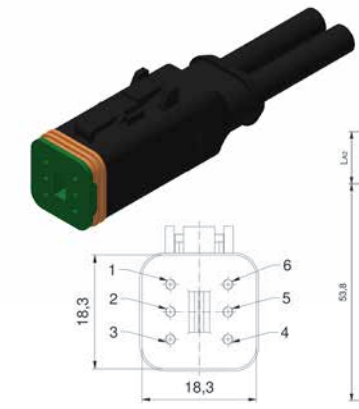
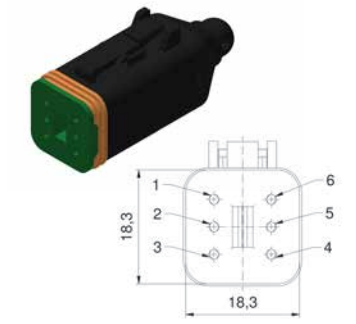
DT04, 4-pin
Pin contacts

Other conductor cross-sections and cable lengths on request.

Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		4	48 V AC/60 V DC	7	2	PUR	4 x 0.75	DT04-4P-A/K1/0.75/2 m	55-00844
					5			DT04-4P-A/K1/0.75/5 m	55-00845
					10			DT04-4P-A/K1/0.75/10 m	55-00846
Without circuitry, M12 threaded connector									
		4	48 V AC/60 V DC	7	2	PUR	4 x 0.75	DT04-4PG-A/K1/0.75/2 m	55-00847
					5			DT04-4PG-A/K1/0.75/5 m	55-00848
					10			DT04-4PG-A/K1/0.75/10 m	55-00849
Without circuitry, twin output									
		4	48 V AC/60 V DC	7	2 x 1	PUR	2 x 4 x 0.75	YDT04-4P-A/K1/0.75/ 1m-K1/0.75/1 m	55-01320
End cap									
		4						DT04-4P-A/AS	55-01359

Valve connector
DT series

DT06, 6-pin
Socket contacts

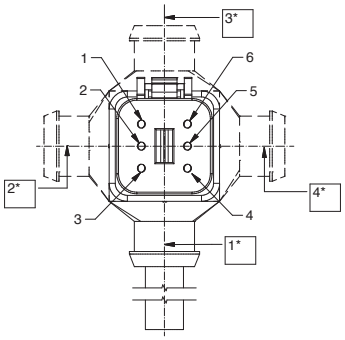
Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
		6	48 V AC/60 V DC	6	2	PUR	6 x 0.75	DT06-6S-A/K1/0.75/2 m	55-00501
					5			DT06-6S-A/K1/0.75/5 m	55-00502
					10			DT06-6S-A/K1/0.75/10 m	55-00503
Without circuitry, M12 threaded connector									
		6	48 V AC/60 V DC	6	2	PUR	6 x 0.75	DT06-6SG-A/K1/0.75/2 m	55-00504
					5			DT06-6SG-A/K1/0.75/5 m	55-00505
					10			DT06-6SG-A/K1/0.75/10 m	55-00506
Without circuitry, twin output									
		6	48 V AC/60 V DC	6	2 X 1	PUR	2 x 6 x 0.75	YDT06-6S-A/K1/0.75/ 1m-K1/0.75/1 m	55-01156
End cap									
		6						DT06-6S-A/AS	55-01360

Valve connector
DT series

DT06, 6-pin
Socket contacts

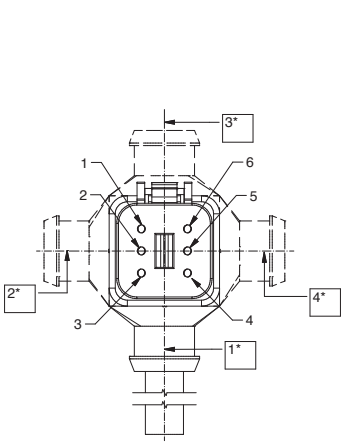
Other conductor cross-sections and cable lengths on request.

Angled



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
6	48 V AC/60 V DC	6	1	PUR	6 x 0.75	DT06-6SW1-A/K1/0.75/1 m	55-01162

Angled



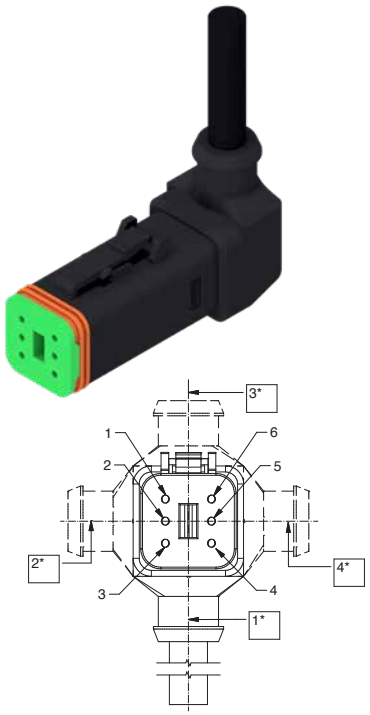
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
6	48 V AC/60 V DC	6	1	PUR	6 x 0.75	DT06-6SW2-A/K1/0.75/1 m	55-01615

Valve connector
DT series

DT06, 6-pin
Socket contacts

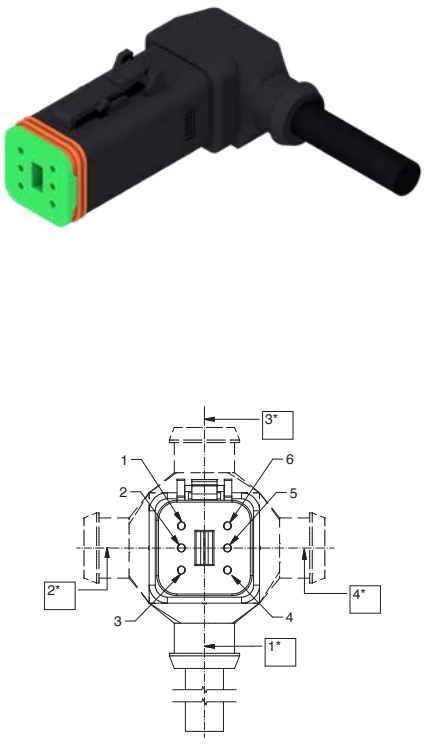
Other conductor cross-sections and cable lengths on request.

Angled



Pin count	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Cable cross section [mm²]*	*Designation*	*Part. no.*
6	48 V AC/60 V DC	6	1	PUR	6 x 0.75	DT06-6SW3-A/K1/0.75/1 m	55-01626

Angled



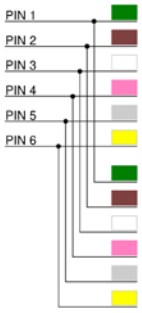
Pin count	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Cable cross section [mm²]*	*Designation*	*Part. no.*
6	48 V AC/60 V DC	6	1	PUR	6 x 0.75	DT06-6SW4-A/K1/0.75/1 m	55-01627

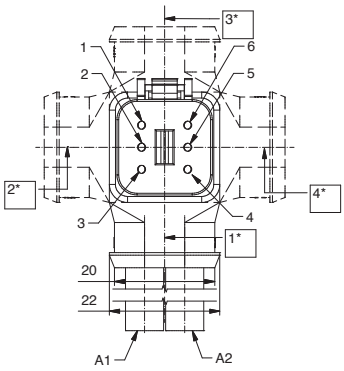
Valve connector
DT series

DT06, 6-pin
Socket contacts

Other conductor cross-sections and cable lengths on request.

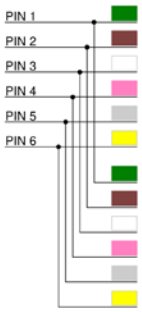
Angled

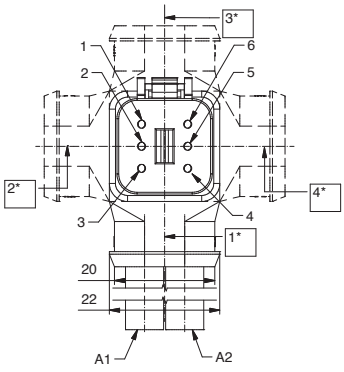




Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
6	48 V AC/60 V DC	6	2 X 1	PUR	2 x 6 x 0.75	YDT06-6SW1-A/K1/0.75/1 m	55-01603

Angled





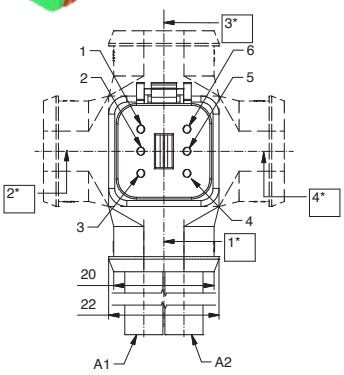
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
6	48 V AC/60 V DC	6	2 X 1	PUR	2 x 6 x 0.75	YDT06-6SW2-A/K1/0.75/1 m	55-01628

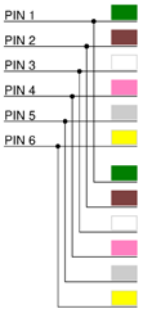
VALVE CONNECTOR
DT series

DT06, 6-pin
Socket contacts

Other conductor cross-sections and cable lengths on request.

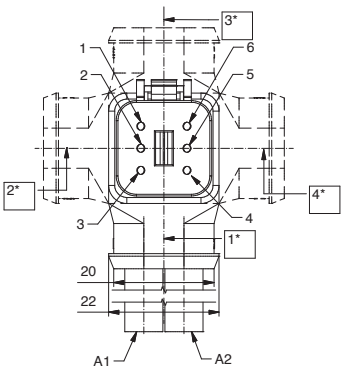
Angled

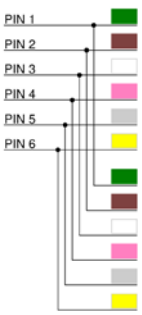




Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
6	48 V AC/60 V DC	6	2 X 1	PUR	2 x 6 x 0.75	YDT06-6SW3-A/K1/0.75/1 m	55-01629

Angled

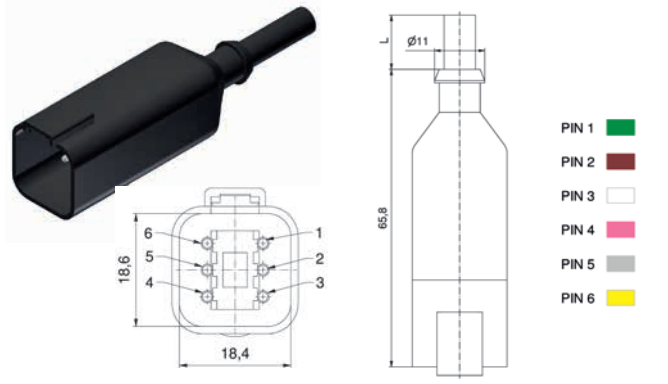
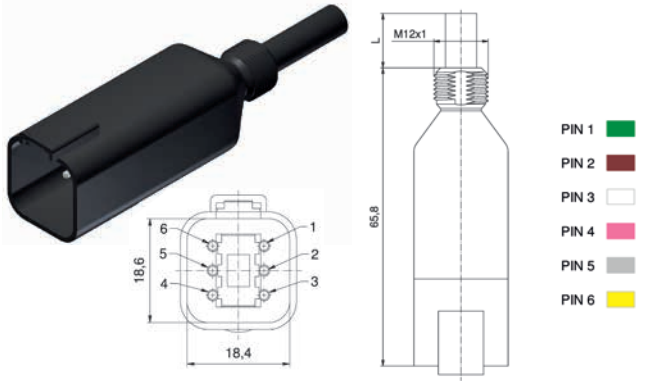
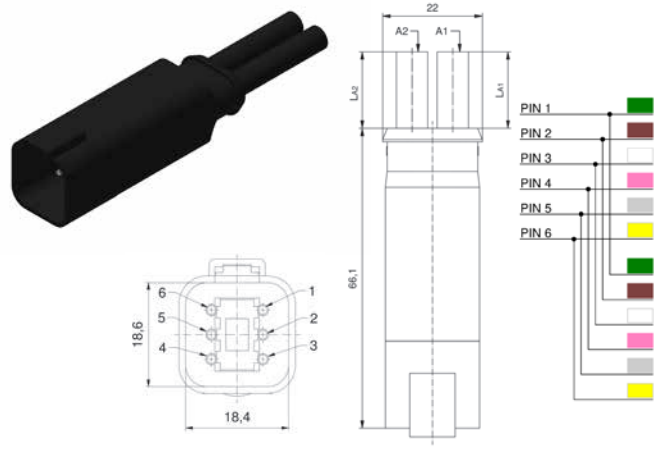
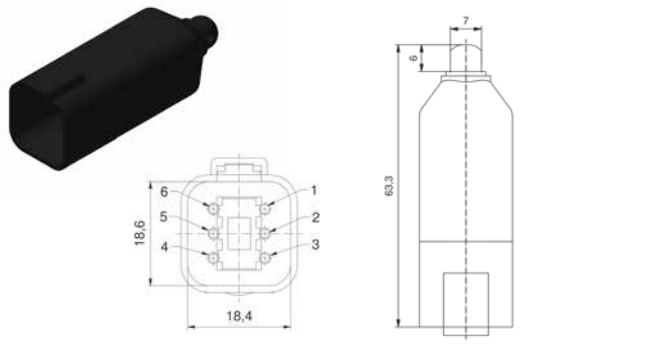




Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Cable cross section [mm²]	Designation	Part. no.
6	48 V AC/60 V DC	6	2 X 1	PUR	2 x 6 x 0.75	YDT06-6SW4-A/K1/0.75/1 m	55-01630

Valve connector
DT series

DT04, 6-pin
Pin contacts

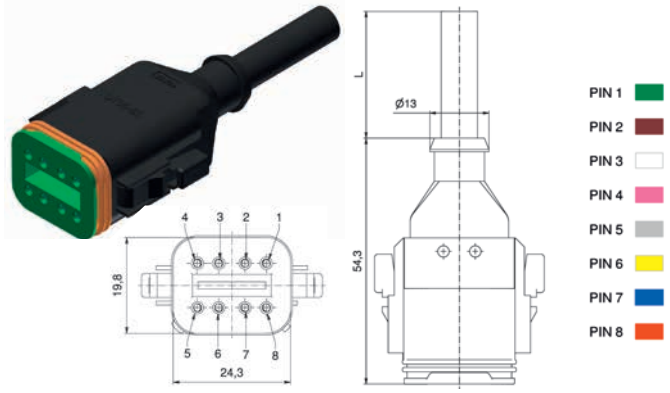
	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request.	
Without circuitry		6	48 V AC/60 V DC	6	2	PUR	6 x 0.75	DT04-6P-A/K1/0.75/2 m	55-00507
					5			DT04-6P-A/K1/0.75/5 m	55-00508
					10			DT04-6P-A/K1/0.75/10 m	55-00509
Without circuitry, M12 threaded connector		6	48 V AC/60 V DC	6	2	PUR	6 x 0.75	DT04-6PG-A/K1/0.75/2 m	55-00510
					5			DT04-6PG-A/K1/0.75/5 m	55-00511
					10			DT04-6PG-A/K1/0.75/10 m	55-00512
Without circuitry, twin output		6	48 V AC/60 V DC	6	2 x 1	PUR	2 x 6 x 0.75	YDT04-6P-A/K1/0.75/ 1m-K1/0.75/1 m	55-01321
End cap		6						DT04-6P-A/AS	55-01361

Valve connector
DT series

DT06, 8-pin
Socket contacts

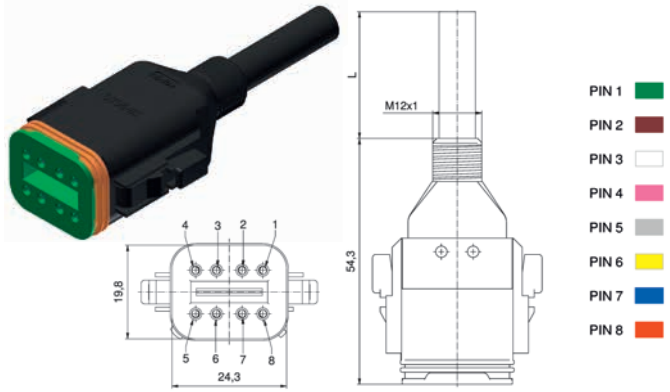
Other conductor cross-sections and cable lengths on request.

Without circuitry — *Contact assignment*



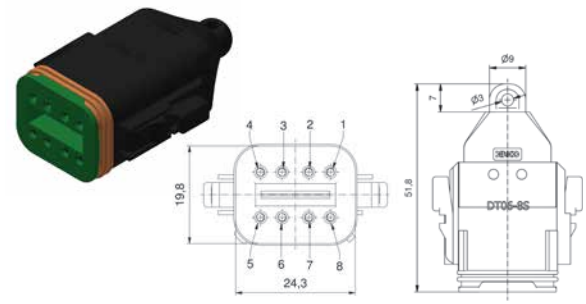
Pin count	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
8	48 V AC/60 V DC	6	2	PUR	8 x 0.75	DT06-8AS-A/K1/0.75/2 m	55-00526
			5			DT06-8AS-A/K1/0.75/5 m	55-00527
			10			DT06-8AS-A/K1/0.75/10 m	55-00528

Without circuitry, M12 threaded connector



Pin count	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
8	48 V AC/60 V DC	6	2	PUR	8 x 0.75	DT06-8ASG-A/K1/0.75/2 m	55-00532
			5			DT06-8ASG-A/K1/0.75/5 m	55-00533
			10			DT06-8ASG-A/K1/0.75/10 m	55-00534

End cap

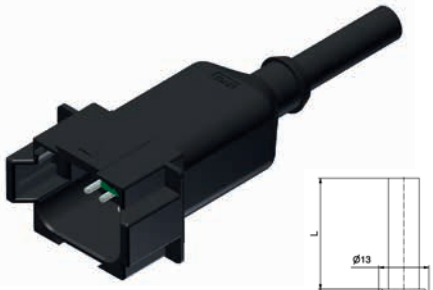
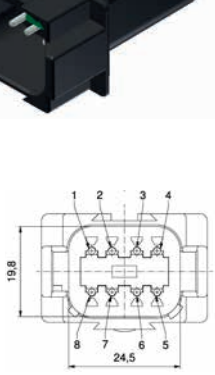
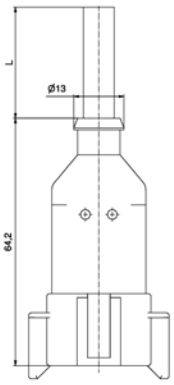
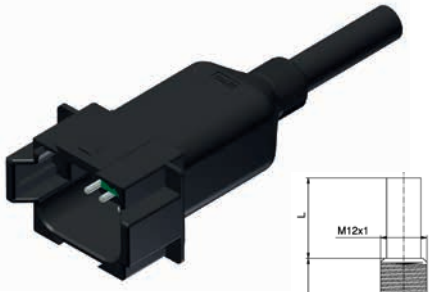
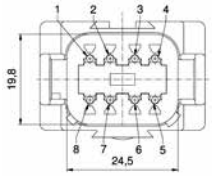
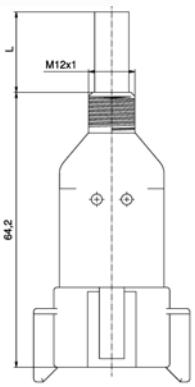
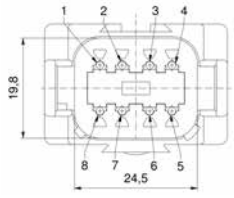
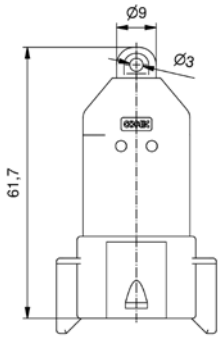


Pin count	*Designation*	*Part. no.*
8	DT06-8AS-A/AS	55-01362

Valve connector
DT series

DT04, 8-pin
Pin contacts

Other conductor cross-sections and cable lengths on request.

Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
  	PIN 1 PIN 2 PIN 3 PIN 4 PIN 5 PIN 6 PIN 7 PIN 8	8	48 V AC/60 V DC	6	2	PUR	8 x 0.75	DT04-8AP-A/K1/0.75/2m	55-00529
					5			DT04-8AP-A/K1/0.75/5m	55-00530
					10			DT04-8AP-A/K1/0.75/10m	55-00531
Without circuitry, M12 threaded connector									
  	PIN 1 PIN 2 PIN 3 PIN 4 PIN 5 PIN 6 PIN 7 PIN 8	8	48 V AC/60 V DC	6	2	PUR	8 x 0.75	DT04-8APG-A/K1/0.75/2m	55-00535
					5			DT04-8APG-A/K1/0.75/5m	55-00536
					10			DT04-8APG-A/K1/0.75/10m	55-00537
End cap									
  		8						DT04-8AP-A/AS	55-01363

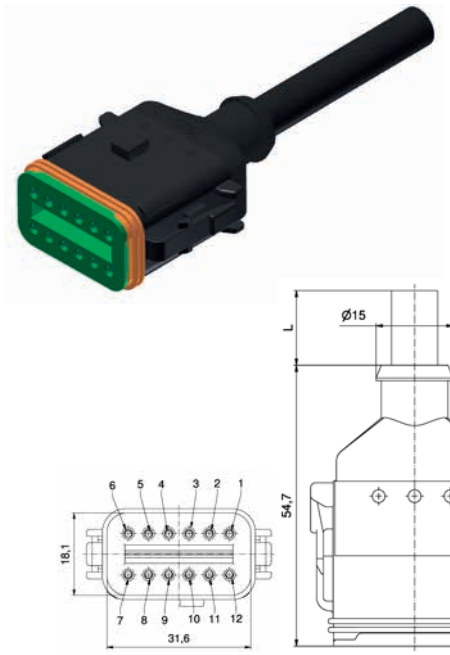
Subject to technical changes and errors. Other designs available on request. Version 1.2023

VALVE CONNECTOR
DT series

DT06, 12-pin
Socket contacts

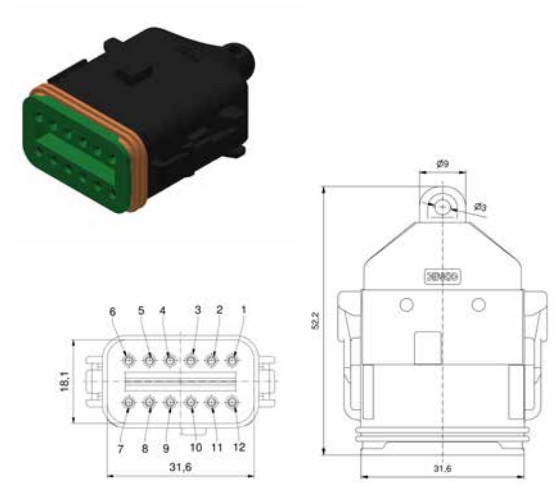
Other conductor cross-sections and cable lengths on request.

Without circuitry — *Contact assignment*



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
12	48 V AC/60 V DC	5	2	PUR	12 x 0.75	DT06-12AS-A/K1/0.75/2 m	55-00553
			5			DT06-12AS-A/K1/0.75/5 m	55-00554
			10			DT06-12AS-A/K1/0.75/10 m	55-00555

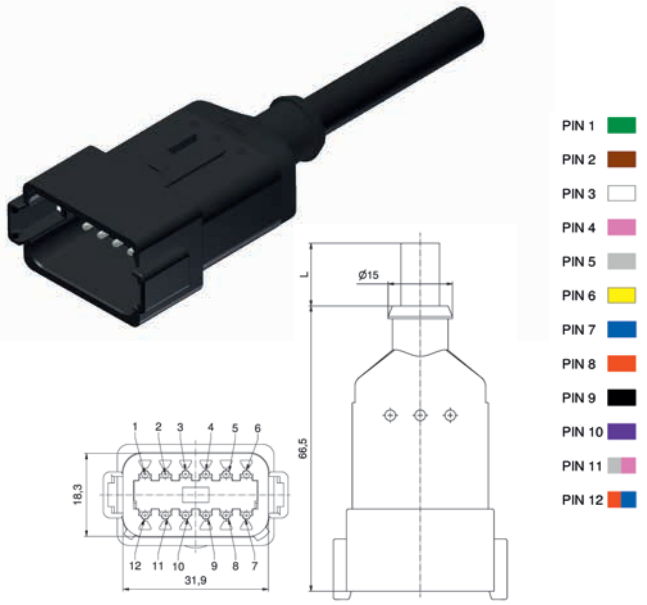
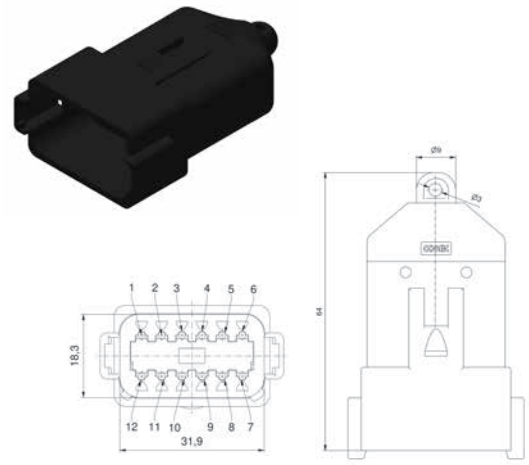
End cap



Pin count	Designation	Part. no.
12	DT06-12AS-A/AS	55-01364

Valve connector
DT series

DT04, 12-pin
Pin contacts

Without circuitry	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request.	
		12	48 V AC/60 V DC	5	2	PUR	12 x 0.75	DT04-12AP-A/K1/0.75/2m	55-00556
					5			DT04-12AP-A/K1/0.75/5m	55-00557
					10			DT04-12AP-A/K1/0.75/10m	55-00558
End cap									
		12						DT04-12AP-A/AS	55-01365

VALVE CONNECTOR
DT series

DT06-DT04
Connecting cables

Other conductor cross-sections and cable lengths on request.

	Pin count	*Rated voltage [V]*	*Bulk*	*Cable length =L [m]*	*Conductor cross-section*	*Designation*	*Part. no.*
2-pin							
	2	48 V AC/60 V DC	PUR	5	2 x 0.75	DT06-2S-A-DT04-2P-A/ K1/0.75/5 m	55-00675
3-pin							
	3	48 V AC/60 V DC	PUR	5	3 x 0.75	DT06-3S-A-DT04-3P-A/ K1/0.75/5 m	55-01532

Valve connector
DT series

DT06-DT04
Connecting cables

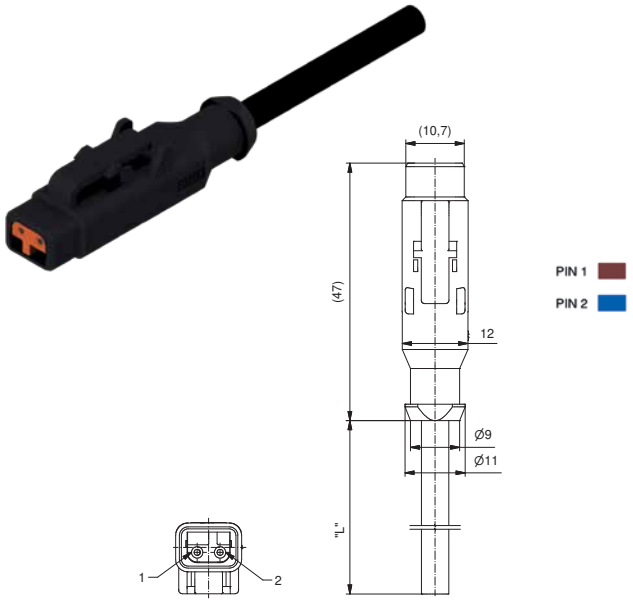
Other conductor cross-sections and cable lengths on request.

