

MSUD valve plug BI-11mm with cable

PUR 3x0.75 gy UL/CSA+drag ch. 7.5m

MSUD Form BI (11 mm) 24 V AC/DC ±25% LED

Further cable lengths on request.

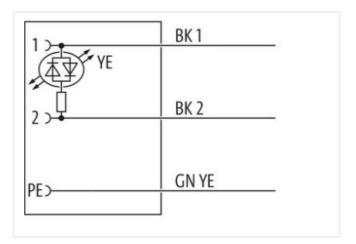
Plastic housings with good resistance against chemicals and oils.

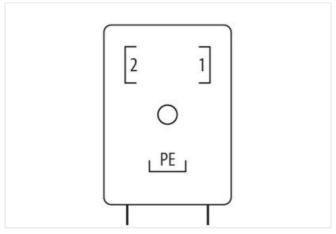
The resistance to aggressive media should be individually tested for your application. Further details on request.

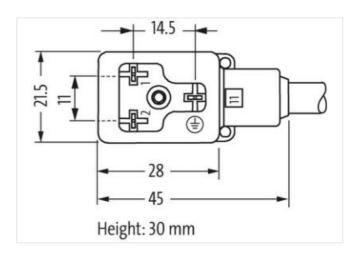
Link to Product

Illustration









Product may differ from Image









Cable length

7,5 m

Side 1

Tightening torque 0,4 Nm



stay connected

Mounting method	inserted, screwed
Family construction form	MSUD BI
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	4048879660259
Packaging unit	1
Electrical data Supply	
Operating voltage AC	24 V
Operating voltage AC min.	18 V
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
Installation Connection	
Mounting set	M3
Device protection Electrical	
Additional condition protection degree	inserted, screwed
Pollution Degree	3
Rated surge voltage	0,8 kV
Mechanical data Material data	
	• • •
Coating of fitting	verzinkt
Color housing	black
Material housing	Plastic
Material screw connection	Steel
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	236
Cable Type	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: 2024-06-26



