

M12male on back A-cod. / MSUD double valve BI-11mm

PUR 3x0.75 ye UL/CSA+drag ch. 0m

Form BI (11 mm) - M12, connector at the rear 24 V AC/DC, M12 (4-pole) LED and suppression Connection cable L = 200 mm

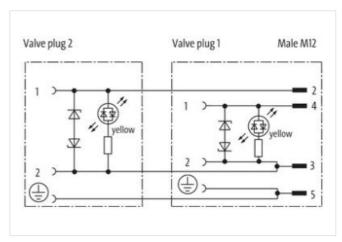
Plastic housings with good resistance against chemicals and oils.

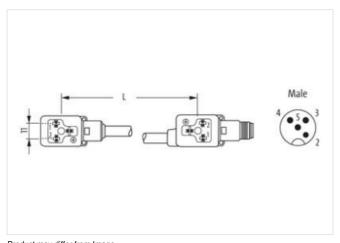
The resistance to aggressive media should be individually tested for your application. Further details on request.

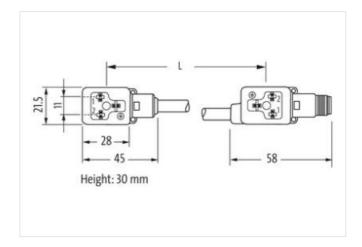
Link to Product

Illustration









Product may differ from Image



Side 1			
Tightening torque	0,4 Nm		
Thread	M3		
Side 2			



stay connected

Tightening torque	0,4 Nm	
Thread	M3	
Commercial data		
ECLASS-6.0	27143423	
ECLASS-6.1	27279218	
ECLASS-7.0	27279218	
ECLASS-8.0	27279218	
ECLASS-9.0	27060312	
ECLASS-10.1	27060312	
ECLASS-11.1	27060312	
ECLASS-12.0	27060312	
ETIM-5.0	EC001855	
customs tariff number	85444290	
GTIN	4048879293365	
Packaging unit	1	
Electrical data		
Drop-out delay time max.	20 ms	
Electrical data Supply		
	24.7	
Operating voltage AC	24 V	
Operating voltage AC min.	19,2 V	
Operating voltage AC max. Operating voltage DC	28,8 V 24 V	
Operating voltage DC min. Operating voltage DC max.	18 V 30 V	
Cut-off peak voltage max.	55 V	
Current operating per contact max.	4 A	
Current consumption max.	12 mA	
Diagnostics	12.107	
Status indication LED	vallau	
	yellow	
Device protection Electrical		
Degree of protection (EN IEC 60529)	IP67	
Degree of protection (ISO 20653:2013)	IP66K	
Additional condition protection degree	inserted, screwed	
Mechanical data Material data		
Color housing	black	
Material housing	Plastic	
Mechanical data Mounting data		
Mounting method	inserted, screwed	
Environmental characteristics Climatic		
Operating temperature min.	-25 °C	
Operating temperature max.	85 °C	
Additional condition temperature range	depending on cable quality	
Important installation notes		
Note on strain relief	Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.	
Note on bending radius	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.	
Installation Cable		
wire arrangement	black 1, black 2, green-yellow	
Cable identification	036	
Cable Type	3	