		Pin count	*Rated voltage [V]*	*Bulk*	*Cable length =L [m]*	*Conductor cross-section*	*Designation*	*Part. no.*
4-pin		4	48 V AC/60 V DC	PUR	5	4 x 0.75	DT06-4S-A-DT04-4P-A/ K1/0.75/5 m	55-50515
6-pin		6	48 V AC/60 V DC	PUR	5	6 x 0.75	DT06-6S-A-DT04-6P-A/ K1/0.75/5 m	55-01281

Valve connector
DTM series

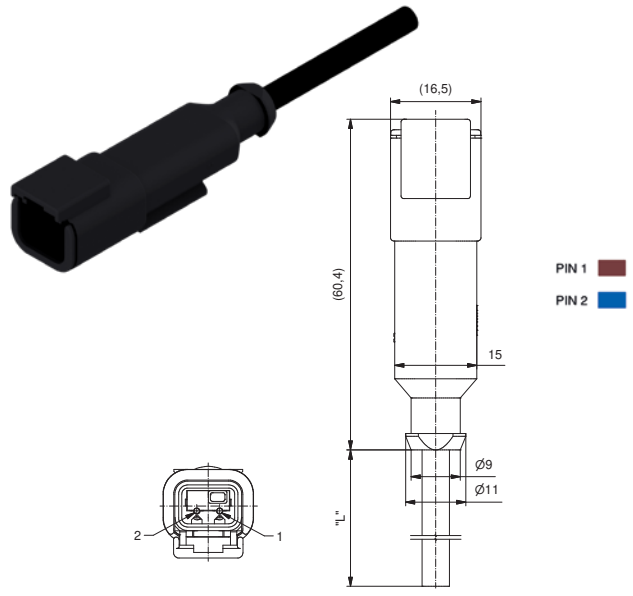
DTM06
2-pin

Socket contact



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
2	48 V AC/60V DC	7.5	2	PUR	2 x 0.5	DTM06-2S-A/K1/0.5/2m	55-01749
			5			DTM06-2S-A/K1/0.5/5m	55-01750
			10			DTM06-2S-A/K1/0.5/10m	55-01751

Pin contact



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
2	48 V AC/60V DC	7.5	2	PUR	2 x 0.5	DTM04-2P-A/K1/0.5/2m	55-01752
			5			DTM04-2P-A/K1/0.5/5m	55-01753
			10			DTM04-2P-A/K1/0.5/10m	55-01754

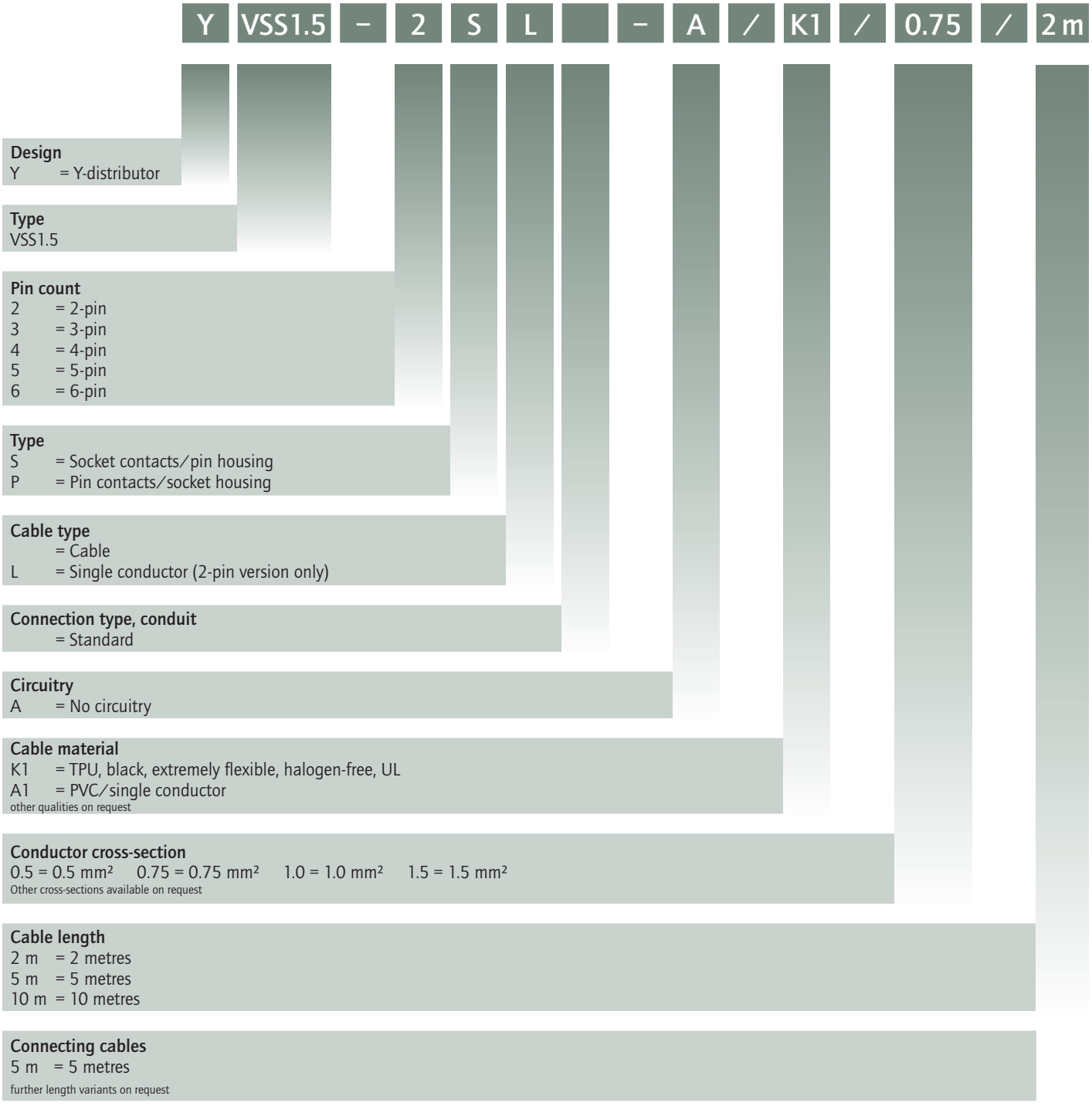
Section 3

Superseal series valve connector

S

Superseal series valve connectors

Nomenclature



Superseal series valve connectors
Product specification

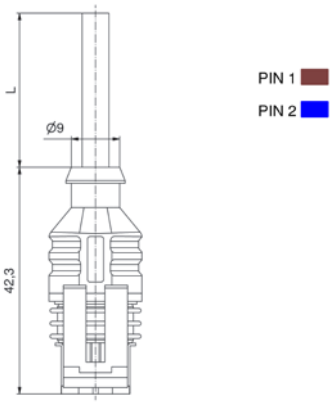
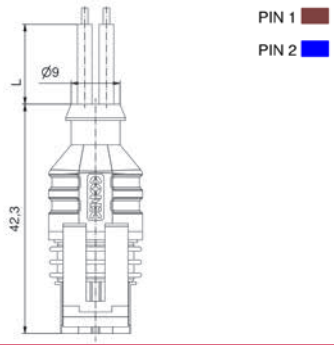
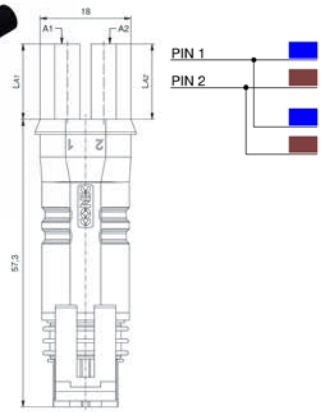
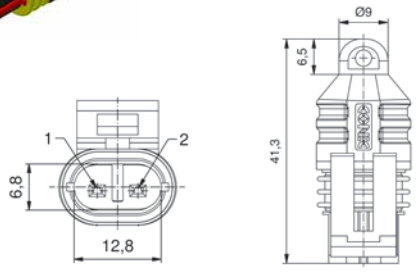
Materials	
Contact	Copper alloy
Contact surface	Sn
Insulating block	PA 6.6 GF
Overmolding	TPU, UL94, black
Seal	Silicone

Technical data	
Rated voltage	max. 24 V DC
Current carrying capacity	8 A at 40 °C [2-, 3-pin] 7 A at 40 °C [4-, 5-pin] 6 A at 40 °C [6-pin]
Degree of protection	IP67/IP69 in plugged-in condition
Ambient temperature for connector	-40 °C to +85 °C
Ambient temperature for cable	Static: -40 °C to +80 °C Moving: -25 °C to +80 °C
Single conductor ambient temperature	Static: -40 °C to +105 °C Moving: -10 °C to +105 °C
Connection cross-section	0.5 mm² [2-, 3-, 4-pin] 0.75 mm² 1.0 mm² [2-pin, 4-pin] 1.5 mm²
Housing	Superseal 1.5, black

Valve connector
Superseal series

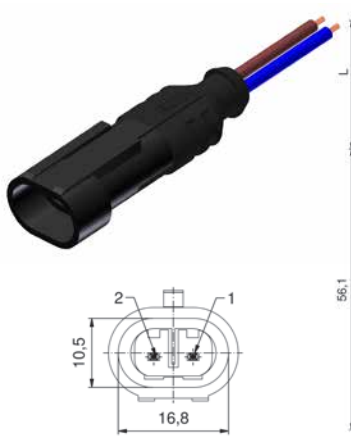
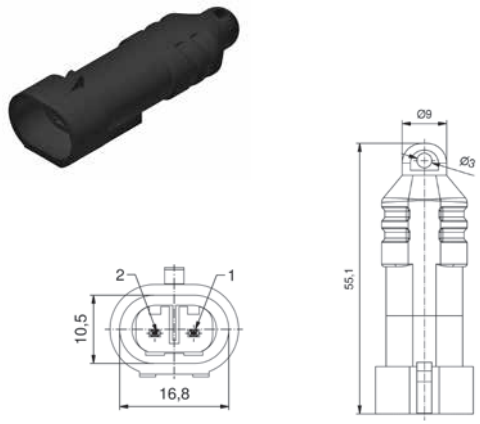
VSS 1.5
2-pin socket contacts

Other conductor cross-sections and cable lengths on request.

Socket contact	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		2	max. 24 V DC	8	2	PUR	2 x 0.75	VSS1.5-2S-A/K1/0.75/2 m	55-00470
					5			VSS1.5-2S-A/K1/0.75/5 m	55-00471
					10			VSS1.5-2S-A/K1/0.75/10 m	55-00472
Single conductor									
		2	max. 24 V DC	8	0.5	PVC	2 x 0.75	VSS1.5-2SL-A/A1/0.75/0.5m	55-00582
					2			VSS1.5-2SL-A/A1/0.75/2m	55-00583
					5			VSS1.5-2SL-A/A1/0.75/5m	55-00584
Twin output									
		2	max. 24 V DC	8	2 x 1	PUR	2 x 2 x 0.75	YVSS1.5-2S-A/K1/0.75/ 1m-K1/0.75/1m	55-01300
End cap									
		2						VSS1.5-2S-A/AS	55-01298

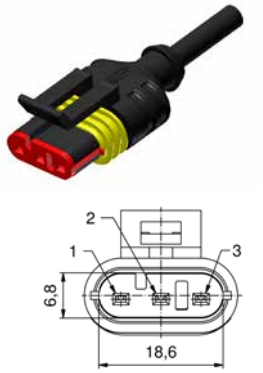
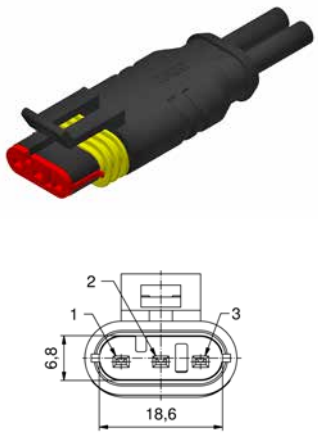
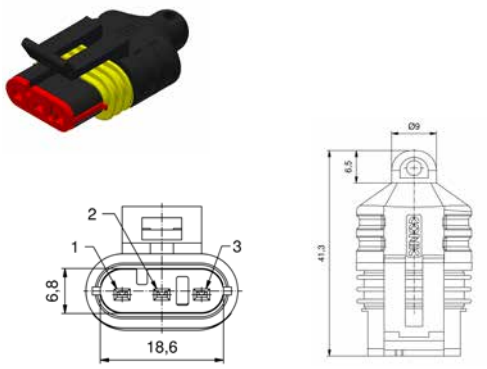
Valve connector
Superseal series

VSS 1.5
2-pin, pin contacts

Pin contact	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
	PIN 1 PIN 2	2	max. 24 V DC	8	2	PUR	2 x 0.75	VSS1.5-2P-A/K1/0.75/2 m	55-00466
					5			VSS1.5-2P-A/K1/0.75/5 m	55-00467
					10			VSS1.5-2P-A/K1/0.75/10 m	55-00468
Single conductor									
	PIN 1 PIN 2	2	max. 24 V DC	8	0.5	PVC	2 x 0.75	VSS1.5-2PL-A/A1/0.75/0.5m	55-00585
					2			VSS1.5-2PL-A/A1/0.75/2m	55-00586
					5			VSS1.5-2PL-A/A1/0.75/5m	55-00587
End cap									
		2						VSS1.5-2P-A/AS	55-01299

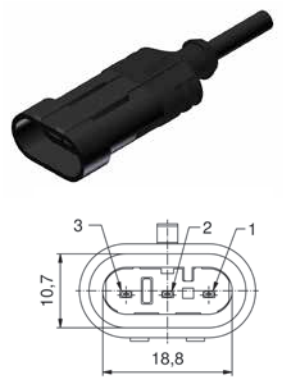
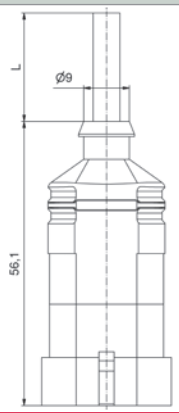
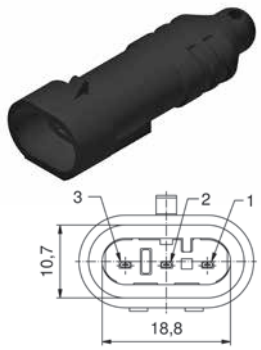
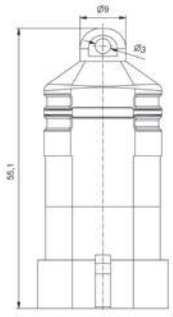
Valve connector
Superseal series

VSS 1.5
3-pin socket contacts

Socket contact / Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
	3	max. 24 V DC	8	2	PUR	3 x 0.75	VSS1.5-3S-A/K1/0.75/2 m	55-00478
				5			VSS1.5-3S-A/K1/0.75/5 m	55-00479
				10			VSS1.5-3S-A/K1/0.75/10 m	55-00480
Twin output								
	3	max. 24 V DC	8	2 x 1	PUR	2 x 3 x 0.75	YVSS1.5-3S-A/K1/0.75/ 1m-K1/0.75/1m	55-01301
End cap								
	3						VSS1.5-3S-A/AS	55-01376

Valve connector
Superseal series

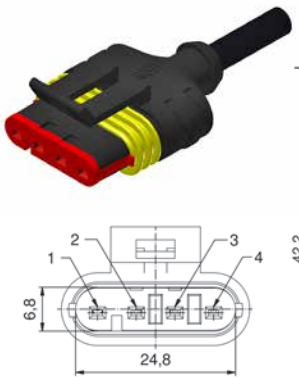
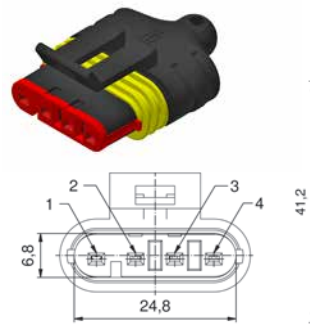
VSS 1.5
3-pin, pin contacts

Pin contact	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
 		3	max. 24 V DC	8	2	PUR	3 x 0.75	VSS1.5-3P-A/K1/0.75/2 m	55-00474
					5			VSS1.5-3P-A/K1/0.75/5 m	55-00475
					10			VSS1.5-3P-A/K1/0.75/10 m	55-00476
End cap									
 		3						VSS1.5-3P-A/AS	55-01375

Valve connector
Superseal series

VSS 1.5
4-pin socket contacts

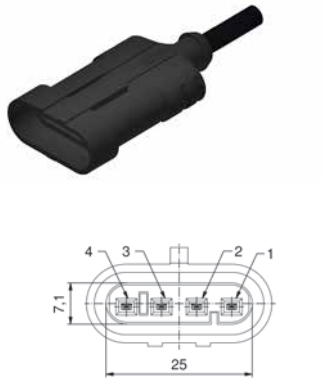
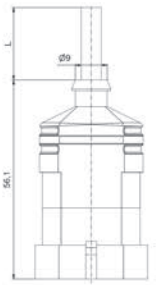
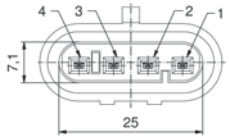
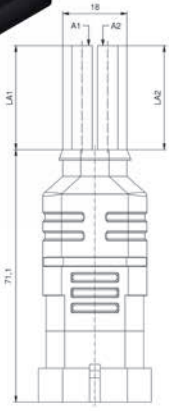
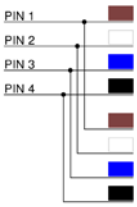
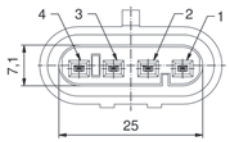
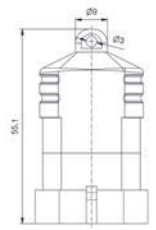
Other conductor cross-sections and cable lengths on request.

Socket contact	*Contact assignment*	*Pin count*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
		4	max. 24 V DC	7	2	PUR	4 x 0.75	VSS1.5-4S-A/K1/0.75/2 m	55-00595
					5			VSS1.5-4S-A/K1/0.75/5 m	55-00596
					10			VSS1.5-4S-A/K1/0.75/10 m	55-00597
End cap									
		4						VSS1.5-4S-A/AS	55-01378

Valve connector
Superseal series

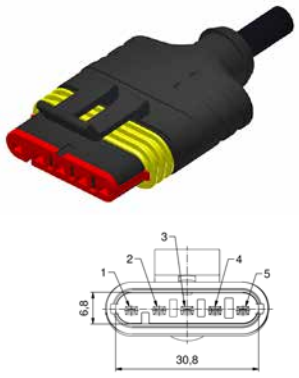
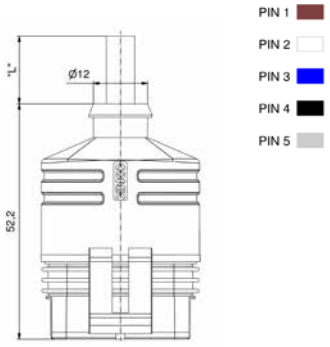
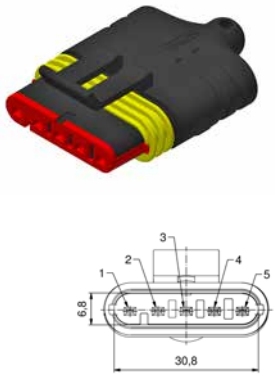
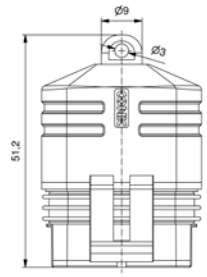
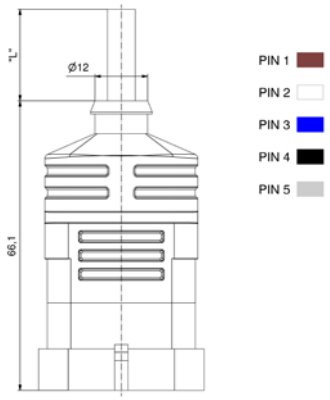
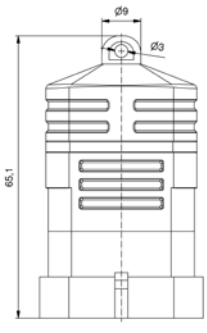
VSS 1.5
4-pin, pin contacts

Other conductor cross-sections and cable lengths on request.

Pin contact	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
 		4	max. 24 V DC	7	2	PUR	4 x 0.75	VSS1.5-4P-A/K1/0.75/2 m	55-00598
					5			VSS1.5-4P-A/K1/0.75/5 m	55-00599
					10			VSS1.5-4P-A/K1/0.75/10 m	55-00600
Twin output									
  		4	max. 24 V DC	7	2 X 1	PUR	2 x 4 x 0.75	YVSS1.5-4P-A/K1/0.75/ 1m-K1/0.75/1m	55-01149
End cap									
  		4						VSS1.5-4P-A/AS	55-01377

Valve connector
Superseal series

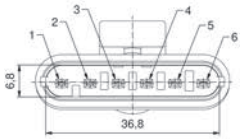
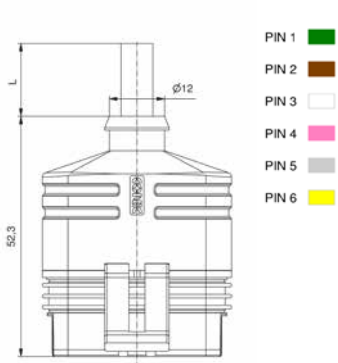
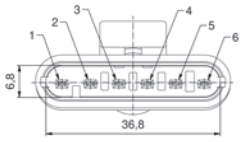
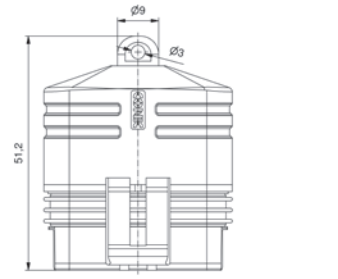
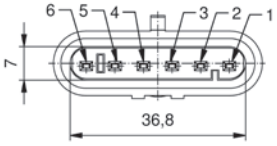
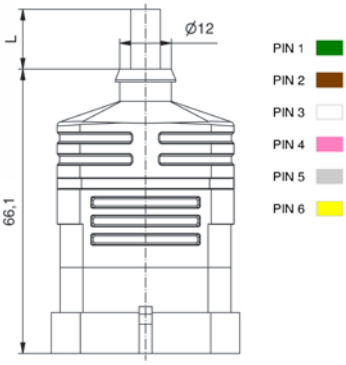
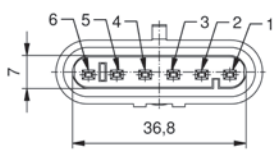
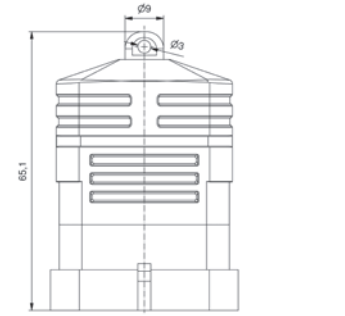
VSS 1.5
5-pin

Socket contact	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
		5	max. 24 V DC	7	2	PUR	5 x 0.75	VSS1.5-5S-A/K1/0.75/2 m	55-00641
					5			VSS1.5-5S-A/K1/0.75/5 m	55-00642
					10			VSS1.5-5S-A/K1/0.75/10 m	55-00643
Socket contact, end cap									
		5						VSS1.5-5S-A/AS	55-01380
Pin contact									
		5	max. 24 V DC	7	2	PUR	5 x 0.75	VSS1.5-5P-A/K1/0.75/2 m	55-00644
					5			VSS1.5-5P-A/K1/0.75/5 m	55-00645
					10			VSS1.5-5P-A/K1/0.75/10 m	55-00646
Pin contact, end cap									
		5						VSS1.5-5P-A/AS	55-01379

Subject to technical changes and errors. Other designs available on request. Version 1.2023

Valve connector
Superseal series

VSS 1.5
6-pin

Socket contact	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other conductor cross-sections and cable lengths on request. Designation	Part. no.
	 	6	max. 24 V DC	6	2	PUR	6 x 0.75	VSS1.5-6S-A/K1/0.75/2 m	55-00647
					5			VSS1.5-6S-A/K1/0.75/5 m	55-00648
					10			VSS1.5-6S-A/K1/0.75/10 m	55-00649
Socket contact, end cap									
	 	6						VSS1.5-6S-A/AS	55-01382
Pin contacts									
	 	6	max. 24 V DC	6	2	PUR	6 x 0.75	VSS1.5-6P-A/K1/0.75/2 m	55-00650
					5			VSS1.5-6P-A/K1/0.75/5 m	55-00651
					10			VSS1.5-6P-A/K1/0.75/10 m	55-00652
Pin contact, end cap									
	 	6						VSS1.5-6P-A/AS	55-01381

Valve connector
Superseal series

VSS 1.5
Connecting cables

Other conductor cross-sections and cable lengths on request.