stay connected

Type of Certificate CUPus	Jacket Color	gray
Ämbount stranding 1 Stranding 3 wires twisted wire arrangement black 1, black 2, green-yellow Cable weight 56.1 g/m Material jacket PUR Shore hardrines jacket 90.5 Shore A Freadom from ingredionist (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 5.5 mm Tolerance outer diameter (sheath) ± 5 % Mallerial wire insulation PP Amount wires 3 Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation 1,95 mm Shore hardriness wire insulation 70 ± 5 Shore D Ingredient feeness wire insulation 70 ± 5 Shore D Ingredient feeness wire insulation white (jacket) Amount strands (vier) 42 Diameter of single wires 0,15 mm Conductor prossection (vier) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (view) strand class 6 Manier al view (view) strand class 6 Courrent load capac	Type of Certificate	-
Stranding 3 wires twisted black 1, black 2, green yellow Cable weight 56,1 gm		
wire arrangement black 1, black 2, green-yellow Cable weight 56,1 g/m Material jacket PUR Shore hardness jacket 90 ± 5 Shore A Froedom from ingredients (jacket) Outer diameter (jacket) 10 ± 5 % Material jacket) 10 ± 5 % Material wire insulation PP Material wire insulation 1,85 mm Outer diameter related to ensulation 1,85 mm Outer diameter insulation 1,85 mm Outer diameter insulation 1,85 mm Outer diameter insulation 70 ± 5 Shore D Ingredient feeness wire insulation 70 ± 5 Shore D Ingredient feeness wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor of wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor vire Strandd copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (sandard) to DIN VDE 0298-4 Current load capacity (sandard) to DIN VDE 0298-4 Current load capacity (sandard) to DIN VDE 0298-4 Current load capacity (wire wire) 2,5 kV Ø 60 s Power frequency withstand voltage (wire wire) 2,5 kV Ø 60 s Min. operating temperature (static) 40 °C Operating temperature (static) 40 °C Operating temperature (static) 40 °C Operating temperature wire, (dynamic) 90 °C 90 °C 0 10000 h Operation Place of the properature of the pr		3 wires twisted
Cable weight 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, ellicone-free Outer-diameter (jacket) 5,9 mm Torrance outer diameter (sheath) ± 5 % Material wire insulation PP Amount wires 3 Outer diameter insulation 1,85 mm Outer diameter insulation 1,85 mm Outer diameter insulation 70 ± 5 shore D Ingredient freeness wire insulation 70 ± 5 shore D Ingredient freeness wire insulation Head-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation 4 ± 2 Amount atrancial (wire) 42 Diameter of single wires 0,15 mm Conductor oressection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 8 Nominal voltage AC max 300 V Current load capacity min. wire 12 A Electrical resistance line constant wire 26 Dkm @ 20		
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) 5.9 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 70 ± 5 Shore D Ingredient freeness wire insulation head-free, cadmium-free, CFC-free, halogen-free, silicone-free 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 type (wire) strand class 6 Nominal voitage 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 with stand voitage (wire - wire) 2,5 kV @ 60 s		
Shore hardness jacket 90 ± 5 Shore A	-	
Freedom from Ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 5.9 mm Toflerance utder diameter (sheath) ± 5 % Material wire insulation PP Amount wires 3 Outer diameter insulation 1.88 mm Outer diameter tolerance core insulation ± 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 vivia (single wires 0,15 mm Conductor type (wire) 9,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) \$10 NV DE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (inviance) 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 Operating temperature (static) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C		
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 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 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 (wire) ±2 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 Max. operating temperature (stact) 40 °C Max. operating tem		
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Material wire insulation PP Amount wires 3 Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation 70 ± 5 Shore D Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation white (solation black) 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 vollage 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 (mix. dynamic) 28 °C Operating te		·
Amount wires 3 Outer diameter Insulation 1.85 mm Outer diameter Insulation 2.5 % mm Outer diameter tolerance core insulation 5.4 5 % mm Outer diameter tolerance core insulation 5.5 % mm Ingredient freeness wire insulation 1 lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 7.0 ± 5 % mm of the (solation black) 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 ∨ 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 Ω/m @ 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 - 3.5 kV @ 60 s Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) 2.5 °C Operating temperature min. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance Good, application-related testing Gasoline resistance DIN EN 60811-404 Good, application-related testing Oil resistance DIN EN 60811-404 Good, application-related testing Gasoline resistance (C-track) 10 m @ 25 °C Traversing distance (C-track) 10 m @ 25 °C		
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 crosssection (wire) 9.75 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 wini. 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 min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 15818 1909 IEC 60332-2-2 UL 15818 \$1100 FT2 chemical resistance		
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 apacity (standard) to DIN VDE 0298-4 Circent load apacity (wire - wire) 2,5 kV @ 60 s 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 - injacket) 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 @ 100		
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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 (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 - ack) 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 max. (dynamic) 25 °C Chemical resistance Good, application-related testing Gasoline resistance DIN EN 60811-404 (Good, application-related testing Gasoline resistance DIN EN 60811-404 (Good, application-related testing Bending radius (fixed) 5 × Outer diameter Bending radius (dynamic) 10 × Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C horizontal Traversing distance (C-track) 10 m @ 25 °C horizontal Traversing distance (C-track) 2 Mio. Torsion stress ± ±80 °/m		
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 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 - gack) 80 °C / 90 °C @ 10000 h Operation 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 Filame resistance UL 1581 § 1990 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance DIN EN 6081-1-404 [Good, application-related testing Bending radius (fixed) 5 × Outer diameter Bending radius (dynamic) 10 × Outer diameter Bending radius (dynamic) 10 × Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± ±180 °/m		
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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 - lacket) 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 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance DIN EN 60811-404 Good, application-related testing Bending radius (fixed) 5 x Outer diameter Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diamet		· · · · · · · · · · · · · · · · · · ·
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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 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - acceptable with a constant 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) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance DIN EN 60811-404 Good, application-related testing Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Bending radius (opcales (C-track) 10 Mio. @ 25 °C Traver sing distance (C-track) 10 Mio. @ 25 °C Traver sing distance (C-track) 3 m/s @ 25 °C No. of borsion cycles 2 Mio. Trosion stress ± 180 °/m	-	
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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 - lack) 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 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance DIN EN 60811-404 Good, application-related testing Bending radius (fixed) 5 × Outer diameter No. of bending cycles (C-track) 10 mio 25 °C Traver sing distance (C-track) 10 m @ 25 °C horizontal Travel speed (C-track) 3 m/s @ 25 °C No. of torsion cycles ± 180 °/m	Material conductor wire	
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 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline 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 Travel speed (C-track) 3 m/s @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	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 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance DIN EN 60811-404 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	Nominal voltage AC max.	300 V
Electrical resistance line constant wire 26 \(\Omega \) \(2 \), kW \(\omega \) 60 s Power frequency withstand voltage (wire - acket) Power frequency withstand voltage (wire - acket) AC withstand voltage (wire - wire) 2,5 kV \(\omega \) 60 s Min. operating temperature (static) 40 °C Max. operating temperature (fixed) 80 °C / 90 °C \(\omega \) 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C \(\omega \) 10000 h Operation Flame resistance UL 1581 \(\struct \) 1090 IEC 60332-2-2 UL 1581 \(\struct \) 1100 FT2 chemical resistance Gasoline resistance Good, application-related testing Gasoline resistance Oil resistance DiN EN 60811-404 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 m \(\omega \) 25 °C Traversing distance (C-track) 10 m \(\omega \) 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Current load capacity (standard)	to DIN VDE 0298-4
AC withstand voltage (wire - wire) Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) A0 °C Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Oil resistance DIN EN 60811-404 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 m @ 25 °C Traversing distance (C-track) 10 m @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 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) Operating temperature max. (dynamic) Operating temperature max. (dynamic) Flame resistance UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Oil resistance DIN EN 60811-404 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 ± 180 °/m	Electrical resistance line constant wire	26 Ω/km @ 20 °C
Jacket) Min. operating temperature (static) Max. operating temperature (fixed) Max. operating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Plame resistance UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 Chemical resistance Good, application-related testing Gasoline resistance Oil resistance DIN EN 60811-404 Good, application-related testing Bending radius (fixed) S x Outer diameter No. of bending cycles (C-track) 10 m @ 25 °C Traversing distance (C-track) 10 m @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	AC withstand voltage (wire - wire)	2,5 kV @ 60 s
Max. operating temperature (fixed) Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Glood, application-related testing Oil resistance DIN EN 60811-404 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	Power frequency withstand voltage (wire - jacket)	2,5 kV @ 60 s
Operating temperature min. (dynamic) Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Oil resistance DIN EN 60811-404 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 ± 180 °/m	Min. operating temperature (static)	-40 °C
Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance DIN EN 60811-404 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	Max. operating temperature (fixed)	80 °C / 90 °C @ 10000 h Operation
Flame resistance UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance DIN EN 60811-404 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 (South of the speed	Operating temperature min. (dynamic)	-25 °C
Chemical resistance Good, application-related testing Gasoline resistance DIN EN 60811-404 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	Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
Gasoline resistance Good, application-related testing Oil resistance DIN EN 60811-404 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	Flame resistance	UL 1581 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2
Oil resistance DIN EN 60811-404 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	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	DIN EN 60811-404 Good, application-related testing
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