

MSUD valve plug B-10mm with cable

PUR 3x0.75 bk UL/CSA+drag ch. 1.5m

MSUD Form B (10 mm) 24 V AC/DC ±25% LED

Further cable lengths on request.

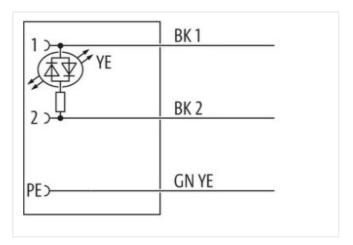
Plastic housings with good resistance against chemicals and oils.

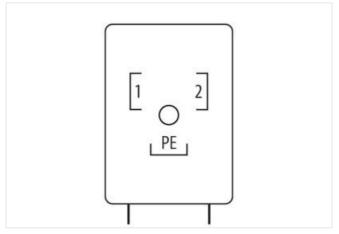
The resistance to aggressive media should be individually tested for your application. Further details on request.

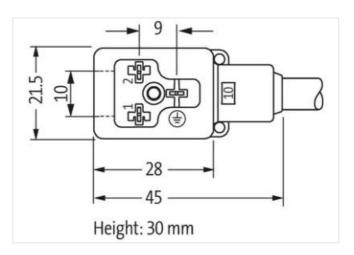
Link to Product

Illustration









Product may differ from Image









Cable length

1,5 m

Side 1

Tightening torque

0,4 Nm



stay connected

Mounting method	inserted, screwed
Family construction form	MSUD B
Thread	M3
Material	PBT
Degree of protection (EN IEC 60529)	IP67
Commercial data	
ECLASS-6.0	27279218
ECLASS-7.0	27279218
ECLASS-8.0	27279218
ECLASS-9.0	27060311
ECLASS-10.1	27060312
ECLASS-11.1	27060312
ECLASS-12.0	27060312
ETIM-5.0	EC001855
customs tariff number	85444290
GTIN	4048879420495
Packaging unit	1
Electrical data Supply	
Operating voltage AC	24 V
Operating voltage AC min.	18 V
Operating voltage AC min. Operating voltage AC max.	30 V
Operating voltage DC	24 V
Operating voltage DC min.	18 V
Operating voltage DC max.	30 V
Current operating per contact max.	4 A
	70
Installation Connection	
Mounting set	M3
Device protection Electrical	
Additional condition protection degree	inserted, screwed
Pollution Degree	3
Rated surge voltage	0,8 kV
Material group (IEC 60664-1)	
Mechanical data Material data	
Coating of fitting	verzinkt
Color housing	black
Material screw connection	Steel
Mechanical data Mounting data	
Mounting method	inserted, screwed
Environmental characteristics Climatic	
·	05.90
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
wiic arrangement	
Cable identification	636
<u> </u>	636 3

The information in this Product-PDF has been compiled with the utmost care. Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2024-06-03