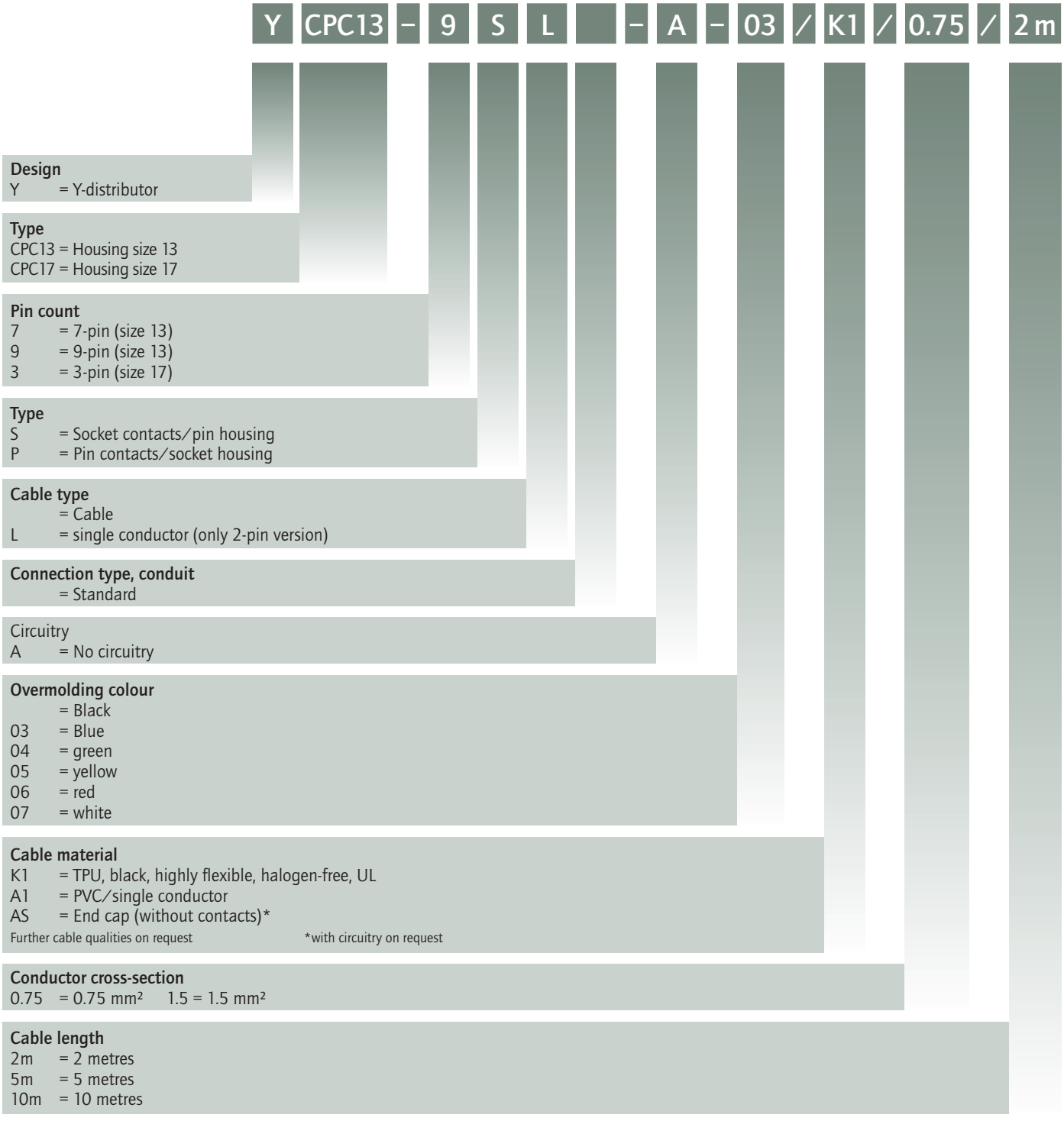
	Pin count	*Rated voltage [V]*	*Bulk*	*Cable length =L [m]*	*Conductor quality*	*Designation*	*Part. no.*
2-pin							
	2	max. 24 V DC	PUR	5	2x 0.75	VSS1.5-2S-A-VSS1.5-2P-A/ K1/0.75/5m	55-00697
3-pin							
	3	max. 24 V DC	PUR	5	3x 0.75	VSS1.5-3S-A-VSS1.5-3P-A/ K1/0.75/5m	55-00667
4-pin							
	4	max. 24 V DC	PUR	1	4x 0.75	VSS1.5-4S-A-VSS1.5-4P-A/ K1/0.75/1m	55-00677

Section 4

CPC series connectors

CPC SERIES CONNECTORS

Nomenclature



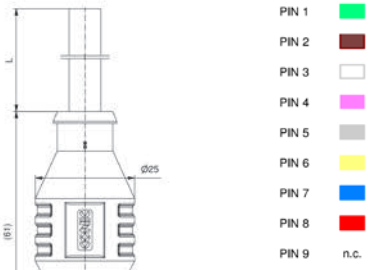
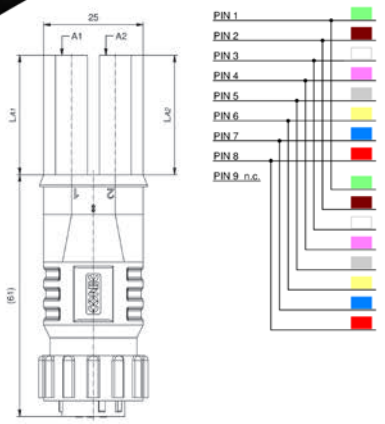
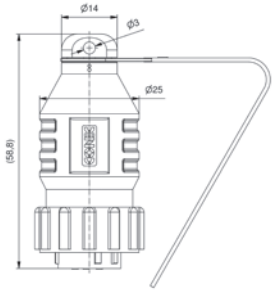
CPC SERIES CONNECTORS
Product specification

Materials	
Contact	Copper alloy
Contact surface	Sn
Insulating block	Thermoplastic UL 94-V0
Overmolding	TPU, UL94
Seal	Silicone

Technical data	
Sizes [pin count]	13 [9, 7] 17 [3]
Locking type	Bayonet
Rated voltage	48 V AC/60 V DC
Current carrying capacity	5 A at 40 °C [9-pin] 6 A at 40 °C [7-pin] 15 A at 40 °C [3-pin]
Degree of protection	IP67 in plugged-in condition
Ambient temperature for connector	-40 °C to +105 °C
Ambient temperature, cable	Static: -40 °C to +80 °C Moving: -25 °C to +80 °C
Single conductor ambient temperature	Static: -40 °C to +105 °C Moving: -10 °C to +105 °C
Connection cross-section	0.75 mm² [9, 7-pin] 1.5 mm² [3-pin]
Housing	CPC, black

CPC SERIES CONNECTORS
overmolded

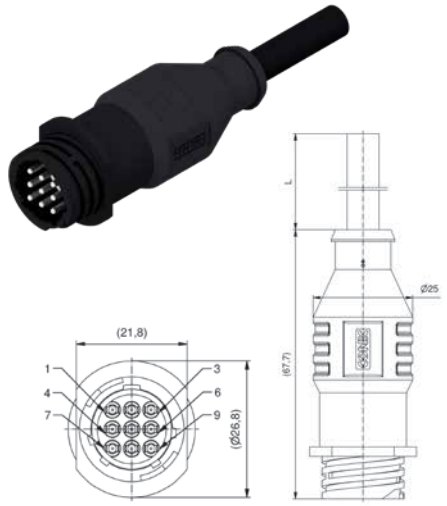
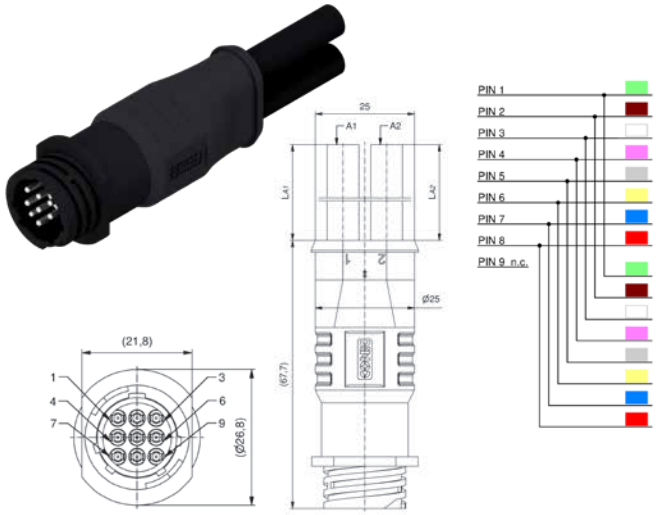
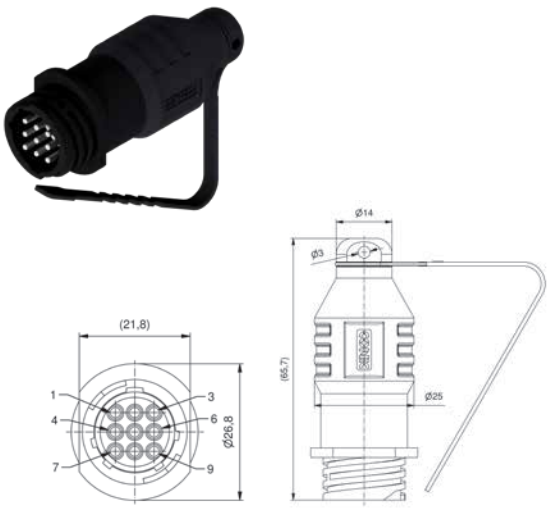
CPC Series 1/housing size 13 / 9-pin
Socket contacts

Connection cable	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Other cable lengths on request: Designation	Part. no.
		9	48 V AC/60 V DC	5	2	PUR	8x 0.75	CPC13-9.04S-A/K1/ 0.75/2 m	55-40014
					5			CPC13-9.04S-A/K1/ 0.75/5 m	55-40015
					10			CPC13-9.04S-A/K1/ 0.75/10 m	55-40016
Twin output									
		9	48 V AC/60 V DC	5	2 x 1	PUR	2x 8x 0.75	YCPC13-9.04S-A/K1/ 0.75/1 m-K1/0.75/1 m	55-40017
End cap									
		9						CPC13-9S-A/AS	55-40018

CPC SERIES CONNECTORS
overmolded

CPC Series 1/housing size 13 / 9-pin
Pin contacts

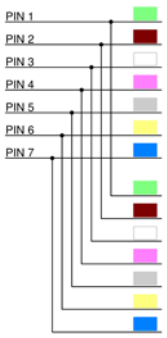
Other cable lengths on request

Connection cable	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		9	48 V AC/60 V DC	5	2	PUR	8 x 0.75	CPC13-9.04P-A/K1/ 0.75/2 m	55-40019
					5			CPC13-9.04P-A/K1/ 0.75/5 m	55-40020
					10			CPC13-9.04P-A/K1/ 0.75/10 m	55-40021
Twin output									
		9	48 V AC/60 V DC	5	2 x 1	PUR	2 x 8 x 0.75	YCPC13-9.04P-A/K1/ 0.75/1 m-K1/0.75/1 m	55-40022
End cap									
		9						CPC13-9P-A/AS	55-40023

CPC SERIES CONNECTORS
overmolded

CPC Series 1/housing size 13 / 7-pin
Socket contacts

Other cable lengths on request

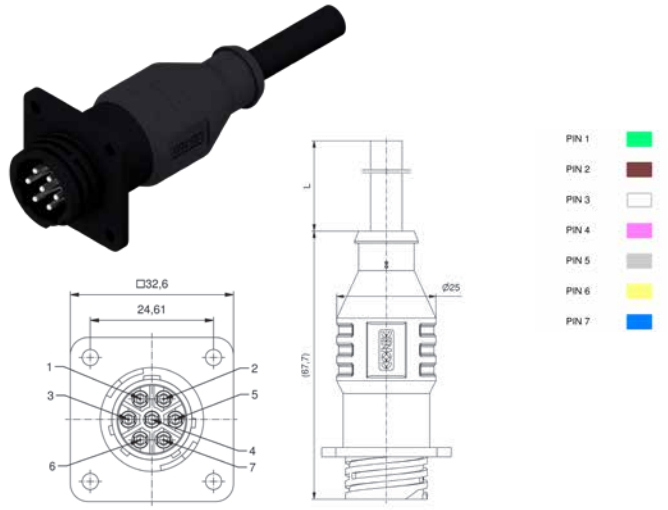
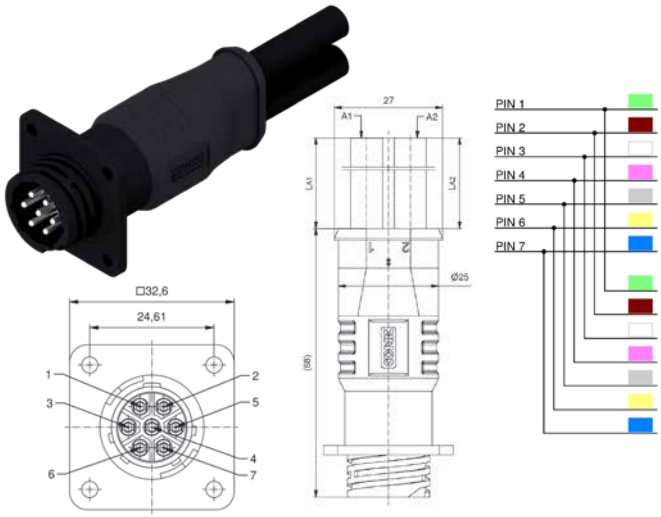
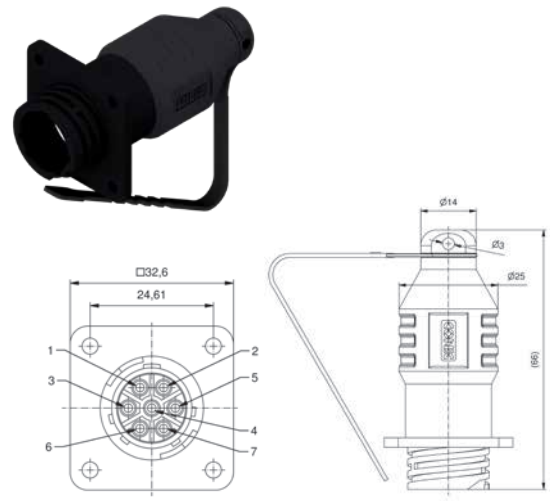
Connection cable	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		7	48 V AC/60 V DC	6	2	PUR	8x 0.75	CPC13-7.12S-A/K1/ 0.75/2 m	55-40024
					5			CPC13-7.12S-A/K1/ 0.75/5 m	55-40025
					10			CPC13-7.12S-A/K1/ 0.75/10 m	55-40026
Twin output									
		7	48 V AC/60 V DC	6	2 x 1	PUR	2x 8x 0.75	YCPC13-7.12S-A/K1/ 0.75/1 m-K1/0.75/1 m	55-40027
End cap									
		7						CPC13-7S-A/AS	55-40028

Subject to technical changes and errors. Other designs available on request. Version 1.2023

CPC SERIES CONNECTORS
overmolded

CPC Series 1/housing size 13 / 7-pin
Pin contacts

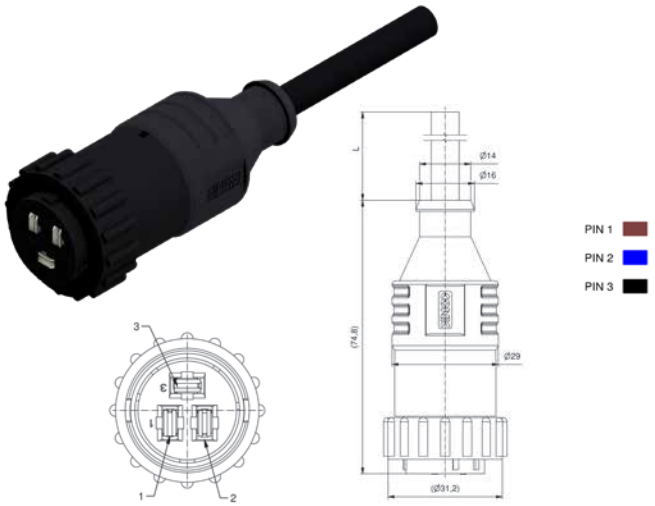
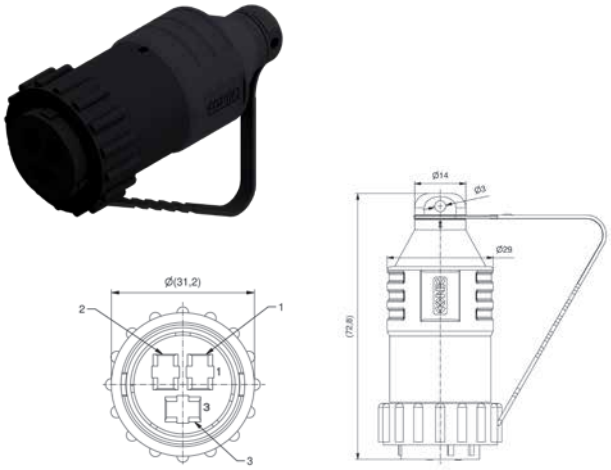
Other cable lengths on request

Connection cable	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		7	48 V AC/60 V DC	6	2	PUR	8x 0.75	CPC13-7.12P-A/K1/ 0.75/2 m	55-40029
					5			CPC13-7.12P-A/K1/ 0.75/5 m	55-40030
					10			CPC13-7.12P-A/K1/ 0.75/10 m	55-40031
Twin output									
		7	48 V AC/60 V DC	6	2 x 1	PUR	2x 8x 0.75	YCPC13-7.12P-A/K1/ 0.75/1 m-K1/0.75/1 m	55-40032
End cap									
		7						CPC13-7P-A/AS	55-40033

CPC SERIES CONNECTORS
overmolded

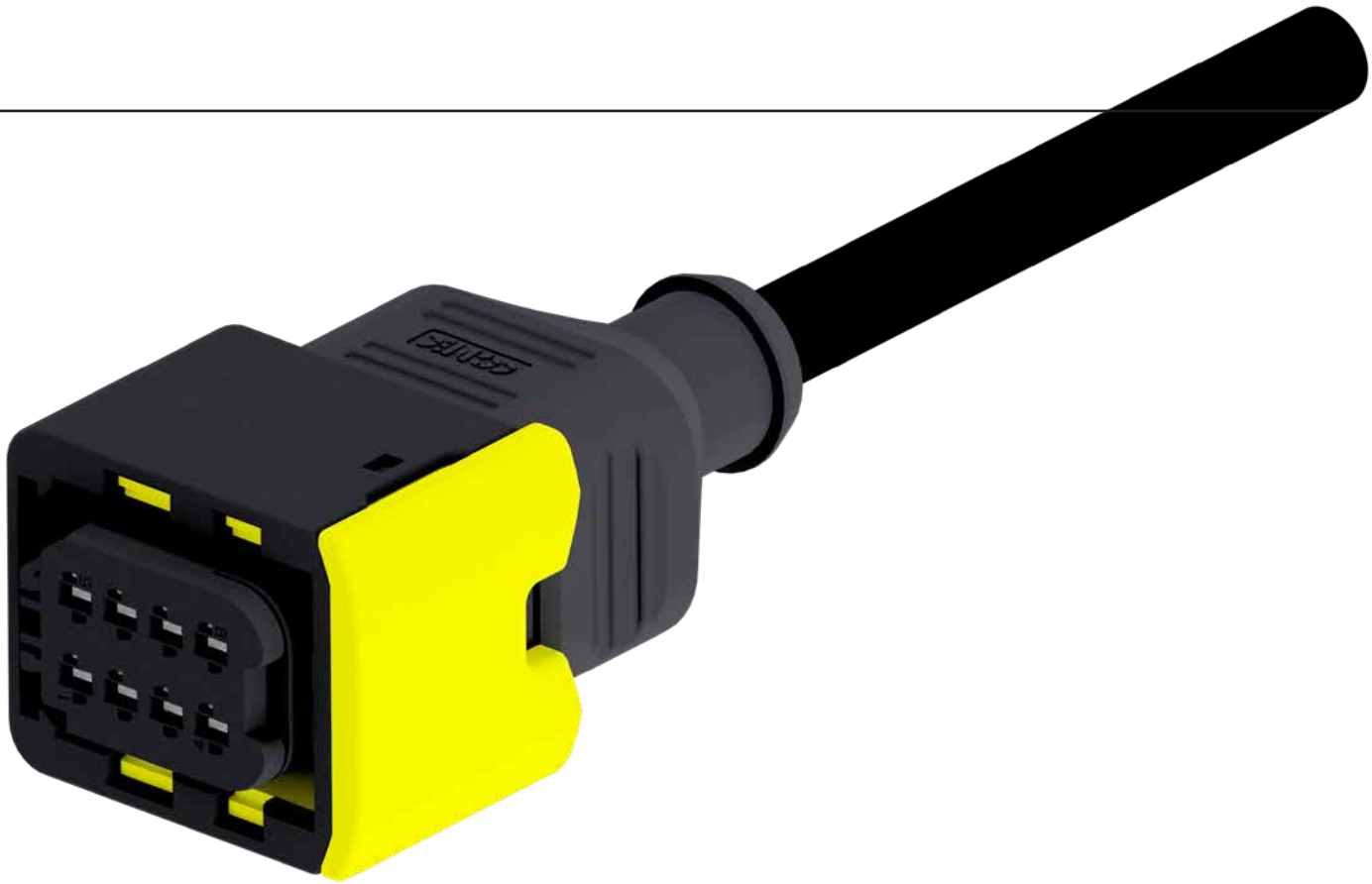
CPC Series 3/housing size 17 / 3-pin
Socket contacts

Other cable lengths on request

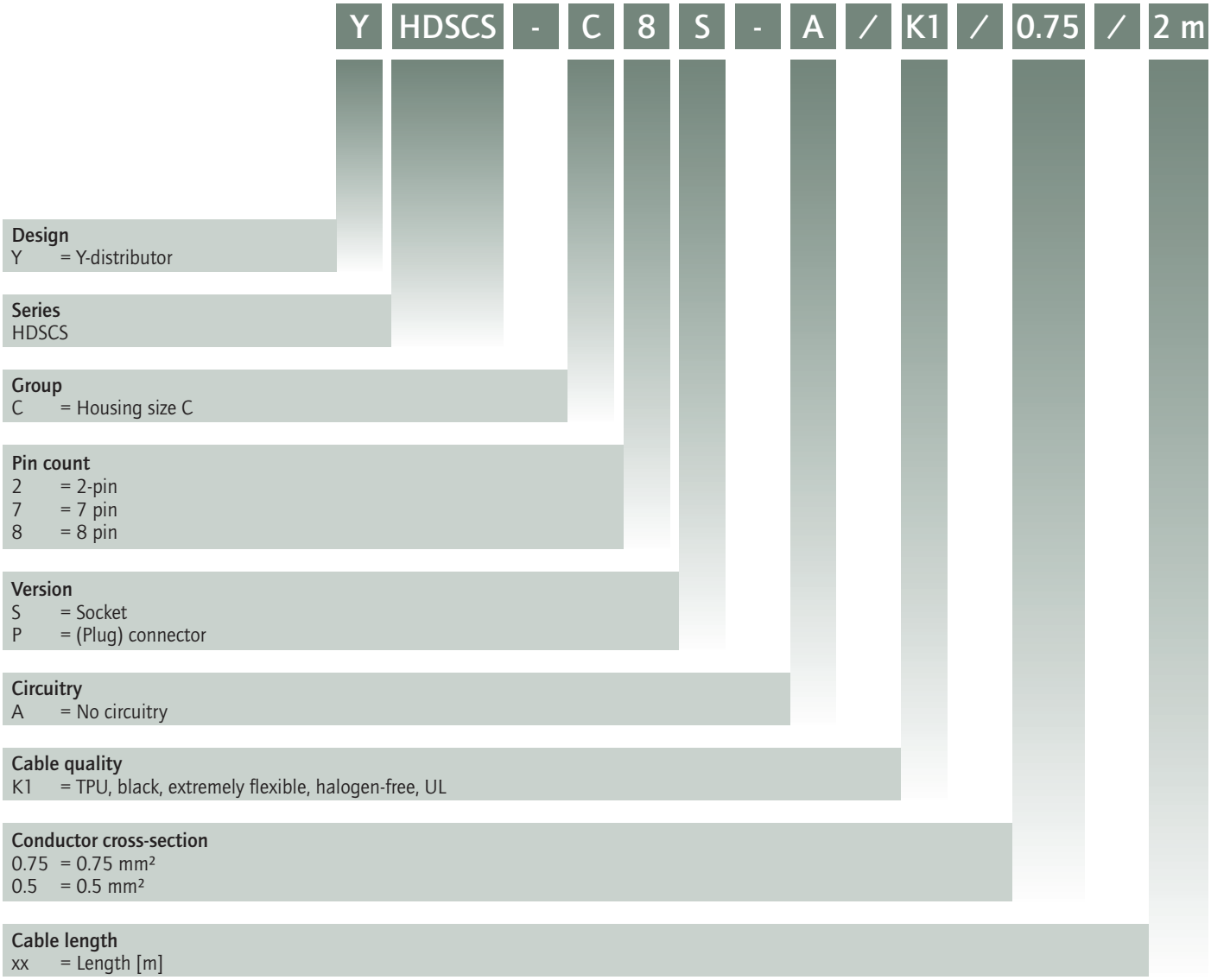
Connection cable	Contact assignment	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
		3	48 V AC/60 V DC	15	2	PUR	3 x 1.5	CPC17-3S-A/K1/ 1.5/2 m	55-40034
					5			CPC17-3S-A/K1/ 1.5/5 m	55-40035
					10			CPC17-3S-A/K1/ 1.5/10 m	55-40036
End cap									
		3						CPC17-3S-A/AS	55-40038

Section 5

HDSCS series connectors



HDSCS SERIES CONNECTORS
Nomenclature



HDSCS SERIES CONNECTORS
Product specification

Materials	
Contact	Copper alloy
Contact coating	Sn
Insulating block	Thermoplastic UL 94-V0
Overmolding	TPU, UL94
Seal	Silicone

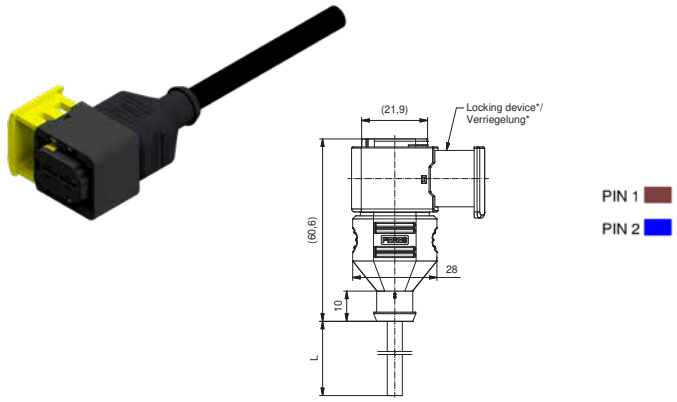
Technical data	
Design	C
Locking	Secondary locking
Rated voltage:	max. 42 V DC
Current carrying capacity	4 A at 40°
Degree of protection	IP67 in plugged-in condition
Ambient temperature for connector	-40 °C to +80 °C
Ambient temperature for cable	Static: -40 °C to +80 °C Moving: -25 °C to +80 °C
Connection cross-section	0.5 mm² 0.75 mm²
Housing	HDSCS

HDSCS SERIES CONNECTORS
overmolded

HDSCS, design C
2-pin

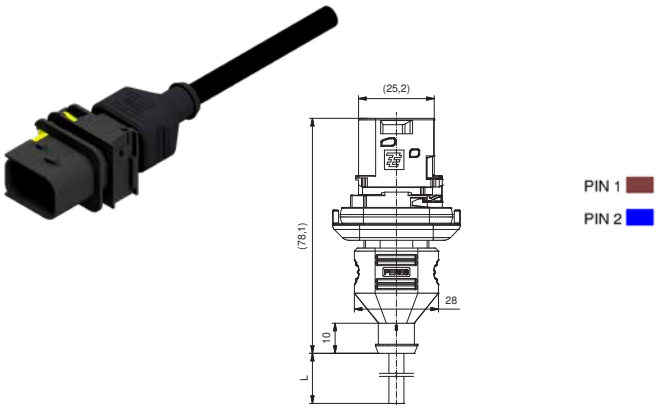
Other cable lengths on request

Socket contacts



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
2	max. 42 V DC	8	1.5	PUR	2 x 0.75	HDSCS-C-2S-A/K1/0.75/1.5 m	55-50862
			2			HDSCS-C-2S-A/K1/0.75/2 m	55-50863
			3			HDSCS-C-2S-A/K1/0.75/3 m	55-50864
			5			HDSCS-C-2S-A/K1/0.75/5 m	55-50865
			10			HDSCS-C-2S-A/K1/0.75/10 m	55-50866