stay connected

Type of Certificate	Printing color of wire insulation	white (isolation black)
Amount stranding 1 Stranding 3 wires twisted wire arrangement black 1, black 2, green-yellow Cable weigth 56.1 g/m Material jacket PUR Shore hardness jacket 90 ± 5 Shore A Freedom from ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) ± 5 % Material wire insulation PP Amount wires 3 Quiter diameter blearance core insulation 1,95 mm Outer diameter blearance core insulation 1,95 shore b admiss wire insulation Ingredient freeness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation white (solition black) Amount strands (wive) 42 Diameter of single wires 0,15 mm Conductor type (wire) 5 mm Material conductor wire 5 mm <td>Jacket Color</td> <td>yellow</td>	Jacket Color	yellow
Stranding 3 wires twisted wire arrangement black 1, black 2, green yellow	Type of Certificate	cURus
Variety Var	Amount stranding	1
Cable weight 56,1 g/m Material jacket PUR Shore hardness jacket 90 ± S Shore A Freedom from ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 5,9 mm Tolerance outer diameter (sheath) ± 5 % Material wire insulation PP Amount wires 3 Outer diameter Insulation ± 5 % Shore hardness wire insulation ± 5 % Shore Parameter insulation ± 5 % Shore D ± 5 % Shore D ± 5 % Shore D in the insulation ± 6 % Amount strands (wire) ± 2 % Printing color of wire insulation white (isolation black) Amount strands (wire) ± 2 % Diameter of single wires 0,15 mm Conductor trossection (wire)	Stranding	3 wires twisted
Material jacket PUR Shore hardness jacket 90 ± 5 Shore A 90 ±	wire arrangement	black 1, black 2, green-yellow
Shore hardness jacket 90 ± 5 Shore A	Cable weigth	56,1 g/m
Freedom from ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free	Material jacket	PUR
Outer diameter (jacket) 5,9 mm Tolerance outer diameter (sheath) ± 5 % Material wire insulation PP Amount wires 3 Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 1,85 mm Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ch/m @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire wire) 2,5 kV @ 60 s <td< td=""><td>Shore hardness jacket</td><td>90 ± 5 Shore A</td></td<>	Shore hardness jacket	90 ± 5 Shore A
Tolerance outer diameter (sheath)	Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Material wire insulation PP Amount wires 3 Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor oversesection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - isolate) 2,5 kV @ 60 s Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature (static) 40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature (min. (dynamic) 25 °C <t< td=""><td>Outer-diameter (jacket)</td><td>5,9 mm</td></t<>	Outer-diameter (jacket)	5,9 mm
Amount wires 3 Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation 25 % Shore hardness wire insulation 1,85 mm To ± 5 Shore D Ingredient freeness wire insulation 1 lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - wire) 2,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (static) -40 °C Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 5 x Outer diameter Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing Bending radius (fixed) 5 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Tolerance outer diameter (sheath)	± 5 %
Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - gacket) 2,5 kV @ 60 s Min. operating temperature (static) 40 °C Max. operating temperature (static) 40 °C Operating temperature max. (dynamic) 2.5 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operat	Material wire insulation	PP
Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor oxidere Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity win. wire 12 A Electrical resistance line constant wire 2.5 kV @ 60 s Power frequency withstand voltage (wire - vire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - iacket) 2.5 kV @ 60 s Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance Good, application-related testing Good, application-related testing	Amount wires	3
Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - iacket) 2.5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance Good, application-related testing Gasoline resistance Good, application-relate	Outer diameter insulation	1,85 mm
Ingredient freeness wire insulation Printing color of wire insulation White (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) Material conductor wire Stranded copper wire, bare Conductor type (wire) Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) Current load capacity (standard) to DIN VDE 0298-4 Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - iacket) Min. operating temperature (static) 40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) Poperating temperature max. (dynamic) Operating temperature max. (dynamic) Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing Dil resistance Good, application-related testing Bending radius (fixed) S × Outer diameter Bending radius (flynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C Traversing distance (C-track) 3 m/s @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C horizontal	Outer diameter tolerance core insulation	± 5 %
Printing color of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (static) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) 25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance Good, application-related testing Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing Bending radius (fixed) 5 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C Traversing distance (C-track) 3 m/s @ 25 °C	Shore hardness wire insulation	70 ± 5 Shore D
Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 0/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2,5 kV @ 60 s Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature min. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 Chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oli resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (fixed) 5 x Outer diameter <td>Ingredient freeness wire insulation</td> <td>lead-free, cadmium-free, CFC-free, halogen-free, silicone-free</td>	Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Q/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) 40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 2-25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter No. of bending cycles (C-track) Traversing distance (C-track) 10 m @ 25 °C horizontal Traversing distance (C-track) 3 m/s @ 25 °C	Printing color of wire insulation	white (isolation black)
Conductor crosssection (wire) Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) Operating temsistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Amount strands (wire)	42
Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - 2,5 kV @ 60 s Power frequency withstand voltage (wire - 40 °C Max. operating temperature (static) -40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Traver speed (C-track) 3 m/s @ 25 °C Traversing distance (C-track) 3 m/s @ 25 °C Traversing distance (C-track) 3 m/s @ 25 °C	Diameter of single wires	0,15 mm
Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1909 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Traver sing distance (C-track) 3 m/s @ 25 °C <td>Conductor crosssection (wire)</td> <td>0,75 mm²</td>	Conductor crosssection (wire)	0,75 mm ²
Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2.5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Traversing distance (C-track) 3 m/s @ 25 °C	Material conductor wire	Stranded copper wire, bare
Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2.5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Traver speed (C-track) 3 m/s @ 25 °C	Conductor type (wire)	strand class 6
Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2.5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Traver speed (C-track) 3 m/s @ 25 °C	Nominal voltage AC max.	300 V
Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 3 m/s @ 25 °C	Current load capacity (standard)	to DIN VDE 0298-4
AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) Ac o c Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 mio. @ 25 °C horizontal Traversing distance (C-track) 3 m/s @ 25 °C	Current load capacity min. wire	12 A
Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) So °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Electrical resistance line constant wire	26 Ω/km @ 20 °C
Jacket) Min. operating temperature (static) Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 Chemical resistance Gaod, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	AC withstand voltage (wire - wire)	2,5 kV @ 60 s
Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Traver speed (C-track) 3 m/s @ 25 °C		2,5 kV @ 60 s
Operating temperature min. (dynamic) Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Gaod, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 3 m/s @ 25 °C	Min. operating temperature (static)	-40 °C
Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Max. operating temperature (fixed)	80 °C / 90 °C @ 10000 h Operation
Flame resistance UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2 chemical resistance Good, application-related testing Oil resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Operating temperature min. (dynamic)	-25 °C
Chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Flame resistance	UL 1581 § 1100 FT2 UL 1581 § 1090 IEC 60332-2-2
Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	chemical resistance	Good, application-related testing
Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Gasoline resistance	Good, application-related testing
Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Oil resistance	Good, application-related testing DIN EN 60811-404
No. of bending cycles (C-track) Traversing distance (C-track) 10 Mio. @ 25 °C 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Bending radius (fixed)	5 x Outer diameter
Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C	Bending radius (dynamic)	10 x Outer diameter
Travel speed (C-track) 3 m/s @ 25 °C	No. of bending cycles (C-track)	10 Mio. @ 25 °C
	Traversing distance (C-track)	10 m @ 25 °C horizontal
No. of torsion cycles 2 Mio.	Travel speed (C-track)	3 m/s @ 25 °C
	No. of torsion cycles	2 Mio.
Torsion stress ± 180 °/m	Torsion stress	± 180 °/m
Torsion speed 35 cycles/min	Torsion speed	35 cycles/min