stay connected

Type of Certificate	Jacket Color	black
Stranding 1		
Stranding 3 wires twisted 1 stack 2, green-yellow 1 stack 2, g		1
Cable weight 56.1 g/m Material jackert PUR Shore hardness jackel 90.2 5 Shore A Freedom from ingredients (jacket) least-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 5,9 mm Orderance outer dameter (sheath) 5 % Material wire insulation PP Amount wires 3 Outer diameter tolerance core insulation 1,85 mm Outer diameter tolerance core insulation 1,85 mm Outer diameter tolerance core insulation 1,85 mm Ingredient freeness wire insulation 45 % North factories were insulation 1,85 mm Ingredient freeness wire insulation 4,24 Printing obbr of wire insulation 44 Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor type (wire) 5 rand class 6 Normal vollage News 30 17 mm Conductor type (wire) strand class 6 Normal vollage AC max 300 V Current load capacity (inc. wire) 25 kW @ 60 s Electrical resistance line	Stranding	3 wires twisted
Cable weight 56.1 g/m Material jackert PUR Shore hardness jackel 90.2 5 Shore A Freedom from ingredients (jacket) least-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 5,9 mm Orderance outer dameter (sheath) 5 % Material wire insulation PP Amount wires 3 Outer diameter tolerance core insulation 1,85 mm Outer diameter tolerance core insulation 1,85 mm Outer diameter tolerance core insulation 1,85 mm Ingredient freeness wire insulation 45 % North factories were insulation 1,85 mm Ingredient freeness wire insulation 4,24 Printing obbr of wire insulation 44 Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor type (wire) 5 rand class 6 Normal vollage News 30 17 mm Conductor type (wire) strand class 6 Normal vollage AC max 300 V Current load capacity (inc. wire) 25 kW @ 60 s Electrical resistance line	wire arrangement	black 1, black 2, green-yellow
Material jacket PUR PUR		
Freedom from ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free	Material jacket	
Freedom from Ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 5.9 mm Toferance outer diameter (shalt) ± 5 % Material wire insulation PP Annount wires 3 Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 1.85 mm Outer diameter tolerance core insulation 1.9 5 flore 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 rosssection (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 wire wires 2.6 kW 60 s Power frequency withstand voltage (wire - wire) 2.5 kW 60 s Power frequency withstand voltage (wire - wire) 2.5 kW 60 s Min. operating temperatur	Shore hardness jacket	90 ± 5 Shore A
Tolerance outer diameter (shealth)	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 2.5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness 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 (ype (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity wink. wire 12 A Electrical resistance line constant wire 26 Ωkm @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire wire) 2,5 kV @ 60 s Jackel) 40 °C Max. operating temperature (knet) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) 25 °C Operating temperature min. (dynamic) 80 °C / 90 °C @ 10000 h Operation Uir resistance	Outer-diameter (jacket)	5,9 mm
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 lead-free, cadminum-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 vorseaction (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 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 - wire) 2,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (static) 40 °C Max. operating temperature mix. (dynamic) -25 °C Operating temperature mix. (dynamic) 80 °C / 90 °C @ 10000 h Operation UV resistance	Tolerance outer diameter (sheath)	± 5 %
Outer diameter Insulation 1,85 mm Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 10 ± 5 % store D Ingredient freeness 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 25 EV @ 60 s Power frequency withstand voltage (wire - vire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - vire) 2,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (static) -40 °C Max. operating temperature (static) -5 °C UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 I Ut. 1581 \$ 1100 FT2 Ut. 1581 \$ 1090 chemical resistance Good, application-rela	Material wire insulation	PP
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 crosssection (wire) 0,75 mm² Conductor vire 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 C/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - wire) 2,5 kV @ 60 s Max. operating temperature (istatic) 40 °C Max. operating temperature (istatic) 80 °C / 90 °C @ 10000 h Operation UV resistance DIN EN ISO 4892-2 A Flame resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, appli	Amount wires	3
Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation lead-free, cadminum-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 orosssection (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 voltage (wire - wire) 2.5 kV @ 60 s AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - wire) 2.5 kV @ 60 s Min. operating temperature (istatic) -40 °C Max. operating temperature (istatic) 80 °C / 90 °C @ 10000 h Operation UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 Chemical resistance Good, application-related testing Oil resistance Good, application-related test	Outer diameter insulation	1,85 mm
Ingredient freeness wire insulation lead-free, admium-free, CFC-free, halogen-free, silicone-free	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 strandard) 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 - wire) 2,5 kV @ 60 s Min. operating temperature (static) 40 °C Max. operating temperature (static) 40 °C Max. operating temperature max. (dynamic) -25 °C Operating temperature max. (dynamic) -25 °C UV resistance DIN EN ISO 4892-2 A Flame resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing Oil resistance Good, application-related testing	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 (standard) 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 - igacket) 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 UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-22 UL 1581 § 1100 FT2 UL 1581 § 1090 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 × Outer diameter	Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Diameter of single wires 0,15 mm² 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 - 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 (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) 2.5 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation UV resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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) <t< td=""><td>Printing color of wire insulation</td><td>white (isolation black)</td></t<>	Printing color of wire insulation	white (isolation black)