Pin contacts



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
2	max. 42 V DC	8	1.5	PUR	2 x 0.75	HDSCS-C-8P-A/K1/0.75/1.5 m	55-50867
			2			HDSCS-C-8P-A/K1/0.75/2 m	55-50868
			3			HDSCS-C-8P-A/K1/0.75/3 m	55-50869
			5			HDSCS-C-8P-A/K1/0.75/5 m	55-50870
			10			HDSCS-C-8P-A/K1/0.75/10 m	55-50871

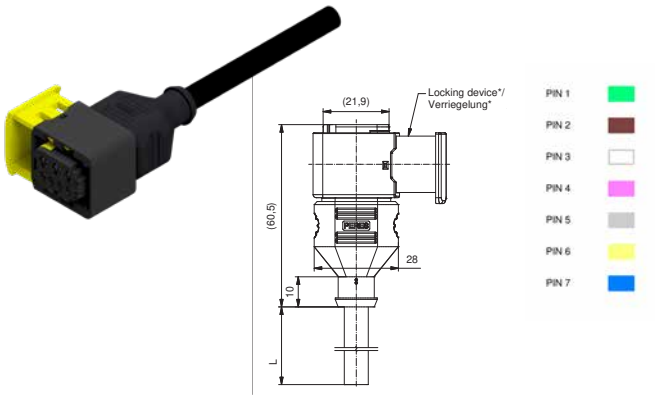
Connecting cable

Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
2	max. 42 V DC	8	2	PUR	2x 0.75	HDSCS-C-2S-A - HDSCS-C-2P-A/ K1/0.75/2 m	55-50888
			5			HDSCS-C-2S-A - HDSCS-C-2P-A/ K1/0.75/5 m	55-50889
			10			HDSCS-C-2S-A - HDSCS-C-2P-A/ K1/0.75/10 m	55-50890

HDSCS SERIES CONNECTORS
overmolded

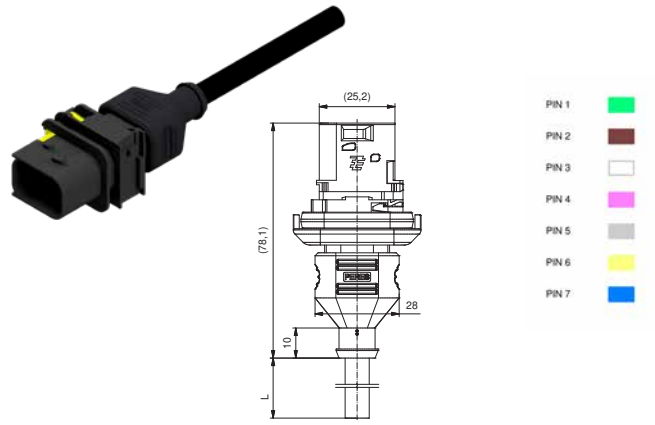
HDSCS, design C
7-pin

Socket contacts



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
7	max. 42 V DC	6	1.5	PUR	7 x 0.75	HDSCS-C-7.12S-A/ K1/0.75/1.5 m	55-50872
			2			HDSCS-C-7.12S-A/K1/0.75/2 m	55-50873
			3			HDSCS-C-7.12S-A/K1/0.75/3 m	55-50874
			5			HDSCS-C-7.12S-A/K1/0.75/5 m	55-50875
			10			HDSCS-C-7.12S-A/ K1/0.75/10 m	55-50876

Pin contacts



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
7	max. 42 V DC	6	1.5	PUR	7 x 0.75	HDSCS-C-7.12P-A/ K1/0.75/1.5 m	55-50877
			2			HDSCS-C-7.12P-A/K1/0.75/2 m	55-50878
			3			HDSCS-C-7.12P-A/K1/0.75/3 m	55-50879
			5			HDSCS-C-7.12P-A/K1/0.75/5 m	55-50880
			10			HDSCS-C-7.12P-A/ K1/0.75/10 m	55-50881

Connecting cable

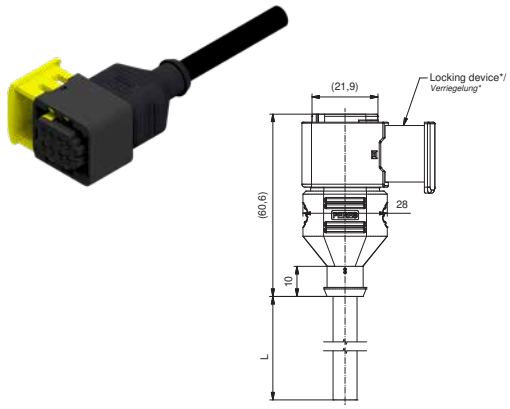
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
7	max. 42 V DC	6	2	PUR	7 x 0.75	HDSCS-C-7.12S-A - HDSCS-C-7.12P-A/K1/0.75/2 m	55-50885
			5			HDSCS-C-7.12S-A - HDSCS-C-7.12P-A/K1/0.75/5 m	55-50886
			10			HDSCS-C-7.12S-A - HDSCS-C-7.12P-A/K1/0.75/10 m	55-50887

HDSCS SERIES CONNECTORS
overmolded

HDSCS, design C
8-pin

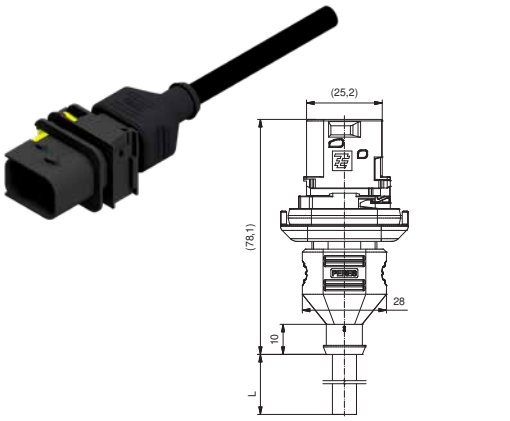
Other cable lengths on request

Socket contacts



Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
8	max. 42 V DC	6	1.5	PUR	8 x 0.75	HDSCS-C-8S-A/K1/0.75/1.5 m	to follow
			2			HDSCS-C-8S-A/K1/0.75/2 m	55-50701
			3			HDSCS-C-8S-A/K1/0.75/3 m	to follow
			5			HDSCS-C-8S-A/K1/0.75/5 m	55-50702
			10			HDSCS-C-8S-A/K1/0.75/10 m	55-50703

Pin contacts



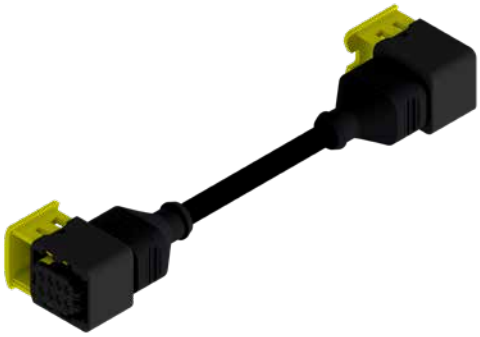
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]	Designation	Part. no.
8	max. 42 V DC	6	1.5	PUR	8 x 0.75	HDSCS-C-8P-A/K1/0.75/1.5 m	55-50857
			2			HDSCS-C-8P-A/K1/0.75/2 m	55-50858
			3			HDSCS-C-8P-A/K1/0.75/3 m	55-50859
			5			HDSCS-C-8P-A/K1/0.75/5 m	55-50860
			10			HDSCS-C-8P-A/K1/0.75/10 m	55-50861

HDSCS SERIES CONNECTORS
overmolded

HDSCS, design C
8-pin

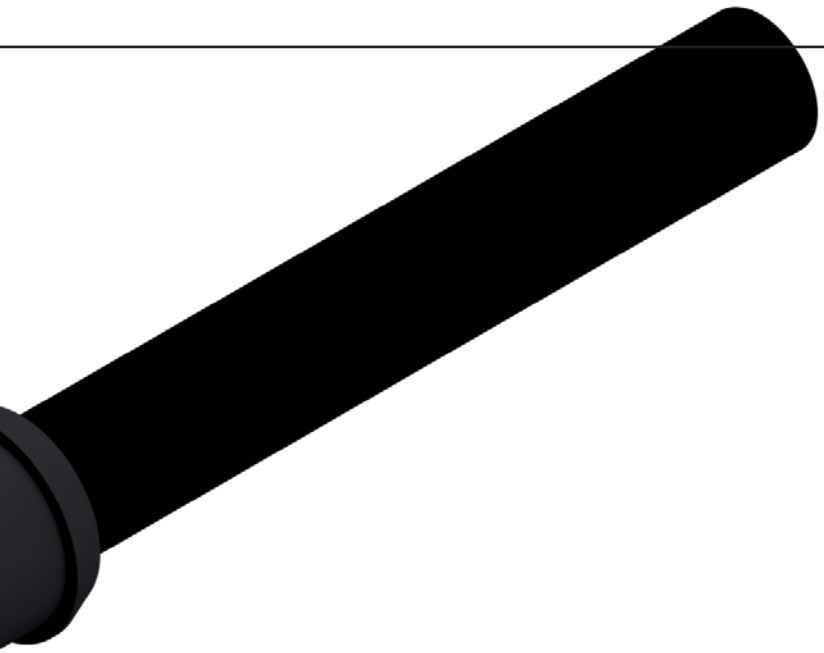
Other cable lengths on request

Connecting cable	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]		
	8	max. 42 V DC	6	2	PUR	8 x 0.75	HDSCS-C-8S-A-HDSCS-C-8S-A/ K1/0.75/2m	55-50698
				5			HDSCS-C-8S-A-HDSCS-C-8S-A/ K1/0.75/5m	55-50699
				10			HDSCS-C-8S-A-HDSCS-C-8S-A/ K1/0.75/10m	55-50700

Connecting cable	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Cable quality	Conductor cross-section [mm²]		
	8	max. 42 V DC	6	2	PUR	8 x 0.75	HDSCS-C-8S-A - HDSCS-C-8P-A/ K1/0.75/2 m	55-50882
				5			HDSCS-C-8S-A - HDSCS-C-8P-A/ K1/0.75/5 m	55-50883
				10			HDSCS-C-8S-A - HDSCS-C-8P-A/ K1/0.75/10 m	55-50884

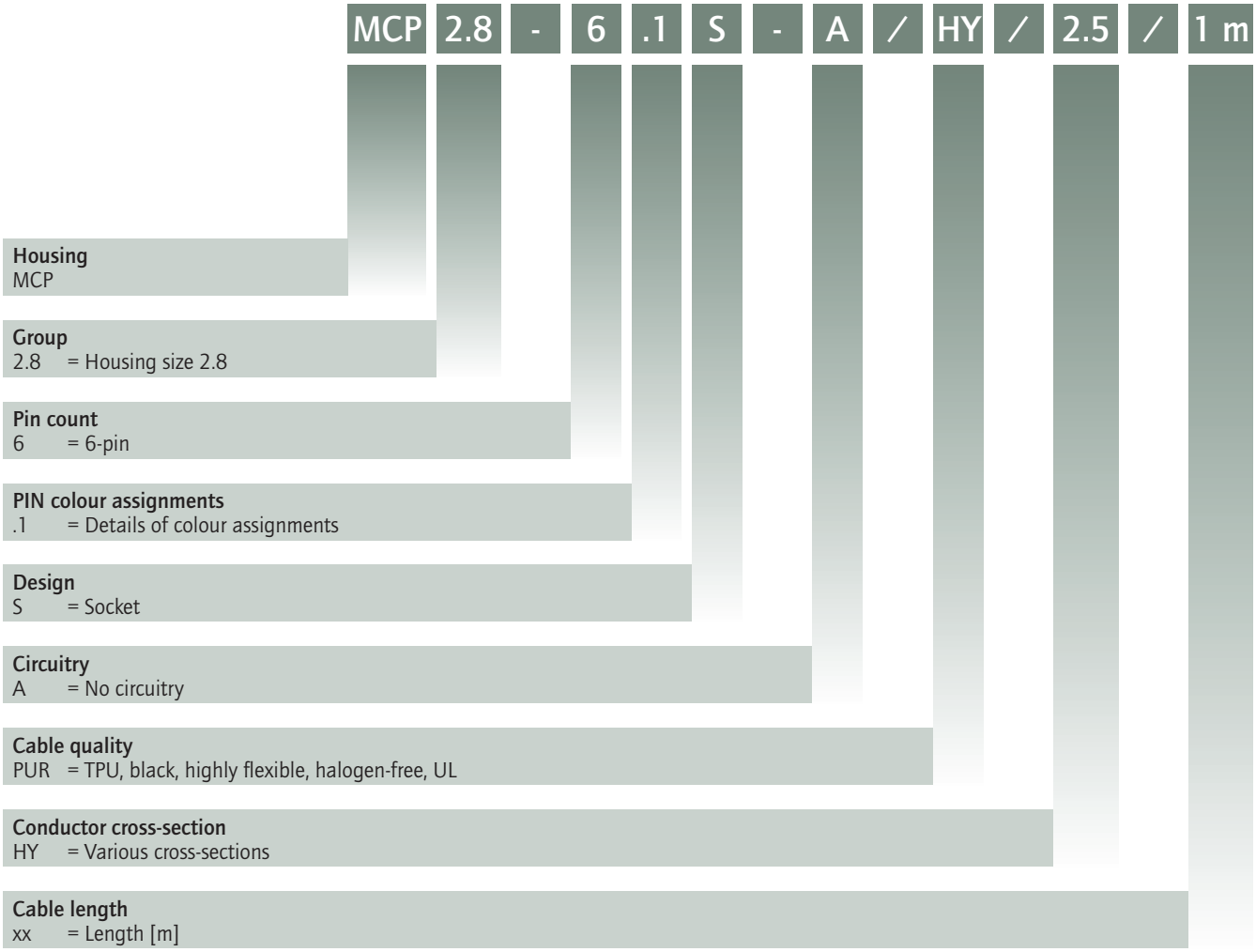
SECTION 6

MCP series connectors



MCP SERIES CONNECTORS

Nomenclature



MCP SERIES CONNECTORS
Product specification

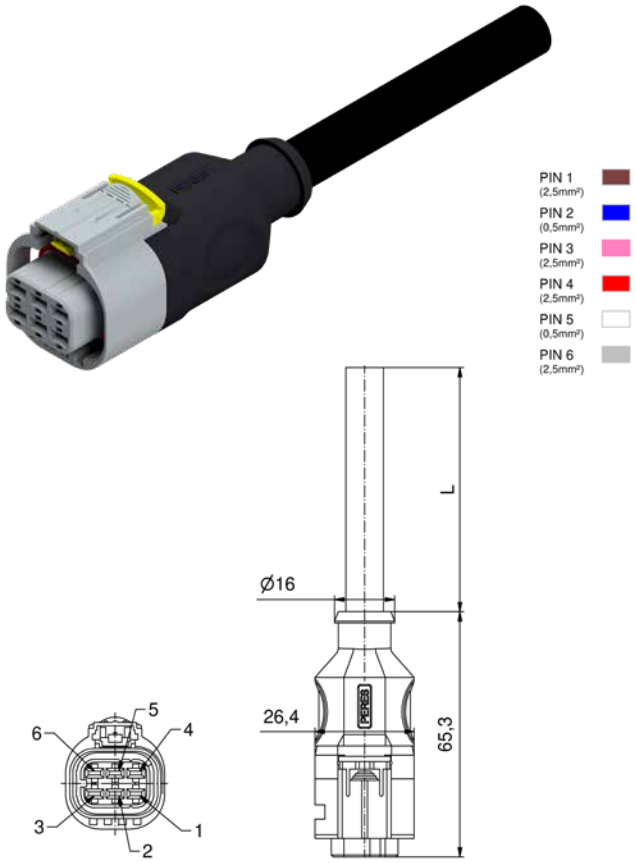
Materials	
Contact	Copper alloy
Contact coating	Sn
Insulating block	PBT GF grey
Overmolding	TPU, UL94
Seal	Silicone

Technical data	
Structure	Hybrid cable, 2x 0.5 mm² and 4x 2.5 mm²
Locking	With or without secondary locking
Rated voltage:	max. 24 V DC
Current carrying capacity	17 A (2.5 mm²) and 4 A (0.5 mm²) at 40°
Degree of protection	IP67 in plugged-in condition
Ambient temperature for connector	-40 °C to +100 °C
Ambient temperature for cable	Static: -40 °C to +80 °C Moving: -30 °C to +80 °C
Connection cross-section	2.5 mm², 0.5 mm²
Housing	AMP MCP 2.8 K Rec.

MCP SERIES CONNECTORS
overmolded

MCP
6 pin

further length variants on request

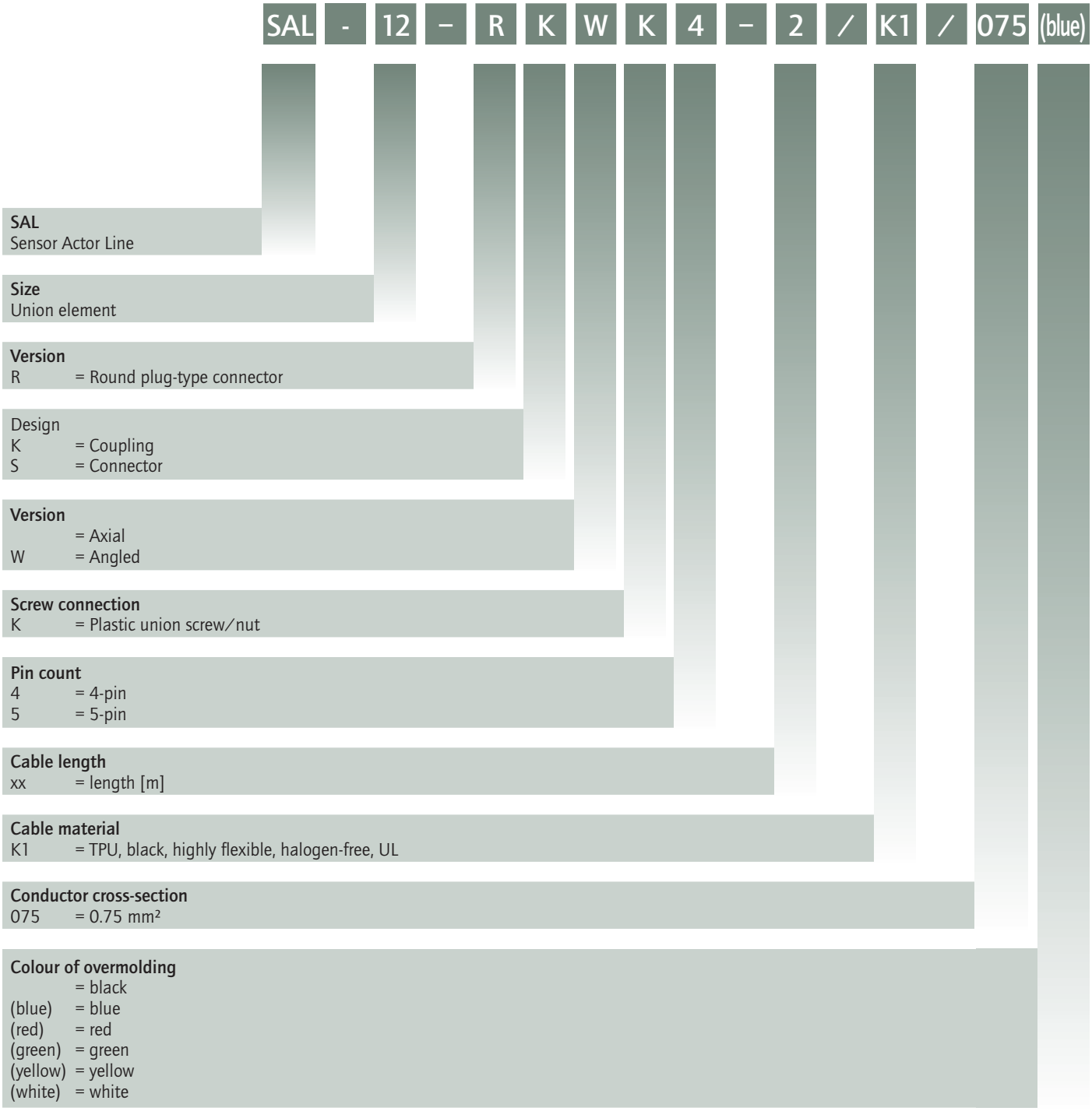
Socket contacts	*Pin count*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Cable quality*	*Conductor cross-section [mm²]*	*Designation*	*Part. no.*
	6	max. 24 V DC	2.5 mm²: 17 A / 0.5 mm²: 4 A	1	PUR	2 x 0.5 4 x 2.5"	MCP2.8-6.1S-A/PUR/HY/1m	PER928
				2			MCP2.8-6.1S-A/PUR/HY/2m	PER836
				3			MCP2.8-6.1S-A/PUR/HY/3m	PER839
				5			MCP2.8-6.1S-A/PUR/HY/5m	PER837
				5			MCP2.8-6.1S-A/PUR/HY/10m	PER838

SECTION 7

M12x1 series connectors

Connectors SAL M12x1 series with plastic retaining screw/nut

Nomenclature



Connectors SAL M12x1 series with plastic retaining screw/nut

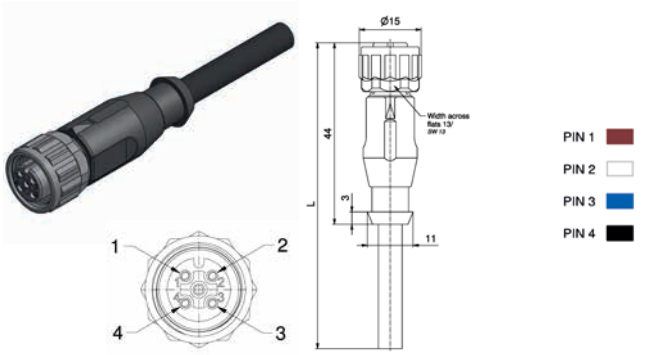
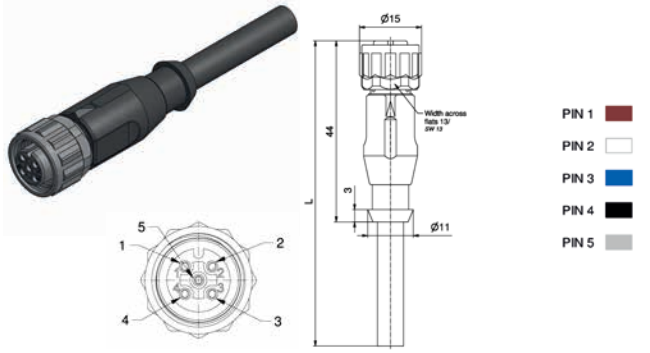
Product specification

Materials	
Contact	CuZn
Contact surface	Ni, Au 0.2 gal.
Insulating block	PA, UL 94 V-0
Overmolding	TPU, UL 94 HB, grey
Seal	FPM
Union nut/screw	PA GF, UL 94 HB, black

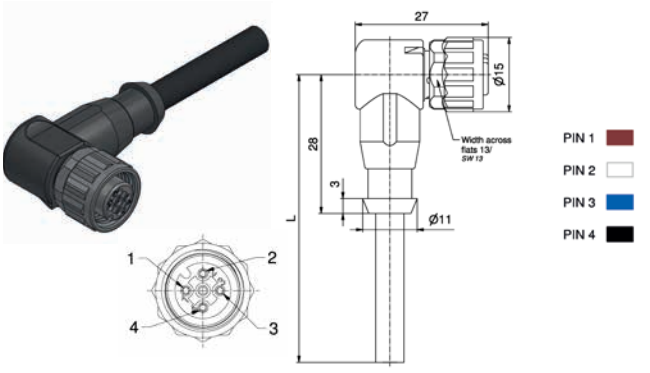
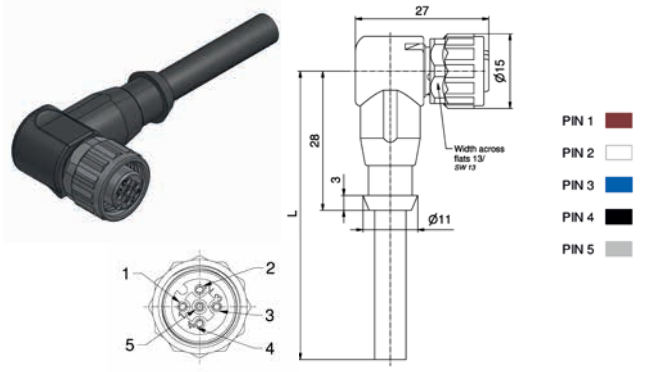
Technical data	
Rated voltage	48 V AC/ 60 V DC
Current carrying capacity	4 A
Degree of protection	IP67, IP68
Ambient temperature	-30 °C ... +80 °C
Connection cross-section	0.75 mm²
Insulation resistance	> = 100 MΩ
Degree of contamination	3/2
Plugging cycles	> = 100

Connectors SAL M12x1 series
Plastic union nut

Coupling
Axial

	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]		
TPU, UL, black, Li9Y11Y							
	4	48 V AC/60 V DC	4	2	4 x 0.75	SAL-12-RKK4-2/K1/075/A1002	43-21049
				5		SAL-12-RKK4-5/K1/075/A1002	43-21050
				10		SAL-12-RKK4-10/K1/075/A1002	43-21051
TPU, UL, black, Li9Y11Y							
	5	48 V AC/60 V DC	4	2	5 x 0.75	SAL-12-RKK5.1-2/K1/075/A1002	43-21055
				5		SAL-12-RKK5.1-5/K1/075/A1002	43-21056
				10		SAL-12-RKK5.1-10/K1/075/A1002	43-21057

Coupling
Angled

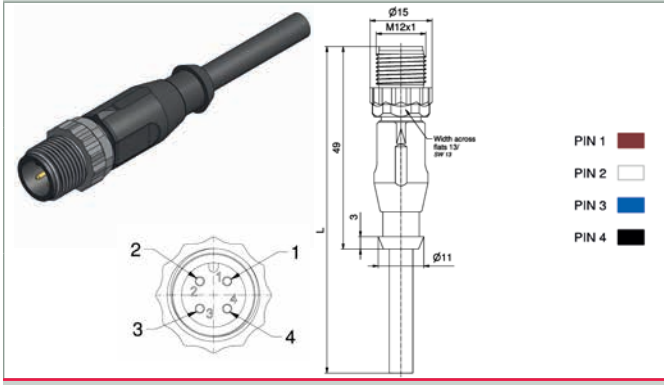
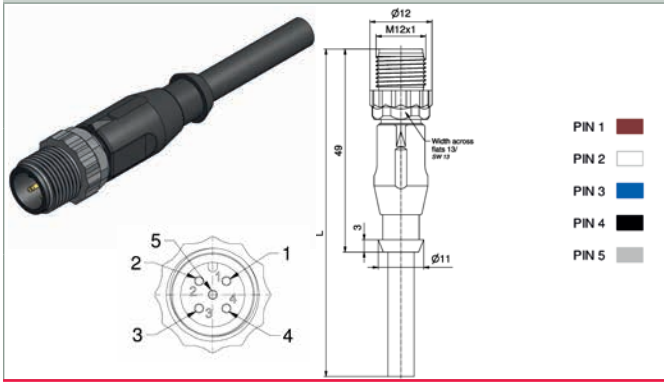
	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]		
TPU, UL, black, Li9Y11Y							
	4	48 V AC/60 V DC	4	2	4 x 0.75	SAL-12-RKWK4-2/K1/075/A1002	43-21061
				5		SAL-12-RKWK4-5/K1/075/A1002	43-21062
				10		SAL-12-RKWK4-10/K1/075/A1002	43-21063
TPU, UL, black, Li9Y11Y							
	5	48 V AC/60 V DC	4	2	5 x 0.75	SAL-12-RKWK5.1-2/K1/075/A1002	43-21067
				5		SAL-12-RKWK5.1-5/K1/075/A1002	43-21068
				10		SAL-12-RKWK5.1-10/K1/075/A1002	43-21069

Other conductor cross-sections and connecting cables available on request

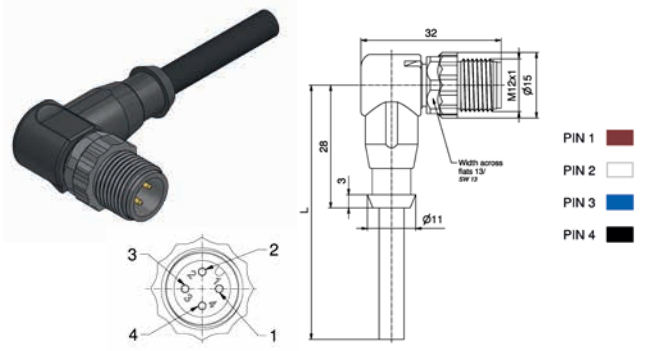
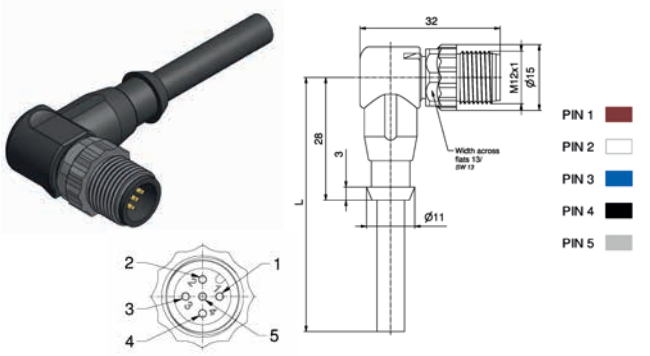
Connectors SAL M12x1 series
Plastic union screw

Other conductor cross-sections and connecting cables available on request

Connector
Axial

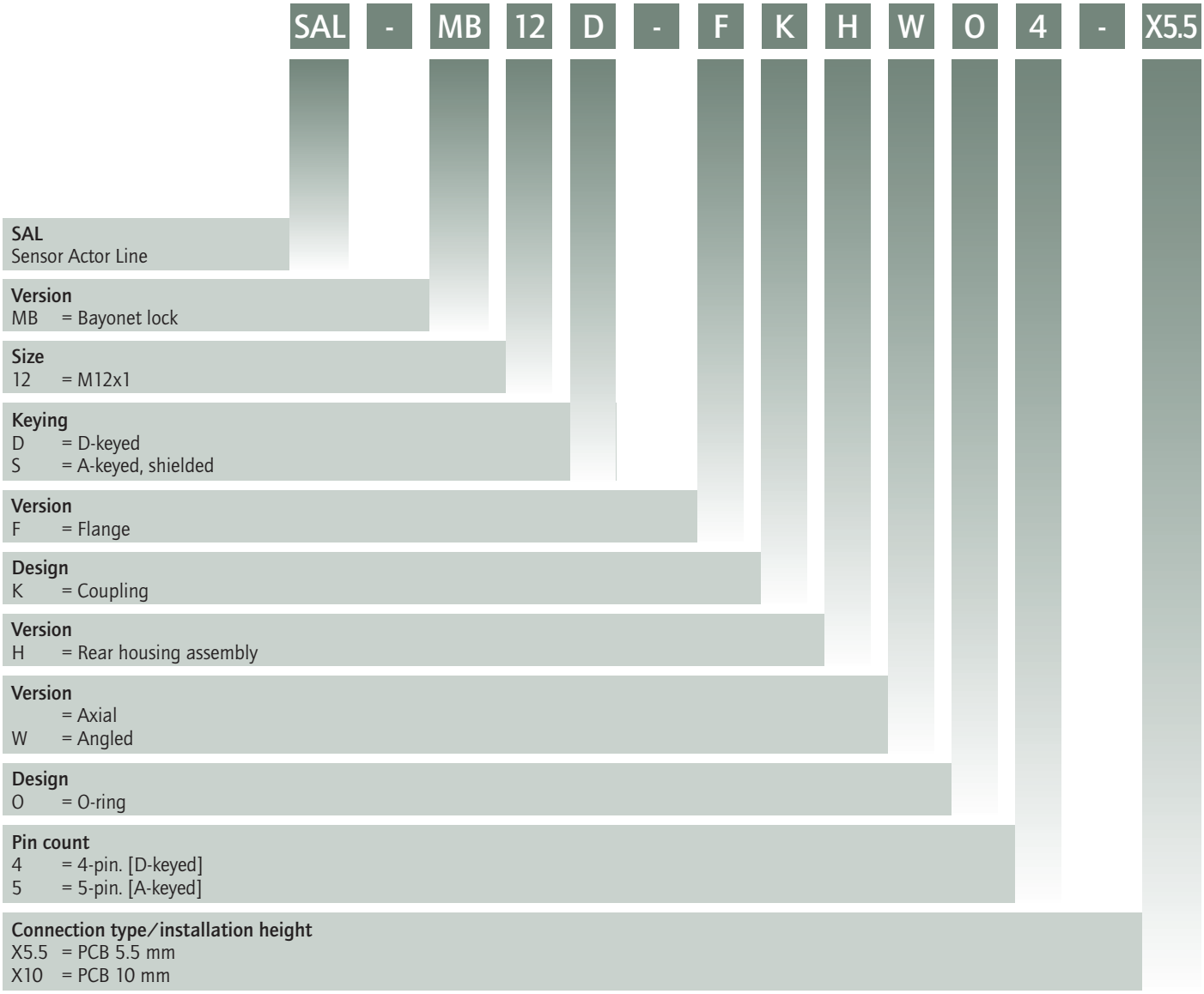
	Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]		
TPU, UL, black, Li9Y11Y							
	4	48 V AC/60 V DC	4	2	4 x 0.75	SAL-12-RSK4-2/K1/075/A1002	43-21052
				5		SAL-12-RSK4-5/K1/075/A1002	43-21053
				10		SAL-12-RSK4-10/K1/075/A1002	43-21054
TPU, UL, black, Li9Y11Y							
	5	48 V AC/60 V DC	4	2	5 x 0.75	SAL-12-RSK5.1-2/K1/075/A1002	43-21058
				5		SAL-12-RSK5.1-5/K1/075/A1002	43-21059
				10		SAL-12-RSK5.1-10/K1/075/A1002	43-21060

Connector
Angled

TPU, UL, black, Li9Y11Y							
	4	48 V AC/60 V DC	4	2	4 x 0.75	SAL-12-RSWK4-2/K1/075/A1902	43-21064
				5		SAL-12-RSWK4-5/K1/075/A1902	43-21065
				10		SAL-12-RSWK4-10/K1/075/A1902	43-21066
TPU, UL, black, Li9Y11Y							
	5	48 V AC/60 V DC	4	2	5 x 0.75	SAL-12-RSWK5.1-2/K1/075/A1902	43-21070
				5		SAL-12-RSWK5.1-5/K1/075/A1902	43-21071
				10		SAL-12-RSWK5.1-10/K1/075/A1902	43-21072

Other variants/M12 with coloured cover

Connectors SAL M12x1 series Installation flange
bayonet quick lock
Nomenclature

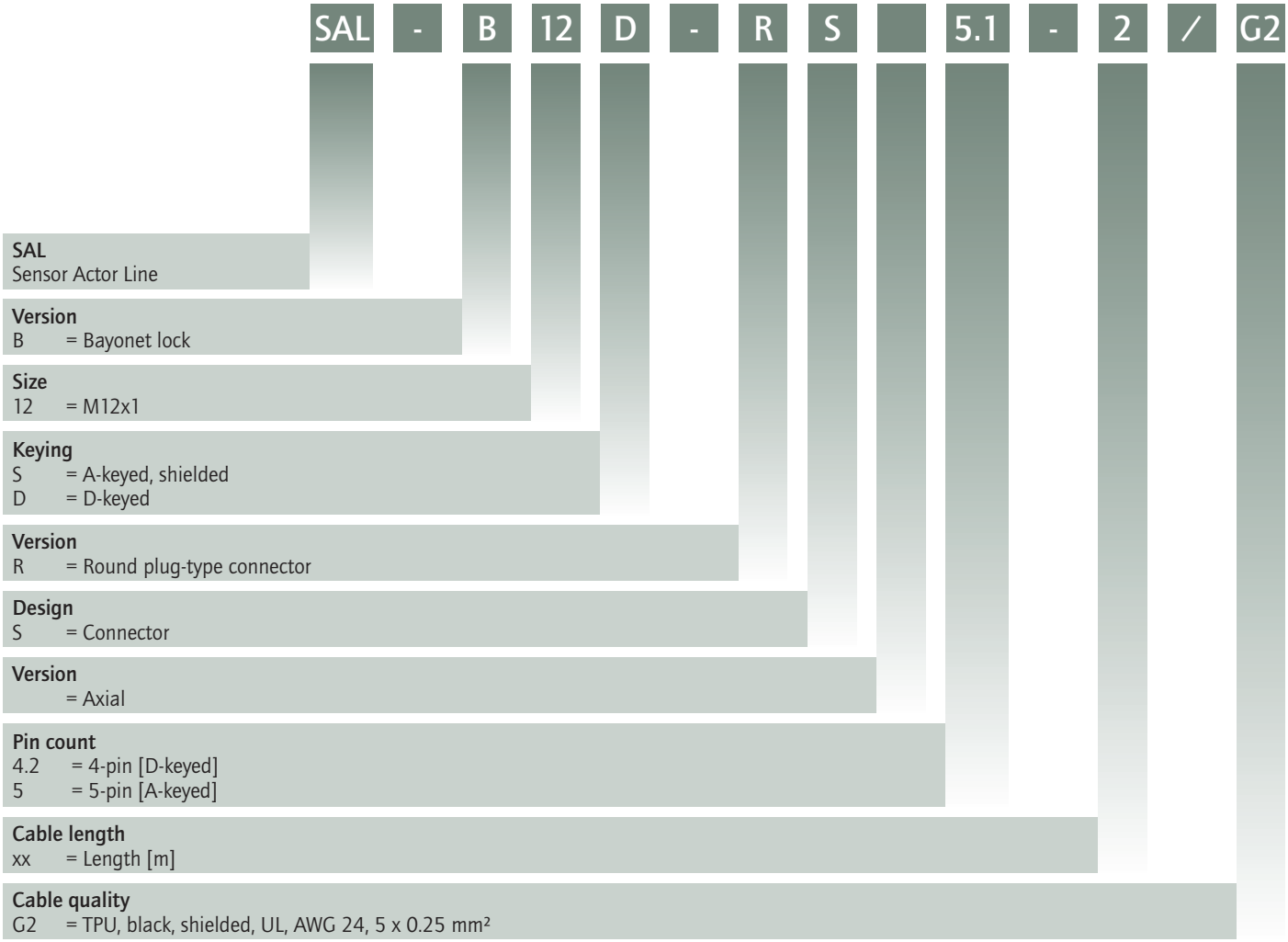


Connectors SAL M12x1 series Installation flange
bayonet quick lock
Product specification

Materials	
Contact	CuZn
Contact surface	Ni, Au gal.
Insulating block	PA GF, UL 94 V-0
Seal	FPM / NBR
Lock nut	CuZn, Ni
Flange housing	CuZn, Ni
Potting	Polyurethane resin
Screening plate	CuSn, Ni /se. Sn
Screening plate surface	Sn gal.

Technical data	
Rated voltage	48 V AC / 60 V DC
Current carrying capacity	4 A
Degree of protection	IP65, IP67, IP69
Ambient temperature	-40 °C ... +85 °C
Wall thickness	2.2 mm [other thicknesses on request]

Connectors SAL M12x1 series connecting cable
bayonet quick lock
Nomenclature



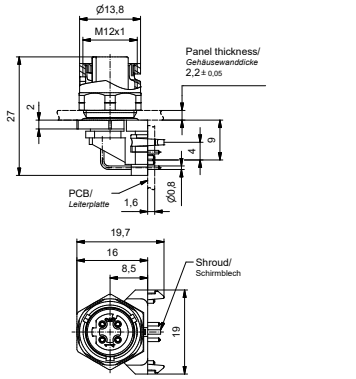
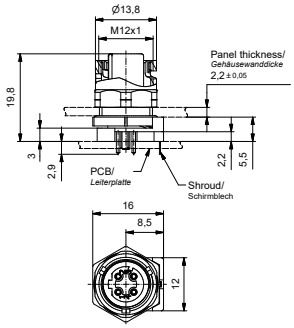
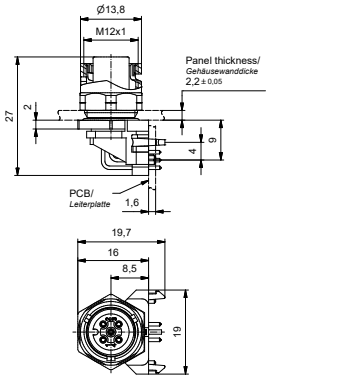
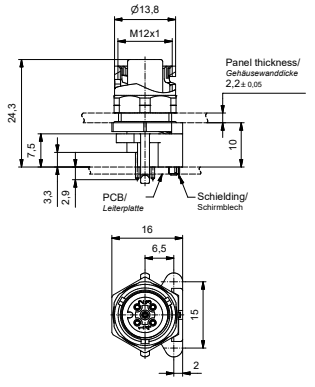
Connectors SAL M12x1 series connecting cable
bayonet quick lock
Product specification

Materials	
Contact	CuZn
Contact surface	Ni, Au gal.
Insulating block	TPU, UL 94
Bayonet screw	Copper alloy, Ni
Overmolding	TPU, UL 94, grey
Seal	FPM
Shielding sleeve	CuZn, Ni

Technical data	
Rated voltage	48 V AC / 60 V DC
Current carrying capacity	4 A
Degree of protection	IP65/IP67/IP69
Ambient temperature	-30 °C ... +70 °C [4-pin], -30 °C ... +80 °C [5-pin]
Connection cross-section	4 x 0.34 mm² [4-pin], 5 x 0.25 mm² [5-pin]
	> =100 MΩ
Degree of contamination	3 / 2
Plugging cycles	> = 100

Connectors SAL M12x1 series
Bayonet quick lock

Flange coupling, rear housing assembly
Shielded

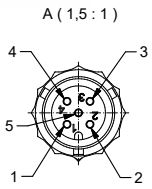
		Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Installation height [mm]		
Angled								
		4	D	48 V AC / 60 V DC	4	9	SAL - MB12D - FKHW04	43-03920
Axial								
		4	D	48 V AC / 60 V DC	4	5.5	SAL - MB12D - FKH4 - X5.5	43-03921
Angled								
		5	A	48 V AC / 60 V DC	4	9	SAL - MB12S - FKHW05	43-03922
Axial								
		5	A	48 V AC / 60 V DC	4	10	SAL - MB12S - FKH5 - X10	43-03923

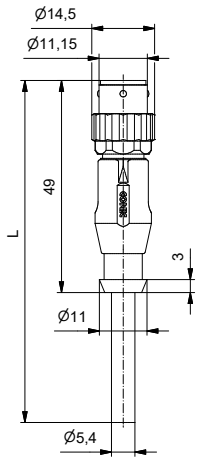
Connectors SAL M12x1 series
Bayonet quick lock

Other conductor cross-sections and connecting cables available on request

Connection cable
Connector

Axial, shielded, TPU, UL

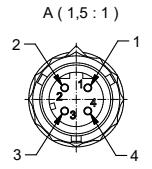


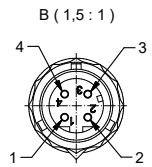


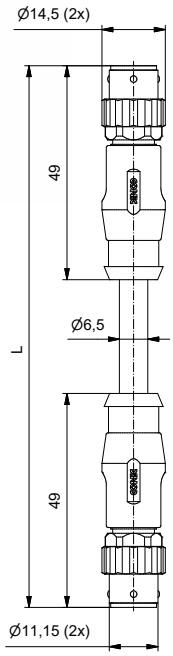
Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]		
5	48 V AC / 60 V DC	4	2	5 x 0.25	SAL - B12S - RS5.1 - 2 / G2	43-23065
			5		SAL - B12S - RS5.1 - 5 / G2	43-23067
			10		SAL - B12S - RS5.1 - 10 / G2	43-23068

Connecting cable industrial Ethernet
Connector - connector

Axial, shielded, TPU, UL



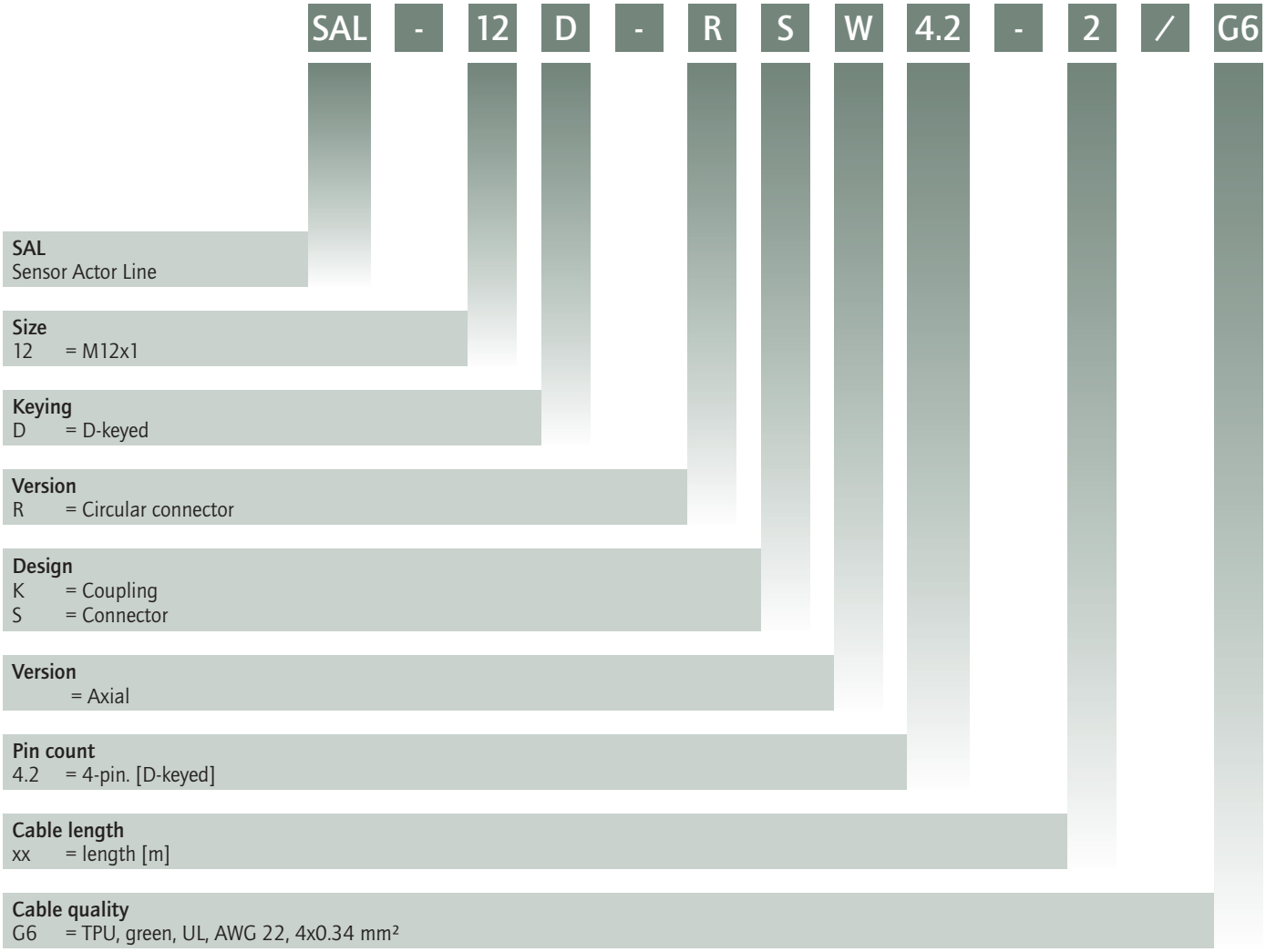




Pin count	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]		
4	48 V AC / 60 V DC	4	0.3	4 x 0.34	SAL - B12D - RS4.2 - RS4.2 - 0.3 / G6	43-23061
			0.6		SAL - B12D - RS4.2 - RS4.2 - 0.6 / G6	43-23062
			1.5		SAL - B12D - RS4.2 - RS4.2 - 1.5 / G6	43-23063
			3		SAL - B12D - RS4.2 - RS4.2 - 3 / G6	43-23064

Connectors SAL M12x1 series industrial Ethernet 100 MBIT/s

Nomenclature



Connectors SAL M12x1 series industrial Ethernet 100 MBIT/s

Product specification

Materials	
Contact	CuZn / CuSn
Contact surface	Ni, Au gal.
Insulating block	TPU GF, UL 94 / PA, UL 94 / PPA
Overmolding	TPU, UL 94, grey
Seal	FPM
Union nut/screw	GD Zn, Ni
Shielding sleeve	CuZn, Ni

Technical data	
The information on the following pages is based on the IEC standards listed below.	
Rated voltage	IEC 61076-2-101
Current carrying capacity	IEC 61076-2-101
Insulation resistance	IEC 60512
Degree of contamination	IEC 60664-1
Degree of protection	IEC 60529
Plugging cycles	IEC 60512-9a

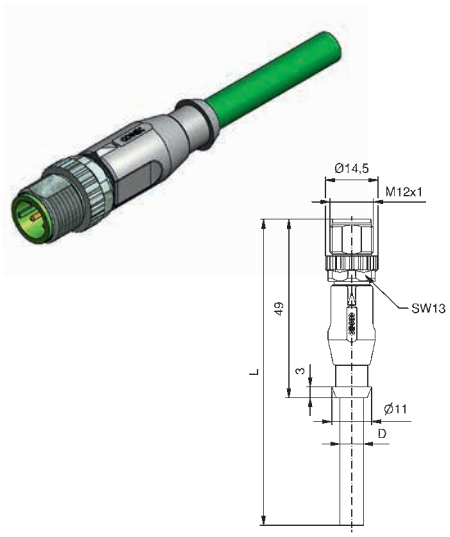
Recommended torque: 0.6 Nm
Subject to technical changes.

Connectors SAL M12x1 series
Industrial Ethernet 100 Mbit/s

Connecting cable

TPU, UL, halogen-free, Cat 5e, shielded

Contact assignment

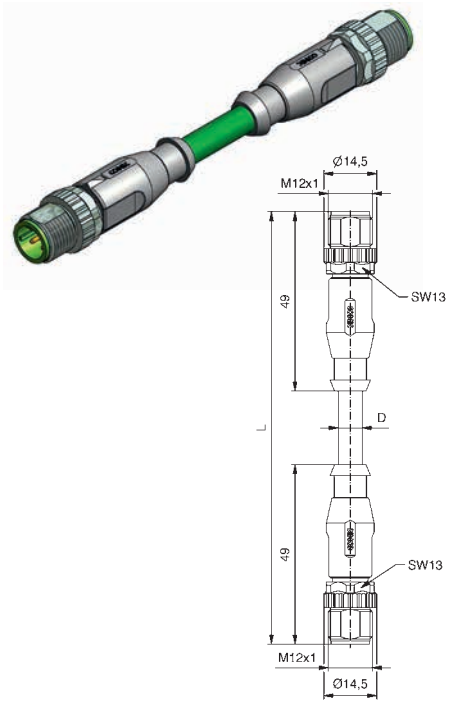


Pin 1
Pin 2
Pin 3
Pin 4

Pin count	*Keying*	*Rated voltage [V]*	*Current carrying capacity [A]*	*Cable length =L [m]*	*Conductor cross-section [AWG]*	*Designation*	*Part. no.*
4	D	160	4	2	4x 22	SAL-12D-RS4.2-2/G6	43-10944
				3		SAL-12D-RS4.2-3/G6	43-10945
				5		SAL-12D-RS4.2-5/G6	43-10946
				10		SAL-12D-RS4.2-10/G6	43-10947

Extension cable axial to axial

TPU, UL, halogen-free, Cat 5e, shielded

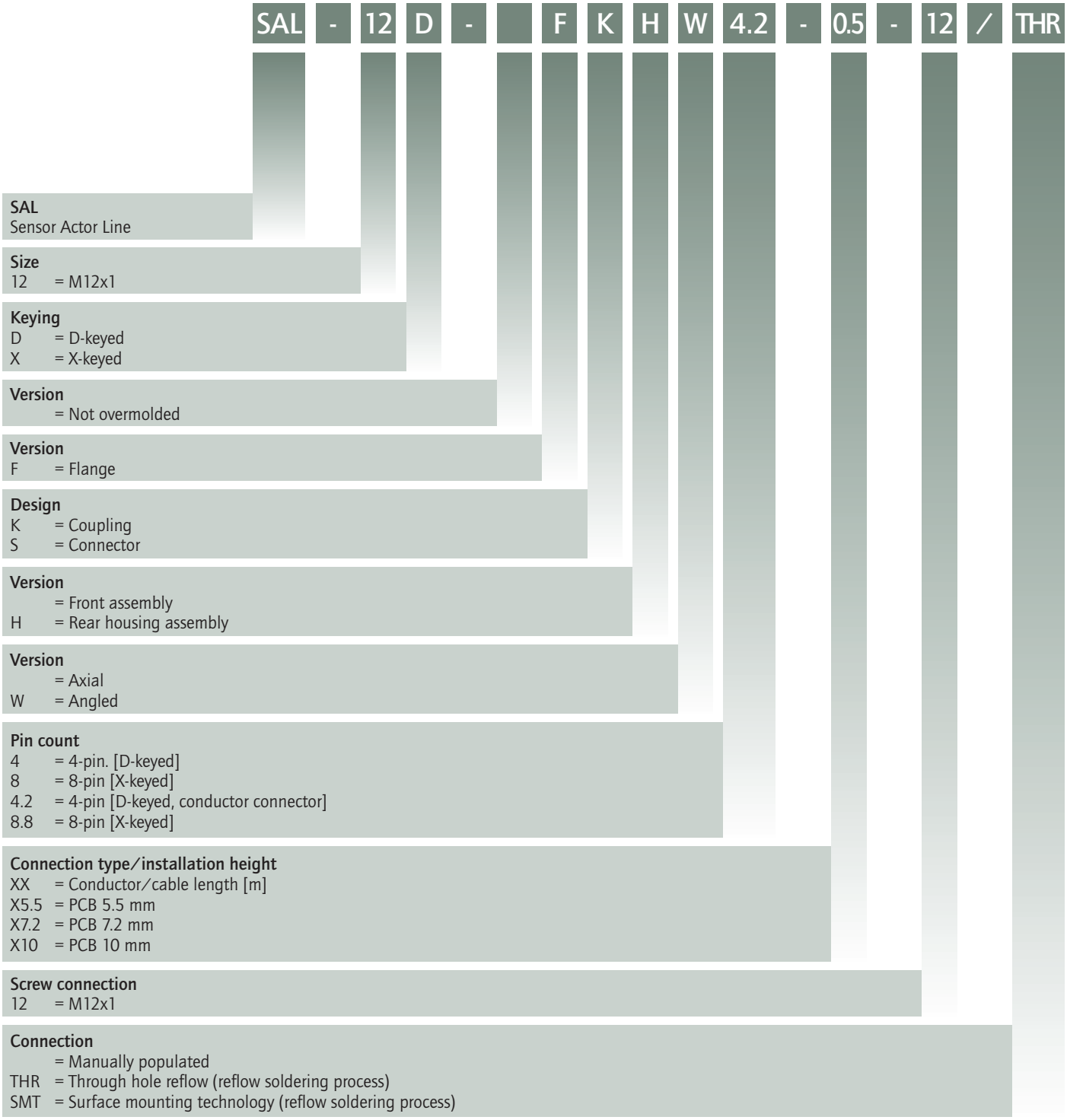


Pin 1
Pin 2
Pin 3
Pin 4

4	D	160	4	0.3	4x 22	SAL-12D-RS4.2-RS4.2-0.3/G6	43-10948
				0.6		SAL-12D-RS4.2-RS4.2-0.6/G6	43-10949
				1.5		SAL-12D-RS4.2-RS4.2-1.5/G6	43-10950
				3		SAL-12D-RS4.2-RS4.2-3/G6	43-10951

Connectors SAL M12x1 series installation flange industrial Ethernet 100 Mbit/s / Ethernet 10 Gbit/s

Nomenclature



Connectors SAL M12x1 series installation flange industrial Ethernet 100 Mbit/s / Ethernet 10 Gbit/s

Product specification

Materials	
Contact	CuZn
Contact surface	Ni, Au gal.
Insulating block	PBT GF, UL 94 / PA GF, UL 94, LCP GF
Seal	FPM / NBR
Lock nut	CuZn, Ni
Flange housing	CuZn, Ni
Potting	Polyurethane resin, UL 94
Screening plate	Spring steel
Screening plate surface	Sn gal.