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) 40 °C 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 UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1990 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	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 D/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - iacket) -40 °C Max. 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 UV resistance DIN EN ISO 4892-2 A Filame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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	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 - iacket) 40 °C 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 UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 I U. 1581 § 1100 FT2 UL 1581 § 1090 Chemical resistance Good, application-related testing Gasoline 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 Bending radius (dynamic) 10 m @ 25 °C	Conductor crosssection (wire)	0,75 mm ²
Nominal voltage AC max. Gurrent load capacity (standard) Current load capacity (standard) Current load capacity min. wire 12 A Electrical resistance line constant wire AC withstand voltage (wire - wire) Power frequency withstand voltage (wire - acket) Acket acket Max. operating temperature (static) Ava. operating temperature (fixed) Ava. operating temperature min. (dynamic) Ava. operating temperature min. (dynamic) Ava. operating temperature max. (dynamic) Ava. operating temperature max. (dynamic) Ava. operating temperature max. (dynamic) Bo over acket acket Flame resistance Bic 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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 min. @ 25 °C Traversing distance (C-track) 3 m/s @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	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 UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing Oil 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 Traversing distance (C-track) 3 m/s @ 25 °C No. o	Conductor type (wire)	strand class 6
Current load capacity min. wire 12 A Electrical resistance line constant wire 26 \(\Omega \text{LW} \) \(\text{@ 60 s} \) Power frequency withstand voltage (wire - wire) 2,5 kV \(\text{@ 60 s} \) Power frequency withstand voltage (wire - iacket) 2,5 kV \(\text{@ 60 s} \) Min. operating temperature (static) 40 °C Max. operating temperature (fixed) 80 °C / 90 °C \(\text{@ 10000 h Operation} \) Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C \(\text{@ 10000 h Operation} \) UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 \(\text{§ 1100 FT2} \) UL 1581 \(\text{§ 1090} \) 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 No. of bending cycles (C-track) 10 Mio. \(\text{@ 25 °C} \) Traversing distance (C-track) 10 Mio. \(\text{@ 25 °C} \) No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	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 - 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 UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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 No. of torsion cycles ± 180 °/m	Current load capacity (standard)	to DIN VDE 0298-4
AC withstand voltage (wire - wire) Power frequency withstand voltage (wire - jacket) Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) A0 °C Max. operating temperature (fixed) B0 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) Operating temperature min. (dynamic) Power in the meritar max. (dynamic) DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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 Travel speed (C-track) 3 m/s @ 25 °C No. of torsion cycles ± 180 °/m	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) UV resistance DIN EN ISO 4892-2 A Flame resistance EEC 60332-2-2 UL. 1581 § 1100 FT2 UL. 1581 § 1090 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 No. of torsion cycles ± 180 °/m	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) Operating temperature max. (dynamic) UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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 No. of torsion cycles ± 180 °/m	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 UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m		2,5 kV @ 60 s
Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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 No. of torsion cycles ± 180 °/m	Min. operating temperature (static)	-40 °C
Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Max. operating temperature (fixed)	80 °C / 90 °C @ 10000 h Operation
UV resistance DIN EN ISO 4892-2 A Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 chemical resistance Good, application-related testing Gasoline 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) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Operating temperature min. (dynamic)	-25 °C
Flame resistance IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090 chemical resistance Good, application-related testing Gasoline 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) 10 Mio. @ 25 °C Traversing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	UV resistance	DIN EN ISO 4892-2 A
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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Flame resistance	IEC 60332-2-2 UL 1581 § 1100 FT2 UL 1581 § 1090
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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Oil resistance	Good, application-related testing DIN EN 60811-404
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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	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 No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Bending radius (dynamic)	10 x Outer diameter
Travel speed (C-track) 3 m/s @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	No. of bending cycles (C-track)	10 Mio. @ 25 °C
No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Traversing distance (C-track)	10 m @ 25 °C horizontal
Torsion stress ± 180 °/m	Travel speed (C-track)	3 m/s @ 25 °C
	No. of torsion cycles	2 Mio.
Torsion speed 35 cycles/min	Torsion stress	± 180 °/m
	Torsion speed	35 cycles/min