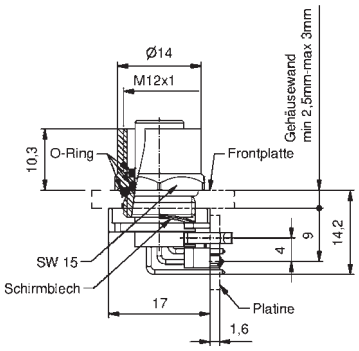
Technical data		
The information on the following pages is based on the IEC standards listed below.		
Rated voltage	IEC 61076-2-101	X-keyed = IEC 61076-2-109
Current carrying capacity	IEC 61076-2-101	X-keyed = IEC 61076-2-109
Insulation resistance	IEC 60512	
Degree of contamination	IEC 60664-1	
Degree of protection	IEC 60529	
Plugging cycles	IEC 60512-9a	

Recommended torque: 1-1.2 Nm

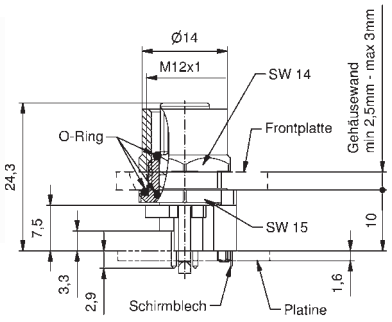
Subject to technical changes.

Connectors SAL M12x1 series, installation flange
Industrial Ethernet 100 Mbit/s

Front assembly, PCB connection
Shielded

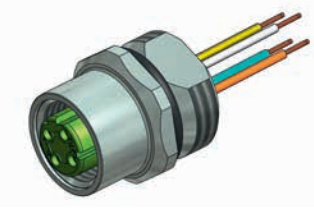
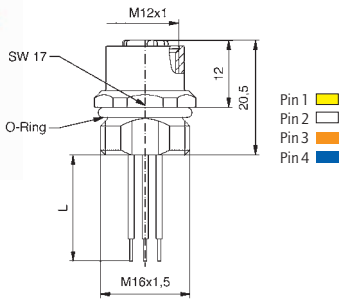
Coupling, angled	Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Installation height [mm]		
 	4	D	48 V AC / 60 V DC	4	9	SAL-12D-FKW4	43-01228

Rear housing assembly, PCB connection
Shielded

Coupling, axial	Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Installation height [mm]		
 	4	D	48 V AC / 60 V DC	4	10	SAL-12D-FKH4-X10	43-01221

Connectors SAL M12x1 series, installation flange
Industrial Ethernet 100 Mbit/s

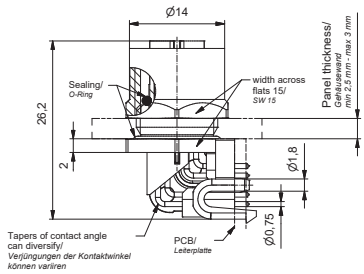
Front assembly, conductor connection
Shielded

Coupling, axial, TPU, UL — *Contact assignment*	Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Conductor material	Conductor cross-section [AWG]	Conductor length = l [m]		
 	4	D	48 V AC / 60 V DC	4	PVC	22	0.5	SAL-12D-FK4.2-0.5	43-01044

Connectors SAL M12x1 series, installation flange
Industrial Ethernet 10 Gbit/s

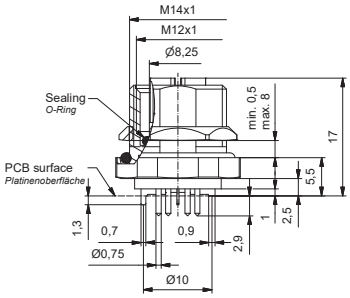
Rear housing assembly
Shielded

Coupling, angled, PCB connection



Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Installation height [mm]		
8	X	48 V AC / 60 V DC	0.5	9	SAL-12X-FKHW8	43-03483

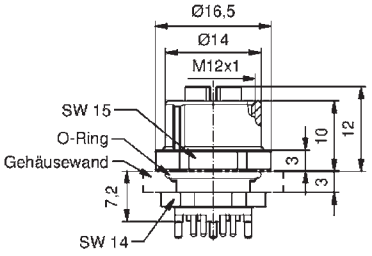
Coupling, axial, THR



Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Installation height [mm]		
8	X	48	0.5	5.5	SAL-12X-FKH8-X5.5/THR	43-03529

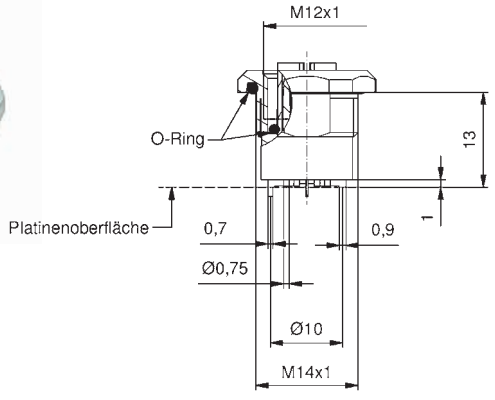
Front assembly
Shielded

Coupling, axial, PCB connection



Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Installation height [mm]		
8	X	48	0.5	7.2	SAL-12X-FK8.8-X7.2-12	43-01847

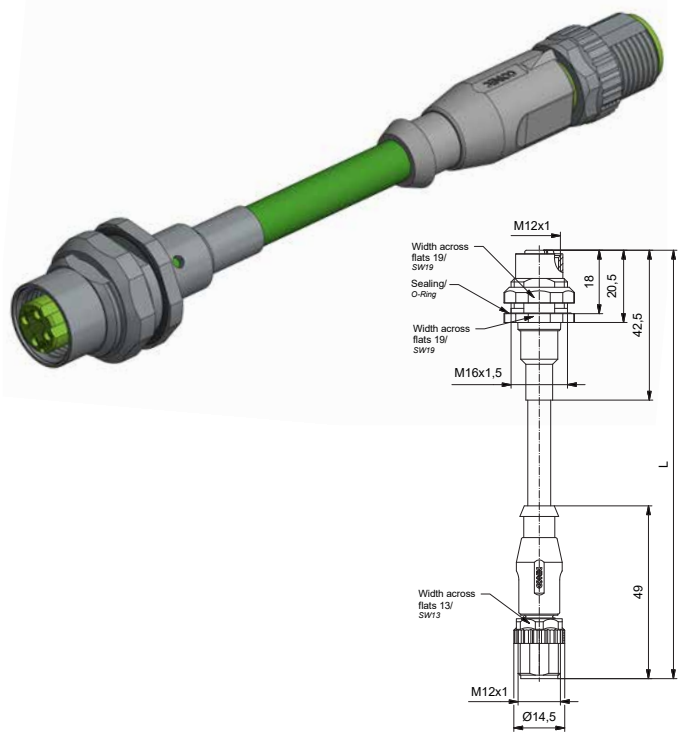
Coupling, axial, SMT



Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Installation height [mm]		
8	X	48	0.5	13	SAL-12X-FK8-X13/SMT	43-02759

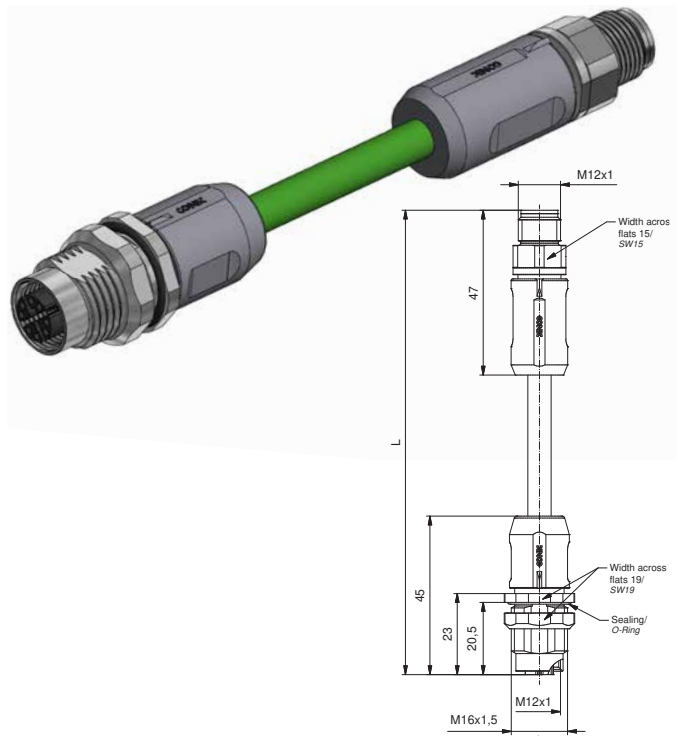
Flange coupling, rear housing assembly
Connector, axial

TPU, UL, 100 Mbit/s, shielded



Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [AWG]	Designation	Part. no.
4	D	160	4	0.5	2 x 2 x 22	SAL-12D-FKH4.2-RS4.2-0.5/G6	43-01672
				1		SAL-12D-FKH4.2-RS4.2-1/G6	43-01673
				2		SAL-12D-FKH4.2-RS4.2-2/G6	43-01674

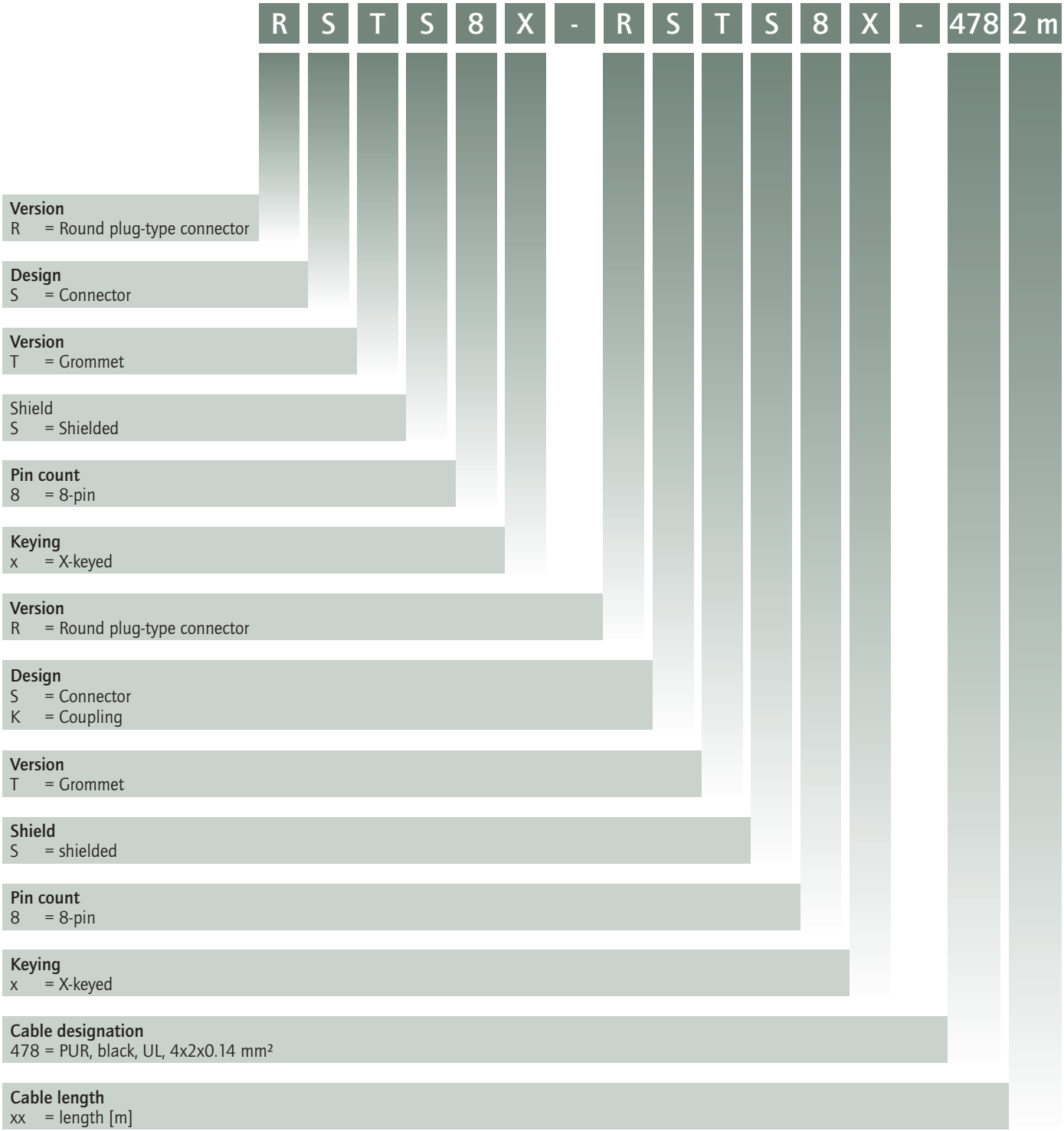
PUR, shielded, 10 Gbit/s, shielded



Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [AWG]	Designation	Part. no.
8	X	48	0.5	0.3	4 x 2 x 26	SAL-12X-RFKH8.8-RS 8.8-0.3/GBB	43-03836
				0.6		SAL-12X-RFKH8.8-RS 8.8-0.6/GBB	43-03837
				1.5		SAL-12X-RFKH8.8-RS 8.8-1.5/GBB	43-03838
				3		SAL-12X-RFKH8.8-RS 8.8-3/GBB	43-03839

Connectors RST M12x1 series connecting cable – Ethernet 10 Gbit/s

Nomenclature



Connectors RST M12x1 series connecting cable – Ethernet 10 Gbit/s

Product specification

Materials	
Contact material, surface finishing	CuZn, Cu/Au
Contact carrier material	PA
Housing material	PA
Knurled screws	CuZn, nickel-plated

Technical data	
Rated voltage	48 V
Current carrying capacity	0.5 A
Degree of protection	IP67
Ambient temperature	-40 °C ... +80 °C
Connection cross-section	4 x 2 x 0.14 mm²
Insulation resistance	≤ 5 mΩ
Degree of contamination	3 according to DIN EN 60664-1 (VDE 0110)

Connectors RST M12x1 series
industrial Ethernet 10 Gbit/s connecting cable

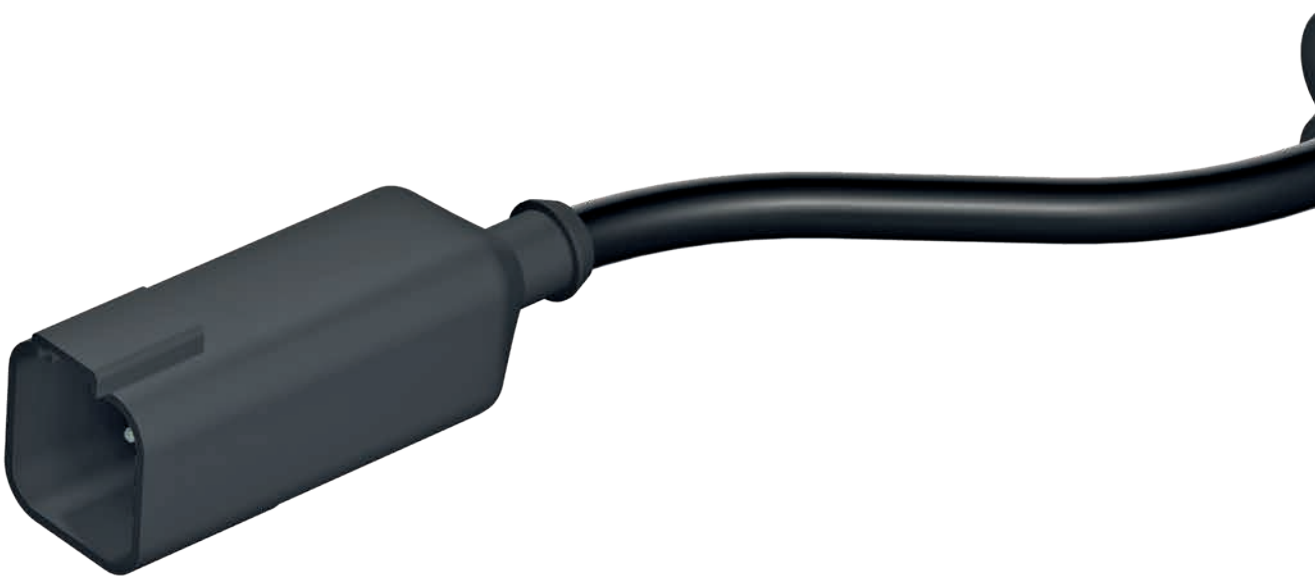
Extension cable axial to axial

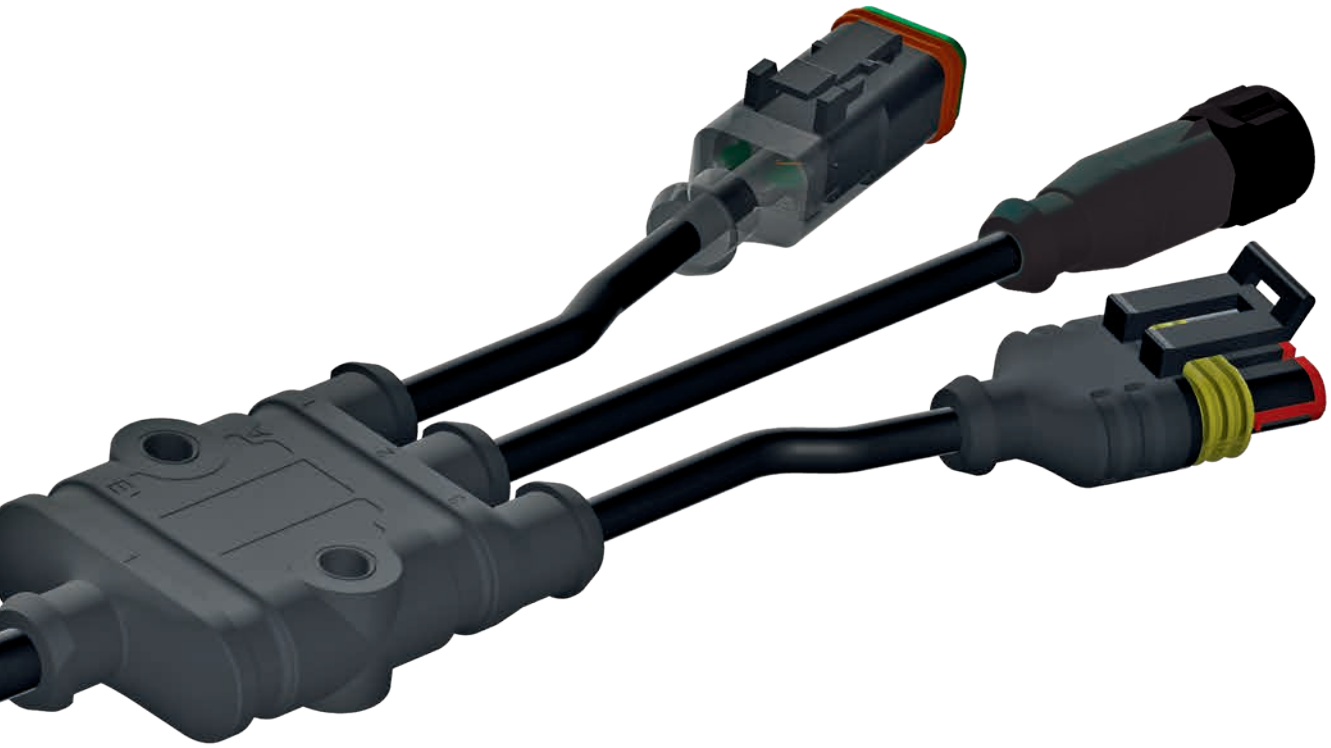
PUR, UL

Pin count	Keying	Rated voltage [V]	Current carrying capacity [A]	Cable length =L [m]	Conductor cross-section [mm²]	Designation	Part. no.
8	X	48	0.5	2	4 x 2 x 0.14	RSTS 8X-RSTS 8X-478/2 m	934809005
				5		RSTS 8X-RSTS 8X-478/5 m	934809006
				10		RSTS 8X-RSTS 8X-478/10 m	934809007

Section 8

Type S, M, L junction system

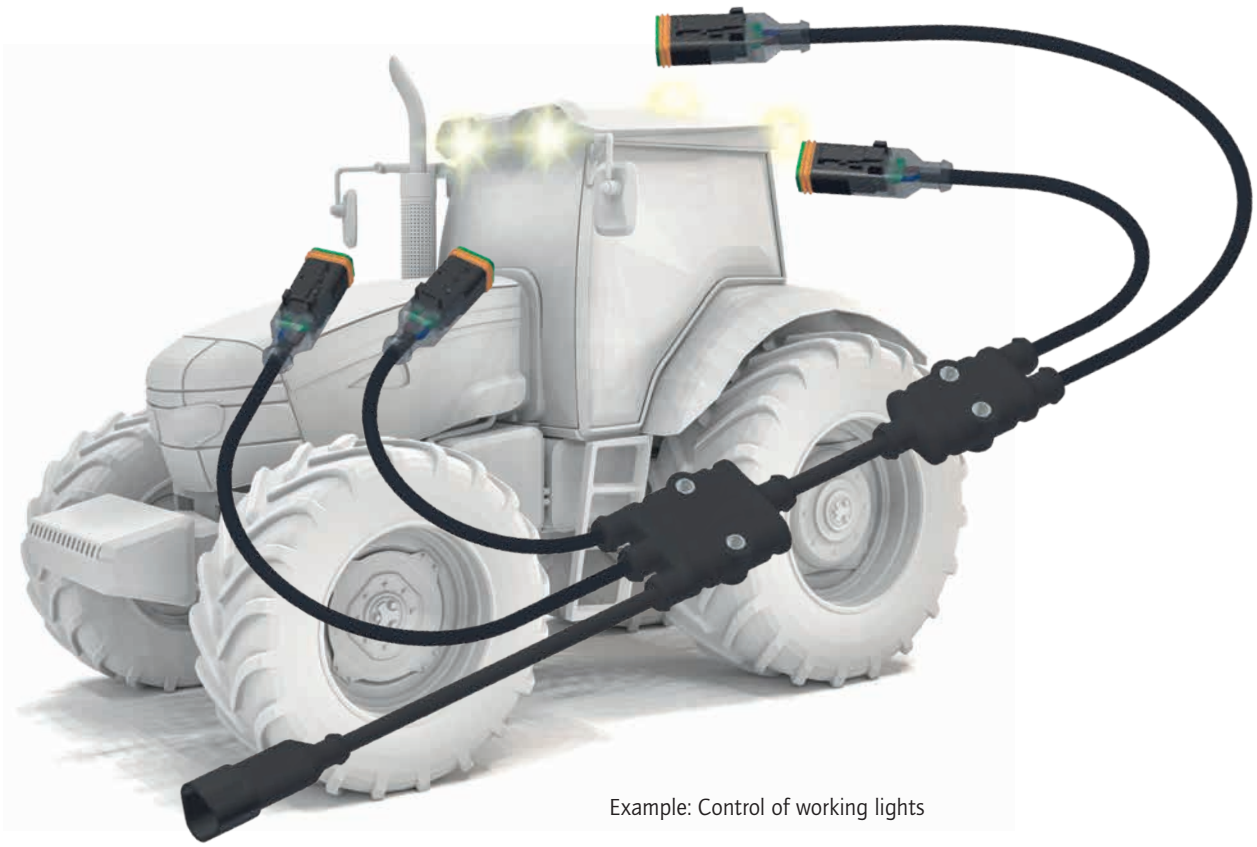




Type S, M, L junction system

Area of application

In agricultural engineering, too, the degree of automation is constantly increasing, as is the need to equip machines locally with sensors and other electrical components.
Our new junction systems offers a flexible way to integrate overmolded branches/outputs into electrical connecting cables such as wiring harnesses. This ensures that the continuous cable sheathing also maintains full functional integrity at the splice point (in the distributor). The junction system is at least IP67 rated; it is electrically tested and quality controlled and therefore offers a robust, tamper-proof approach to safely electrifying machines. PUR overmolding offers good resistance for the agricultural environment.
PERES offers three different sizes of junction systems (S, M and L).



Example: Control of working lights

Specifications	Type S	Type M	Type L
Dimensions (L x W x H mm)	66 x 30 x 15	66 x 40 x 15	76 x 55 x 22
Cable inputs	1, 2	1, 2, 3	1, 2, 3, 4
Cable outputs	1, 2	1, 2, 3	1, 2, 3, 4

Since the junction system is exclusively intended for cable inputs and outputs. There are virtually no restrictions to create your desired combination of different connectors in this modular system. Restrictions are defined by the maximum cable diameter of 8 mm for the S and M junctions. For the L variant, the maximum cable diameter for the input is limited to 17 mm and the cable diameters for the outputs are limited to 8 mm for the 4-way version and 13 mm for the 3-way version.
Each junction has two mounting holes with M5 thread for easy and safe installation. Additionally, a cable tie holder is integrated at the input and output of the housing. This means that the system can be easily and securely securely attached at the required location. There it will be able to withstand toughest external conditions.

Due to the flexible design of the internal wiring in the junction, there are many options to create your desired circuits and integrate components. E.g. diodes, fuses and resistors.

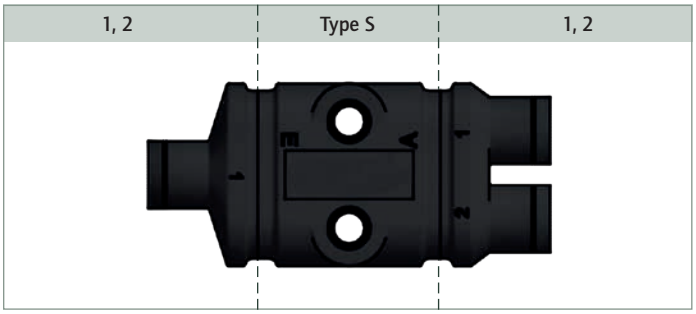
Type S, M, L junction system
Overview

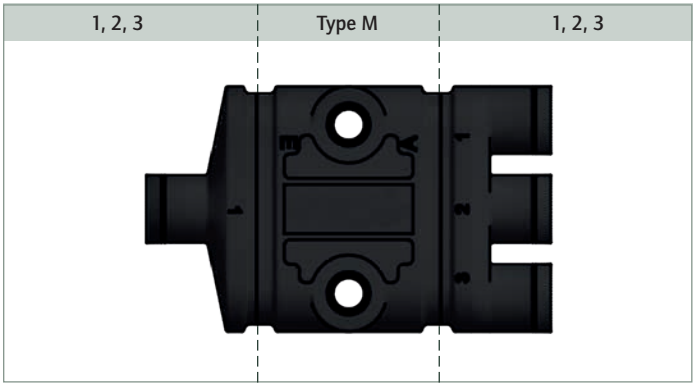
Usable series	Inlet	Output	Usable series

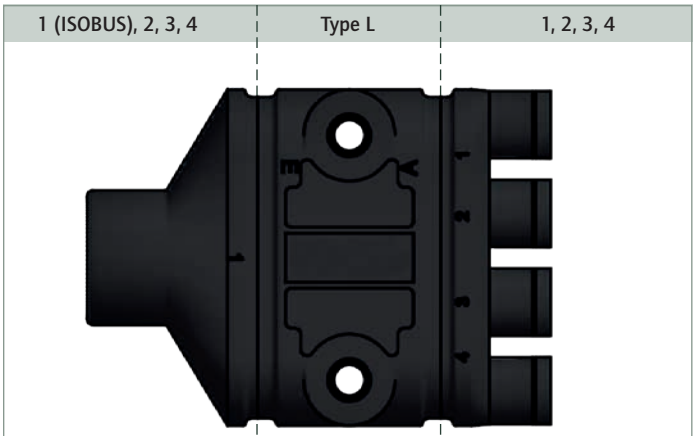
VSS series
Type: S, M, L

DT series
Type: S, M, L

ISOBUS series
Type: L







M8 series
Type: S, M, L

M12 series
Type: S, M, L

CPC series
Type: S, M, L

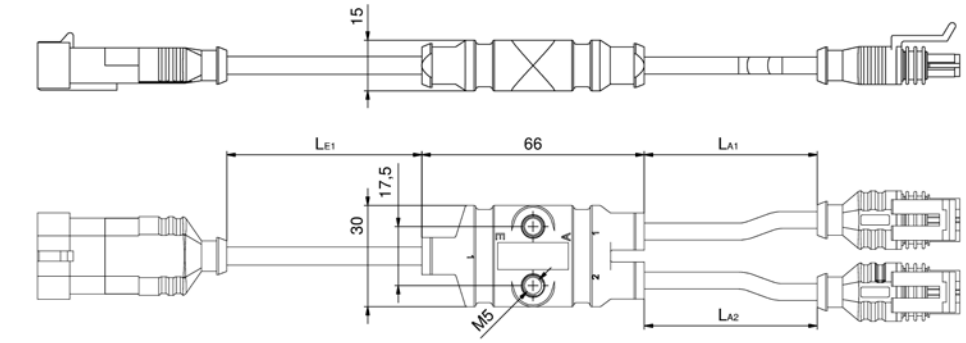
Specifications	Type S	Type M	Type L
Dimensions (L x W x H mm)	66 x 30 x 15	66 x 40 x 15	76 x 55 x 22
Cable inputs	1, 2	1, 2, 3	1
Cable outputs	1, 2	1, 2, 3	3, 4
Overmolding	TPU UL94 V-0	TPU UL94 V-0	TPU UL94 V-0
Cable quality	PUR (0.75 mm²)*	PUR (0.75 mm²)*	PUR (Hybrid)*
Max. cable diameter for input	8 mm	8 mm	17 mm
Max. cable diameter for output	8 mm	8 mm	13 mm (3 outputs) 8 mm (4 outputs)
Degree of protection	IP67	IP67	IP67

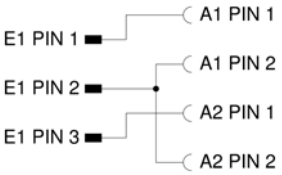
* Other cross-sections available on request

Type S

1 input/2 outputs

Contact assignment



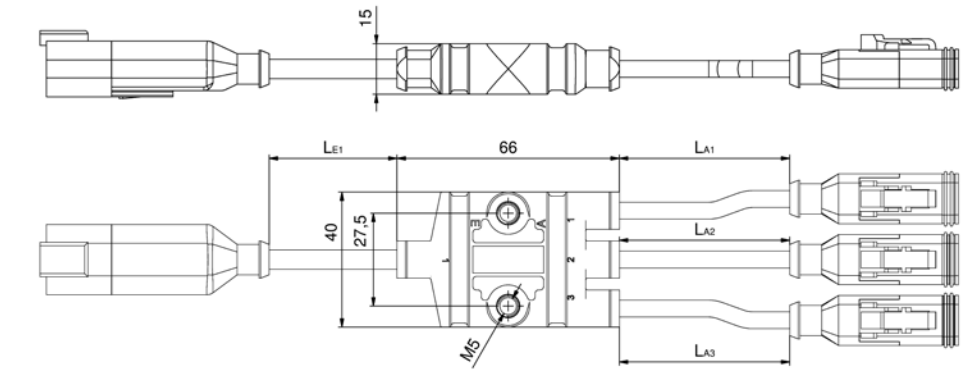


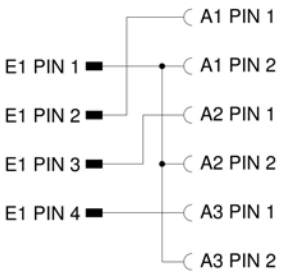
Input $_{E1-2}$	Type	Length L_{E1-2} [m]	Distributor type	Output $_{A1-2}$	Type	Length L_{A1-2} [m]	Article
E1	VSS1.5-3P-A	0.6	S	A1	VSS1.5-2S-A	0.6	55-20001
E2	–	–		A2	VSS1.5-2S-A	0.6	

Type M

1 input/3 outputs

Contact assignment

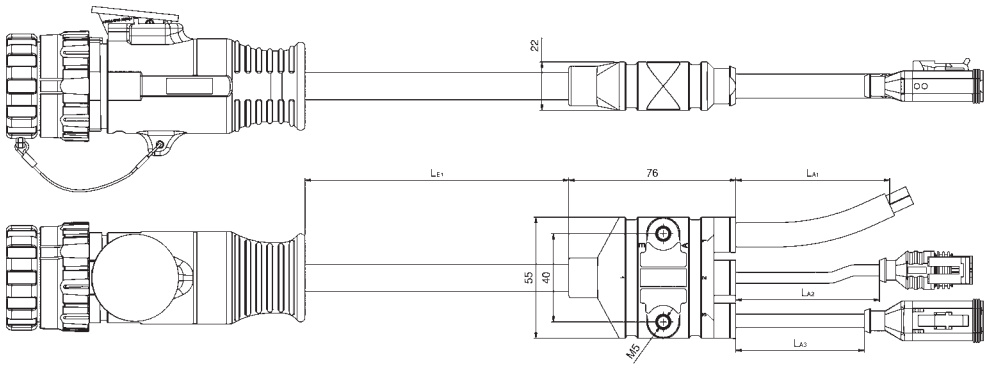




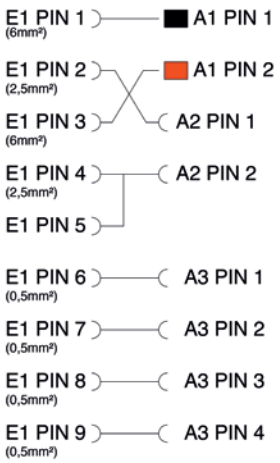
Input $_{E1-3}$	Type	Length L_{E1-3} [m]	Distributor type	Output $_{A1-3}$	Type	Length L_{A1-3} [m]	Article
E1	DT04-4P-A	0.6	M	A1	DT06-2S-B	0.6	55-20002
E2	–	–		A2	DT06-2S-B	0.6	
E3	–	–		A3	DT06-2S-B	0.6	

Type L

1 input/3 outputs



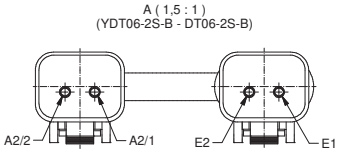
Contact assignment

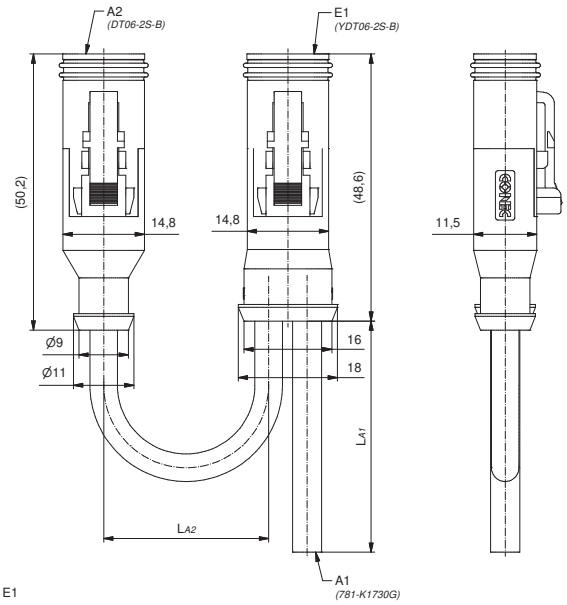


Input $_{E1}$	Type	Length L_{E1-3} [m]	Distributor type	Output $_{A1-4}$	Type	Length L_{A1-4} [m]	Article
E1	EJ	2.5	L	A1	Cable	1.2	55-20003
				A2	VSS1.5-2S-A	1.0	
				A3	DT06-4S-A	1.0	
				A4	–	–	

Y-connecting cable

1 input/2 outputs





Input $_{E1-2}$	Type	Output $_{A1-2}$	Type	Length L_{A1-2} [m]	Article
E1	YDT06-2S-B	A1	Open ended	2	55-50360
		A2	DT06-2S-B	0.15	

Y-extension cable

1 input/2 outputs

Input $_{E1-2}$	Type	Output $_{A1-2}$	Type	Length L_{A1-2} [m]	Article
E1	YDT04-2P-A	A1	DT06-2S-A	x	55-xxxxx
		A2	DT06-2S-A	x	

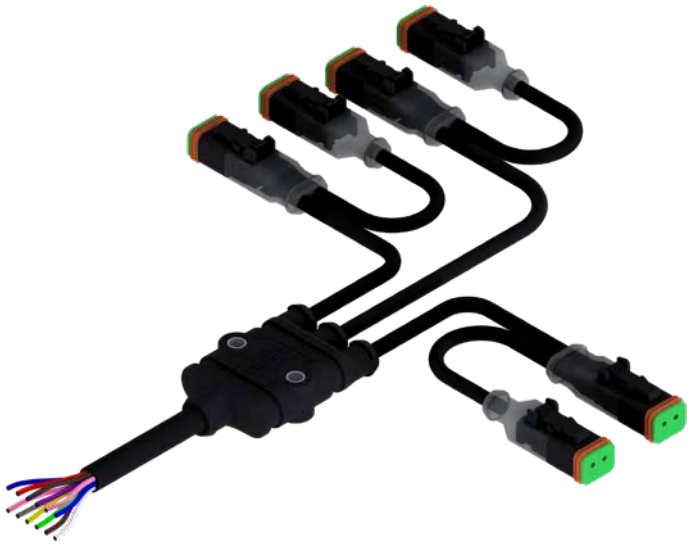
Junction System Type S

1 input/4 outputs

Input $_{E1-2}$	Type	Output $_{A1-2}$	Type	Length L_{A1-2} [m]	Article
E1	Open ended	A1	YDT06-2S-B	x	55-xxxxx
		A2	DT06-2S-B	x	
		A3	YDT06-2S-B	x	
		A4	DT06-2S-B	x	

Junction System Type M

1 input/6 outputs



Input $_{E1-2}$	Type	Output $_{A1-2}$	Type	Length L_{A1-2} [m]	Article
E1	Open ended	A1	YDT06-2S-B	x	55-xxxxx
		A2	DT06-2S-B	x	
		A3	YDT06-2S-B	x	
		A4	DT06-2S-B	x	
		A5	YDT06-2S-B	x	
		A6	DT06-2S-B	x	

Junction System Type L

1 input/8 outputs

Input $_{E1-2}$	Type	Output $_{A1-2}$	Type	Length L_{A1-2} [m]	Article
E1	Open ended	A1	YDT06-2S-B	x	55-xxxxx
		A2	DT06-2S-B	x	
		A3	YDT06-2S-B	x	
		A4	DT06-2S-B	x	
		A5	YDT06-2S-B	x	
		A6	DT06-2S-B	x	
		A7	YDT06-2S-B	x	
		A8	DT06-2S-B	x	

Y-extension cable

1 input/2 outputs

Input $_{E1-2}$	Type	Output $_{A1-2}$	Type	Length	Article
E1	DT06-12CS-A	A1	CPC13-9P-A	X	55-XXXXX
		A2	SAL-8RS4	X	

Y-extension cable

1 input/2 outputs

Input $_{E1-2}$	Type	Output $_{A1-2}$	Type	Length	Article
E1	VSS1.5-4P-A	A1	VSS1.5-4S-A	X	55-XXXXX
		A2	VSS1.5-4P-A	X	

Section 9

Vision systems

Subject to technical changes and errors. Other designs available on request. Version 1.2023

Colour camera

IP69K
120° angle of vision
IR LED for improved night vision

Description

- 1/3" CMOS image sensor
- Angle of vision: 120°
- PAL or NTSC version available
- 500 TV lines
- Day/night sensor
- Automatic white balance

- Operating temperature: -20 °C to +60 °C
- IP69K
- Dimensions: W 90 / H 67 / D 64 mm

Designation	*Part. no.*
PERES camera CLS-120 P	PER484

Flap camera

IP69K
Built-in heater

- 1/3" Sony CCD image sensor
- Angle of vision: 120°
- PAL or NTSC version available
- 420 TV lines
- Day/night sensor
- Automatic white balance
- Mechanical vibration: 5G

- Operating temperature: -20 °C to +70 °C
- IP69K
- Dimensions: W 85 / H 73 / D 65 mm

Designation	*Part. no.*
PERES camera CLX-120S 12-24V	PER1081

BroadR-Reach camera

IP69K

- 1/4" CMOS image sensor
- Angle of vision: 126°
- Digital BroadR-Reach
- LED flickering, HDR

- Connection: M12x1, 4-pin, D-coded

- Operating temperature: -40 °C to +85 °C
- IP69K
- Dimensions: W 34 / H 28 / D 46 mm
- Weight: 65 g

Designation	*Part. no.*
PERES camera BR	PER780

Ball camera

150° angle of vision
5 IR LEDs for improved night vision

Description

- 1/3" Sharp CCD image sensor
- Angle of vision: 150°
- PAL
- 420 TV lines
- Day/night sensor
- Automatic white balance
- Mechanical vibration: 10G

- Operating temperature: -20 °C to +70 °C
- IP69K
- Dimensions: W 55 / H 48 / D 33 mm

Designation	*Part. no.*
PERES camera CLX-KN150	PER722

Ball camera

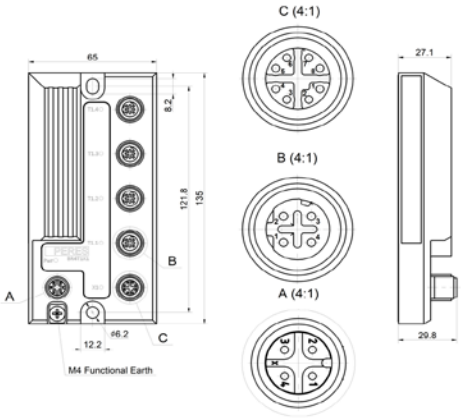
IP69K
5 IR LEDs for improved night vision

- 1/3" CMOS image sensor
- Angle of vision: 120°
- PAL
- 420 TV lines
- Day/night sensor
- Automatic white balance
- Mechanical vibration: 10G

- Operating temperature: -20 °C to +70 °C
- IP69K
- Dimensions: W 56 / H 48 / D 45 mm

Designation	*Part. no.*
PERES camera CLS-KN120	PER723

Unmanaged industrial Ethernet switch M12 IP65/IP67 – BroadR-Reach technology



Description

- Up to 4 cameras
- One monitor

- Switch: IEEE802.3 Store and Forward
- No. of ports (X-coded + D-coded): 4+1
- Cable length: 15 m (twisted pair)
- Gigabit speed

- Operating temperature: -40 °C to +70 °C
- IP65/IP67
- Dimensions (mm): 65 x 135 x 29.8
- Weight: (g): 370

Designation	*Part. no.*
PERES switch BR4T1X1	PER633

LCD digital monitor MLX 73S, 7“

Description

- Suitable for 1 × flap camera + 2 × cameras
- Resolution: 800 × 480 pixels
- Contrast: 500 : 1
- Brightness:: 400 cd/m2
- Angle of vision: top 50° / bottom 70° / sides 70°
- Automatic dimming
- Integrated loudspeaker
- Distance markers on the screen
- Switchable: Mirror image/normal view
- Anti-reflective screen
- Mechanical vibration: 7G
- Multilingual menu
- Operating temperature: -20 °C to +60 °C
- Sun visor
- Incl. brackets
- Dimensions: W 213 / H 138 / D 41 mm

7“ LCD digital monitor
3 camera inputs / triggers
12 / 24 V DC

Designation	*Part. no.*
PERES terminal MLX 73S	PER1168

HD monitor MLX-104 HD, 10“

Description

- Resolution: 1,024 × 600 pixels
- Contrast: 800 : 1
- Brightness:: 600 cd/m2
- Angle of vision: top/bottom/sides 85° in each case
- Automatic dimming
- Integrated loudspeaker

- Switchable: Mirror image/normal view
- Multilingual menu
- Mechanical vibration: 7G
- Operating temperature: -20 °C to +70 °C
- Sun visor
- Incl. brackets
- Dimensions: W 266 / H 160 / D 30 mm (D with cover plate 75 mm)
- Weight: 1190 g

10“ LCD
Digital monitor
4 camera inputs /
triggers / multiple image function
12 / 24 V DC

Designation	*Part. no.*
PERES terminal MLX-104 HD	PER1046

IMX8X BASED DISPLAY, 7"

i.MX 8DualXPlus processor
Panorama function
Voice detection
Multiple image function

Description

- Resolution: 7" WVGA, 800x480 pixels
- Contrast: 800 cd/m²
- Gradual dimming, 1-100%
- Connections:
  8 pin DIN M12 for power and CAN input
  4 pin DIN M12 for Ethernet
  5 pin DIN M12 for USB
- IP protection class: IP65, IP66 and IP67
- Touch screen
- Operating temperature: -30 °C to +70 °C
- Dimensions: W 201 x H 135H x D 40
- Weight: 650 g

Designation	*Part. no.*
PERES terminal V700	PER1082

Freely programmable display, 3.5"

3.5" colour display with Linux operating system
For multifunctional use
Instrument display
Machine control system, HMI
Electronic manual

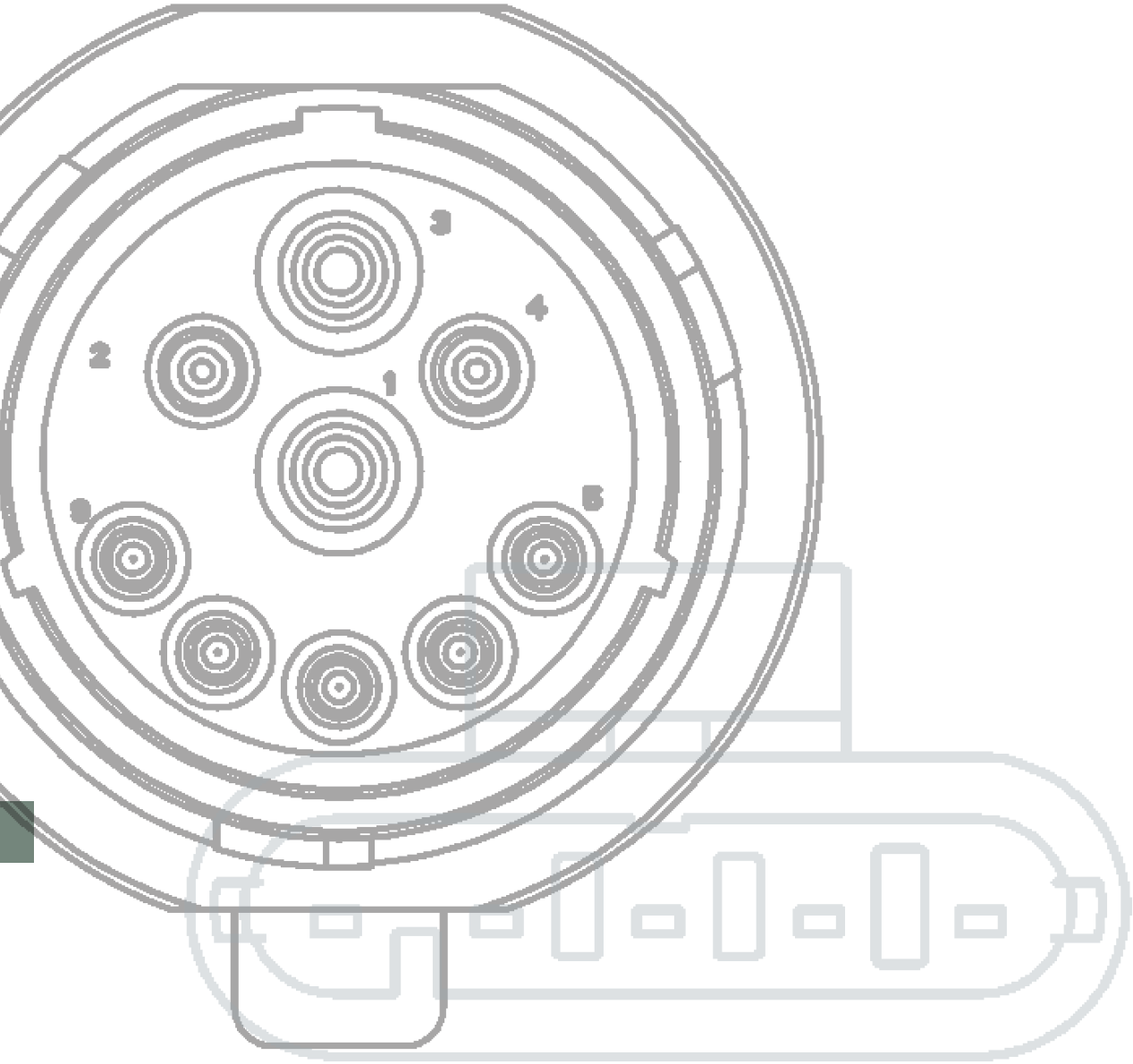
Description

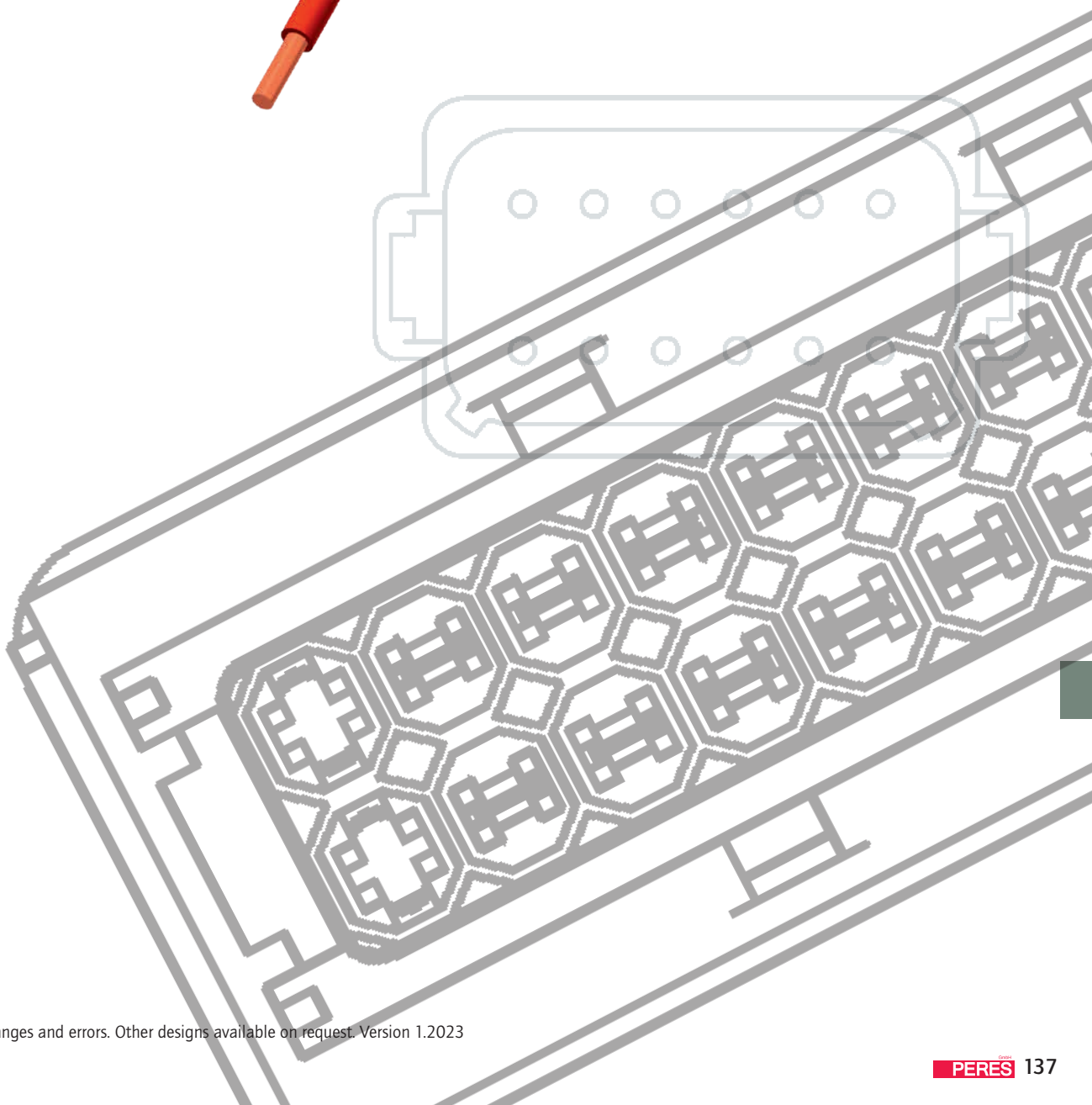
- Resolution: 3.5" QVGA, 320*240 pixels
- Contrast: 520 Cd/m²
- Gradual dimming, 1-100%
- Connections: 2 x Deutsch DTM04-12 connectors
- IP protection class: IP66 and IP67
- Operating temperature: -20 °C to +70 °C
- Dimensions: W 119 x H 79 x D 48
- Weight: 0.25 kg

Designation	*Part. no.*
PERES terminal VI	PER1083

Section 10

Technical data





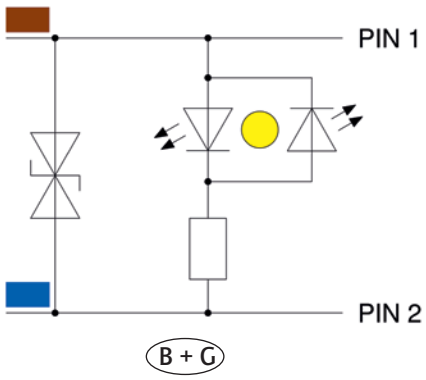
Safety circuits
2- and 3-pin DT connectors

Protective circuits are currently available in three different designs.

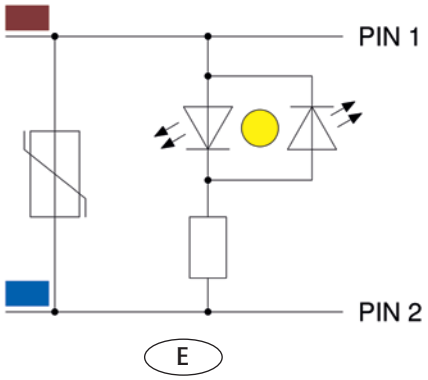
1) Protective circuitry with suppressor diode + 2 x LED (yellow)
2) Protective circuitry with varistor + 2 x LED (yellow)
3) Protective circuitry with free-wheeling diode + LED (yellow)

Protective circuits with suppressor diode or varistors:

With suppressor diode:



With varistor:



Protective circuits with suppressor diode and varistor are designed to be bidirectional. They can therefore be operated on both DC and AC voltage independently of polarity.
These two circuit designs are used to protect downstream electronic circuits against short-term overvoltage. Overvoltage can be caused by switching operations in the system, whereby the resulting voltage pulses can be negative or positive in nature. The pulses are limited by the respective protective element to defined voltages above the operating voltage of the protective element.
The protective circuits with varistor and suppressor diodes differ in terms of technical data as shown below:

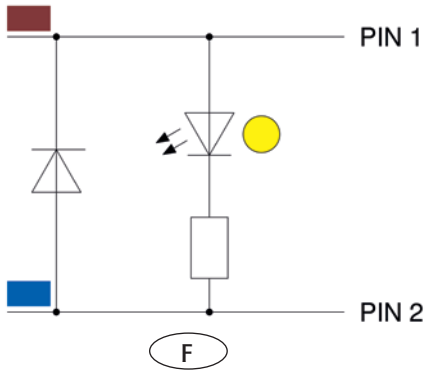
	Suppressor diode	Varistor
Response behaviour	+	–
Breakdown area	+	–
Energy absorption	–	+

Suppressor diodes generally react a little faster and in a smaller breakdown range than varistors, closer to the operating voltage of the protective element than varistors. However, they can absorb higher energies than suppressor diodes.
Due to their faster response, suppressor diodes are therefore particularly suitable for use in areas of input/output interfaces and sensitive circuits.
Varistors, on the other hand, are also preferred for supply cables and inductive loads.

Protective circuits
2- and 3-pin DT connector

Protective circuitry with free-wheeling diode:

With free-wheeling diode:



In contrast to the above-mentioned circuits, the protective circuit with free-wheeling diode is unipolar and can therefore only be operated on a DC voltage with a defined polarity. It is used to protect against negative voltage peaks, which can occur when switching off inductive loads. Positive overvoltage, on the other hand, is not limited by this circuit.

Summary

Due to the bidirectional design of the suppressor diode and varistor, these protective circuits provide protection against both negative and positive overvoltage. However, the reverse voltage of these versions is higher than the forward voltage of a free-wheeling diode.
The forward voltage of a free-wheeling diode is below the operating voltage of the system. The overvoltage pulse can be limited to values below 1 VDC with a free-wheeling diode, which is not possible with the bidirectional mode of operation of suppressor diode and varistor.

Typical applications:

Circuitry design	
Suppressor diode/varistor	**Free-wheeling diode**
• Drive technology • Engine management • Safety devices such as airbags and stability controls • Entertainment and comfort accessories • Control electronics	• Directly on the relay • Directly on solenoid valves

Technical data
Cable qualities

Control cable
DT series/Superseal series/CPC series/M12

Not all conductor cross-sections are possible for every connector.

K1 = Li9Y11Y, unshielded

Similar to figure

Conductor cross-section [mm²]	Number of conductors	Colour of cable sheathing	Approval	Sleeve material	Wire colours	Data sheet no.
0.50	2	black	cULus 20549	PUR	BR - BLU	
0.75						781-*K1* 7200
1.0						781-*K1* 6200
1.5						781-*K1* 8200
0.75	3				BR - BLU - GN/YE	781-*K1* 7300
0.50					BR - BLU- BLA	781-*K1* 5300
0.75						781-*K1* 730G
1.5						781-*K1* 8300
0.75	4				BR - BLU - BLA - GN/YE	781-*K1* 7400
0.50					BR - BLU - BLA - W	781-*K1* 5400
0.75						781-*K1* 740G
1.0						
1.5						781-*K1* 840G
1.5	5				BR - BL - SW - WS - GN/YE	781-*K1* 7500
0.75					BR - BLU - BLA - W - GR	781-*K1* 750G
1.5						781-*K1* 8500
0.75	6				W - BR - GN - YE - GR - RB	781-*K1* 7600
1.5						781-*K1* 8600
0.75	8				W - BR - GN - YE GR - RB - RED - BLU	781-*K1* 7800
1.5						
0.75	12				W - BR - GN - YE - GR RB - RED - BLU - BLA - VI - GR/RB - RED/BLU	781-*K1* 7120
1.5						

Technical data
Cable qualities

Control cable

LiY11Y 2x10 mm², unshielded	Conductor cross-section [mm²]	Number of conductors	Colour of cable sheathing	Approval	Sleeve material	Wire colours	Data sheet no.
 Similar to figure	10.0	2	black		PUR	BLA - RED	PER179

Video cable
DT series/Superseal series/CPC series/M12

Shielded	Conductor cross-section [mm²]	Number of conductors	Colour of cable sheathing	Approval	Sleeve material	Wire colours	Data sheet no.
 Similar to figure	1x0.15 + 1x0.15 + 2x0.62	4	black	UL Style 2919	PVC	COLOURLESS - OR BLA - RED	PER513
	1x0.15 + 1x0.15 + 2x0.61			UL AWM Style 20236	PUR		PER332
	1x0.15 + 1x0.15 + 2x0.60			UL AWM Style 20233			PER514

Technical data
Cable qualities

CAN bus cable
DT series/Superseal series/CPC series/M12

Unshielded

Similar to figure

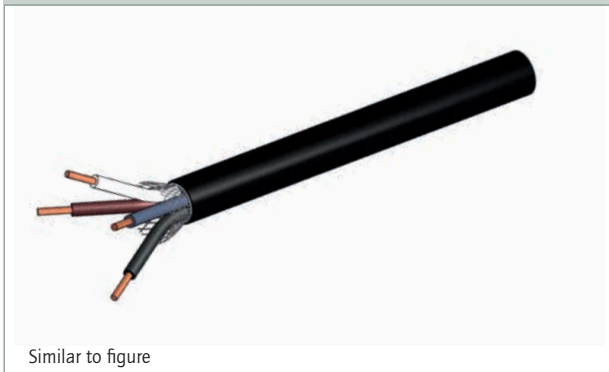
Conductor cross-section [mm²]	Number of conductors	Colour of cable sheathing	Approval	Sleeve material	Wire colours	Data sheet no.
2x AWG20	2	black	UL2464	PVC	GN/YE	PER508
					GR - RB	PER509
					W - BLU	PER510
4x0.50	4		UL AWM Style 20549	PUR	W - BR - GN - YE	PER210
2x0.25 + 2x0.34			UL 758 / 1581		RED - BL - W - BLU	PER511
4x2x0.50	8				(W - BR) (GR - YE) (GR - RB) (BLU - RED)	PER399
6x2x0.50	12				(W - BR) (GR - YE) (GR - RB) (BLU - RED) (BLA - VIO) (GR/RB - RED/BLU)	PER512

Technical data
Cable qualities

BroadR-Reach bus cable
M12

Unshielded	Conductor cross-section [mm²]	Number of conductors	Colour of cable sheathing	Approval	Sleeve material	Wire colours	Data sheet no.
 Similar to figure	2 x 0.13	2	black		TPE	W - GR	PER520

Hybrid cable
DT series/Superseal series/CPC series/M12

Unshielded							
 Similar to figure	2x2x0.50 + 2x1.5	6	black		PUR	W - BR - GN - YE - RED - BLU	PER151
	3x0.50 + 2x2x0.50 + 2x1.50	9				GR - RB - BLA - W - BR - GN - YE - RED - BLU	PER340
Shielded							
 Similar to figure	4x0.25 + 1x0.25 + 2x0.50	7	black		TPE	YE - BLA - GN - RED - GR - RED - BLA	PER515
	2x2x0.25 + 1x0.25 + 2x0.50				PUR	BR - YE - GR - BLU - W - RB	PER217

Technical data
Cable qualities

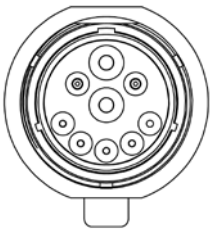
Hybrid bus cable, ISOBUS

Unshielded

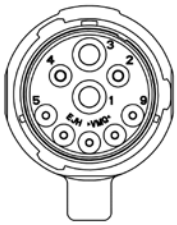
Conductor cross-section [mm²]	Number of conductors	Colour of cable sheathing	Approval	Sleeve material	Wire colours	Data sheet no.
4x0.50 + 2x2.50 + 2x 10.00	4 x 2 x 2	black	ISO 11783-2 compliant	PUR	BLA - YE - GN - RED - BLA - RED - BLA - RED	PER405
4x0.50 + 2x2.50 + 2x 6.00	4 x 2 x 2				BLA - YE - GN - RED - BLA - RED - BLA - RED	PER406
4x0.50 + 2x2.50 + 2x16.00	4 x 2 x 2				BLA - YE - GN - RED - BLA - RED - BLA - RED	PER407

Contact arrangements

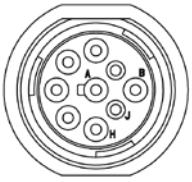
ISOBUS connector, overmolded, socket/pin connector



Socket
9-pin

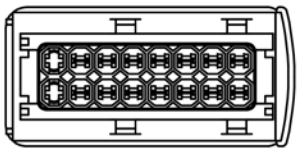


Pin
9-pin



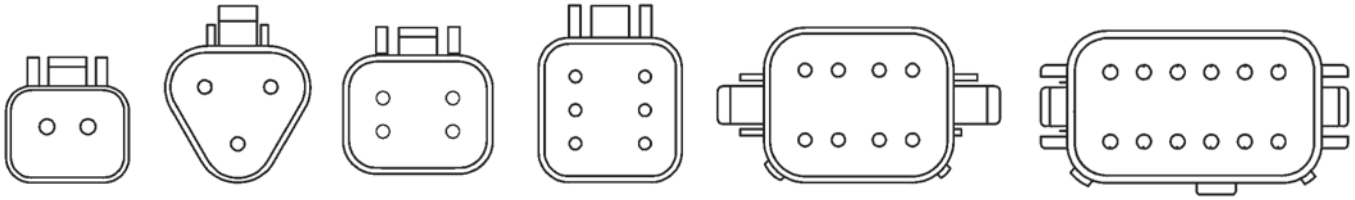
Pin
9-pin

JPT connector



Socket
16-pin

DT series DT 06 (housing for socket contacts)



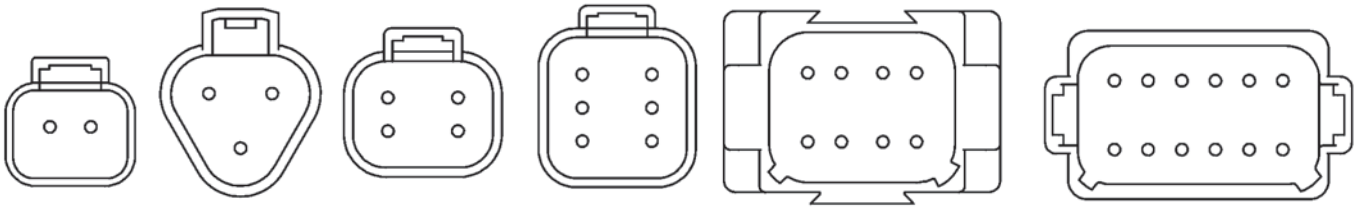
3-pin

6-pin

8-pin
(A-coded)

12-pin
(A-coded)

DT series DT 04 (housing for pin contacts)



2-pin

3-pin

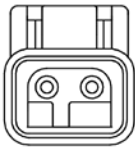
4-pin

6-pin

8-pin
(A-coded)

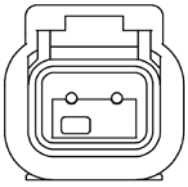
12-pin
(A-coded)

DT series DTM06 (housing for socket contacts)



DTM06-2S
2-pin

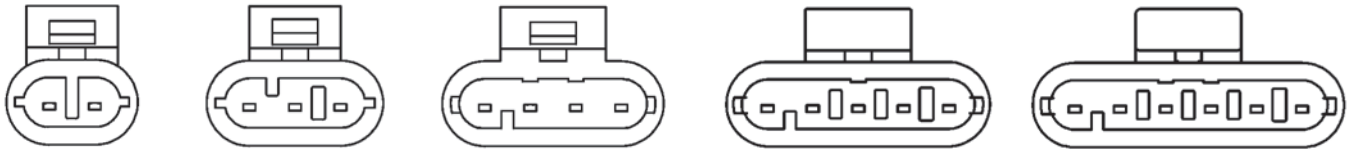
DT series DTM04 (housing for pin contacts)



DTM04-2P
2-pin

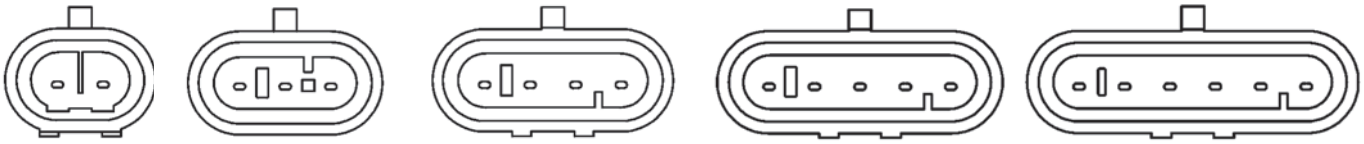
Contact arrangements

Superseal series VSS1.5 (housing for socket contacts)



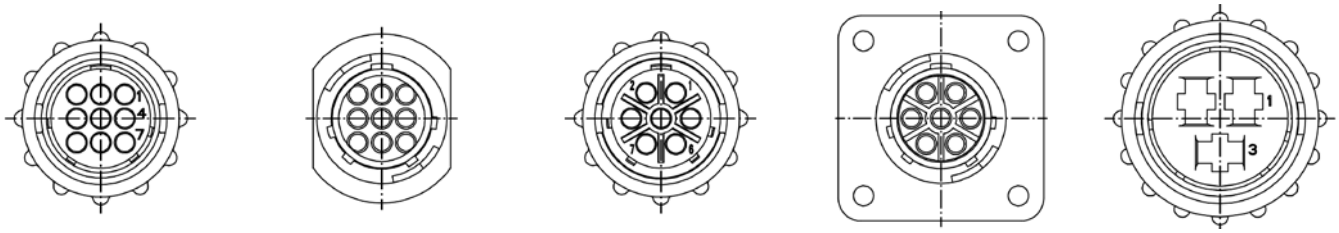
2-pin | 3-pin | 4-pin | 5-pin | 6-pin

Superseal series VSS1.5 (housing for pin contacts)



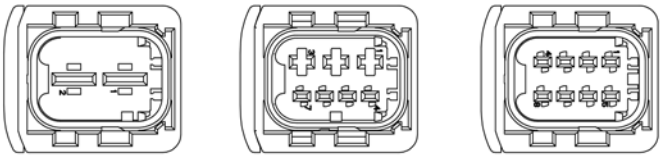
2-pin | 3-pin | 4-pin | 5-pin | 6-pin

CPC series housing size 13 + 17



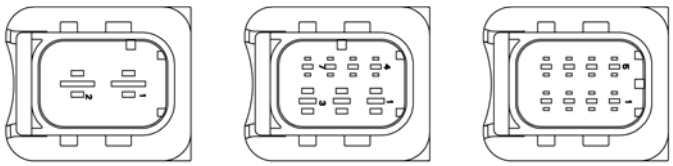
Housing size 13 Socket 9-pin | Housing size 13 Pin 9-pin | Housing size 13 Socket 7-pin | Housing size 13 Pin 7-pin | Housing size 17 Socket 3-pin

HDSCS series housing size C (housing for socket contacts)



2-pin | 7-pin | 8-pin

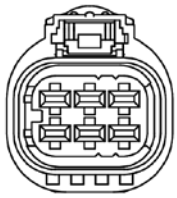
HDSCS series housing size C (housing for pin contacts)



2-pin | 7-pin | 8-pin

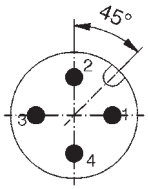
Contact arrangements

MCP series (housing for socket contacts)

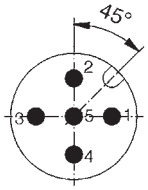


6-pin

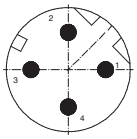
M12x1 connector, overmolded



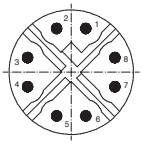
Connector
4-pin
A-coded



Connector
5-pin
A-coded

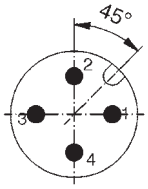


Connector
4-pin
D-coded

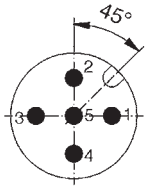


Connector
8-pin
X-coded

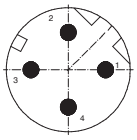
M12x1 connector, overmolded



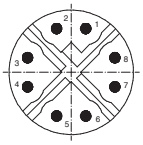
Connector
4-pin
A-coded



Connector
5-pin
A-coded



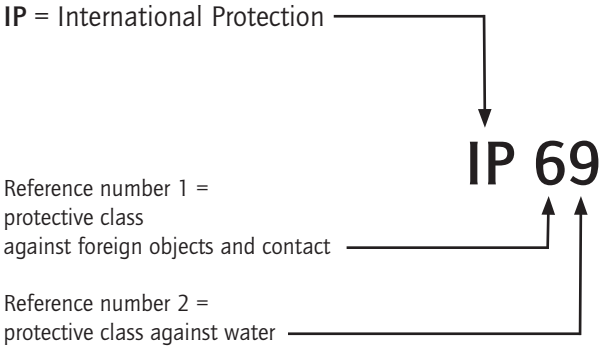
Connector
4-pin
D-coded



Connector
8-pin
X-coded

Degrees of protection

IEC 60529 standard



For safety reasons connectors must be protected against external influences such as dust, foreign bodies, contact, moisture and water. In the case of industrial connectors this protection is provided by the housings with their locking mechanisms and sealed cable ingress points. The protection classes are also referred to as IP codes. The abbreviation IP stands for "Ingress Protection". The IEC 60529 standard defines the degree of protection and catageorizes them in different protection classes.

The protection rating is definded by two parameters. The first number defines a protection class against the ingress of solid objetcts such as dust, foreign bodies and direct contact. The second number describes the protection level againt the harmful ingress of water.

OVERVIEW OF DEGREES OF PROTECTION

First reference number	Protection against the ingress of foreign bodies Protection against contact	Second reference number	Protection against water ingress	Examples
0	Not protected	0	Not protected	
1	Protection against ingress of solid foreign bodies with a diameter > 50 mm. Protected against access with the back of the hand.	1	Protection against vertically dripping water.	
2	Protection against ingress of solid foreign bodies with a diameter > 12.5 mm. Protected against access with the finger.	2	Protection against dripping water with 15° inclination.	
3	Protection against ingress of solid foreign bodies with a diameter > 2.5 mm. Protected against access with a tool.	3	Protection against water spray, diagonal up to 60°.	
4	Protection against ingress of solid foreign bodies with a diameter > 1 mm. Protected against access with a wire.	4	Protection against splash water.	
5	Protected against dust in harmful quantities. Complete protection against contact.	5	Protection against water jets.	
6	Dust-tight. Complete protection against contact.	6	Protection against strong water jets.	
		7	Protection against temporary immersion (max. water depth 1 m).	
		8	Protection against permanent immersion. An additional number indicates the maximum immersion depth in metres.	
		9	Protection against very intensive water jets, e.g. high-pressure and steam pressure cleaners for vehicles.	

Technical electrical information

Voltage classification of the connectors (insulation coordination)

The clearance and creepage distances are used in voltage classification of connectors.

The following standard applies:

IEC 60664-1

Insulation coordination for electrical equipment in low-voltage installations.

Insulation coordination comprises the selection of the electrical insulation properties of a device (e.g., a connector) with regard to its application and its environment.

Explanation of some terms:

– Rated voltage

Value of a voltage specified by the manufacturer for a connector and to which the operating and power data refer.
(Previous designation: reference voltage)

– Rated surge voltage

The value of a voltage surge a component can withstand is specified by the manufacturer.
Indicating the specified withstand capacity of its insulation against temporary overvoltage.

– Clearance distance

Shortest distance in air between two conductive parts.

– Creepage distance

Shortest distance along the surface of an insulating material between two conductive parts.

– Degree of contamination

The expected degree of contamination of the immediate surroundings of a piece of equipment (e.g. connector) was specified in the standard in four degrees:

Degree of contamination 1

No contaminatioin, or only dry, non-conductive contamination occurs. The contamination has no influence.

Examples: The interior of electrical measuring instruments, electronic measuring instruments.

Degree of contamination 2

Only non-conductive contamination occurs. Occasionally, however, temporary conductivity due to condensation must be expected.

Examples: Household appliances, installation material, lights, power supply units for office machines.

Degree of contamination 3

Conductive contamination occurs or dry, non-conductive contamination which becomes conductive because condensation is to be expected.

Examples: Electrical equipment for working and processing machines, low-voltage switchgear on machine tools.

Degree of contamination 4

Contamination leads to stable conductivity caused by conductive dust, rain or snow.

Examples: Equipment on the roof and under the floor of electric locomotives, railcars, trolleybuses. Equipment in electric locomotives underground.

Notice:

If the connectors specified in the technical data for degree of contamination 1 and overvoltage category 1 are used under other conditions (higher degree of contamination and higher overvoltage category), the voltage values are reduced accordingly. However, the connectors can easily be used with the reduced maximum possible voltages.

It should be noted that parts of connectors with sufficient encapsulation (min. IP54) can also be dimensioned for a lower degree of contamination. This also applies to connectors in the separation area, where the encapsulation is achieved by the connector housing when mated and which are only separated for testing and maintenance purposes.

Technical electrical information

Voltage classification of the connectors (insulation coordination)

– Overvoltage categories

The standard assigns possible overvoltage to four categories. The three categories that can be considered for connectors are briefly explained below:

Overvoltage category I

Equipment (e.g. connectors) intended for use in devices or parts of systems in which no overvoltage can occur. This includes devices that are mainly operated with low voltages.

Overvoltage category II

Equipment (e.g., connectors) intended for use in systems or parts thereof in which lightning overvoltage does not need to be, but overvoltage due to switching operations must be, taken into account. This includes, for example, electrical household appliances.

Overvoltage category III

Equipment (e.g., connectors) intended for use in systems or parts thereof where lightning overvoltage does not need to be, but overvoltage due to switching operations and on which special requirements are placed with regard to the safety and availability of the equipment (e.g. connectors) or networks dependent thereon, must be taken into account. This includes equipment for fixed installations, e.g., safety devices, contactors, switches and sockets.

– Insulation groups

When dimensioning the creepage distance, the creep path formation of the insulating material used by the manufacturer must be taken into account. The insulating materials are divided into three groups according to their CTI creep path formation factor (Comparative Tracking Index):

Insulating material group I 600 ≤ CTI

Insulating material group II 400 ≤ CTI < 600

Insulating material group III 175 ≤ CTI < 400

Technical electrical information

American conductor designations

The AWG (American Wire Gauge) is also used in various areas of the automation industry.
The table below is intended to support the conversion from AWG to mm².

AWG	Cable structure [mm]	Cable Ø [mm]	Cable cross-section [mm²]
30	1 x 0.25	0.25	0.05
	7 x 0.10	0.36	0.06
28	1 x 0.32	0.32	0.08
	7 x 0.13	0.38	0.09
26	1 x 0.40	0.4	0.13
	7 x 0.16	0.48	0.14
	19 x 0.10	0.51	0.15
24	1 x 0.51	0.51	0.21
	7 x 0.20	0.61	0.22
	19 x 0.13	0.64	0.25
22	1 x 0.51	0.64	0.33
	7 x 0.20	0.76	0.34
	19 x 0.13	0.81	0.38
20	1 x 0.81	0.81	0.52
	7 x 0.32	0.97	0.56
	19 x 0.20	1.02	0.6
18	1 x 1.02	1.02	0.82
	19 x 0.25	1.27	0.93
16	19 x 0.29	1.44	1.25
14	19 x 0.36	1.8	1.93
12	19 x 0.46	2.29	3.16
10	19 x 0.40	3.1	4.65

Note: A different cable cross-section results from different wire structures with the same AWG.

Structure and dimensions of standard copper cables according to IEC 60228

Cable cross-section [mm²]	Cable structure [mm]	Cable Ø [mm]
0.09	12 x 0.10	0.5
0.14	18 x 0.10	0.5
0.25	14 x 0.16	0.7
	32 x 0.10	0.7
0.34	19 x 0.16	0.8
	42 x 0.10	0.9
0.5	7 x 0.30	1
	16 x 0.21	1.1
	28 x 0.16	1.1
0.75	7 x 0.37	1.2
	24 x 0.21	1.2
	42 x 0.16	1.3
1.0	7 x 0.43	1.4
	32 x 0.21	1.4
	56 x 0.16	1.5
1.5	7 x 0.52	1.6
	30 x 0.26	1.7
	84 x 0.16	1.8
2.5	7 x 0.67	2.2
	50 x 0.26	2.3
	140 x 0.16	2.3
4.0	7 x 0.85	2.7
	56 x 0.31	2.8
	224 x 0.16	2.9

GmbH

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