

MSUD valve plug A-18mm with cable

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

Form A (18 mm) 24 V AC/DC ±25% LED

Further cable lengths on request.

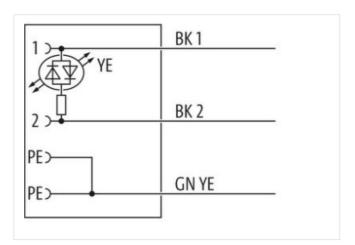
Plastic housings with good resistance against chemicals and oils.

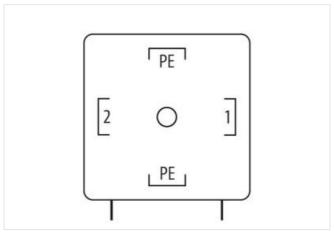
The resistance to aggressive media should be individually tested for your application. Further details on request.

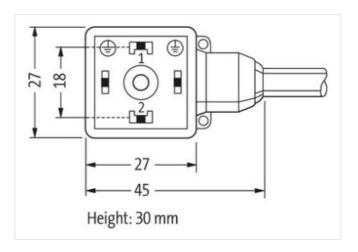
Link to Product

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 A
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	4048879194921
Packaging unit	1
Electrical data Supply	
	24 V
Operating voltage AC Operating voltage AC min.	24 V 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
	77
Diagnostics	
Status indication LED	yellow
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)	I
Mechanical data Material data	
Coating locking	verzinkt
Coating of fitting	verzinkt
Color housing	black
Locking material	Steel
Material screw connection	Steel
Mechanical data Mounting data	<u></u>
	inserted, screwed
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	



stay connected

Cable to Type 3 Cable Type 3 Printing color of wire insulation white (seelation black) Jacket Color gray Type of Certificate CURus Amount stranding 1 Stranding 3 wires twisted wire arrangement black 1, black 2, green-yellow Cable weight 56.1 g/m Material jacket PUR Shore hardness jacket 90 ± 5.5 brore A Freadom from ingredients (jacket) 10 ± 5.5 brore A Color-disable (jacket) 5.5 mm Tolerance outer disarter (slecket) 5.5 % Tolerance suiter disarter (slecket) 5.5 % Amount wires 3 Outer disarter insulation 1,85 mm Outer disarter insulation 70 ± 5.5 brore D Incredient free insulation 70 ± 5.5 brore D Incredient free insulation 70 ± 5.5 brore D Printing color of wire insulation 16 ± 6.5 % Printing color of wire insulation white (solation black) Incredient freeness wire insulation white (solation black)		
Cable Type 3 Printing outor of wine insulation white (soletion black) Jacked Color gray Type of Certificate Culture Amount stranding 1 Stranding 3 wires weisted within amagement black 1, black 2, green-yelllow Cable weight Sol, 1 gmm Malerial jacket PUR Shore hardness wire insulation PP Amount wres Shore hardness wire insulation PP Amount wres Shore hardness wire insulation PUR Shore hardness	wire arrangement	black 1, black 2, green-yellow
Printing color of wire insulation		
Jacket Color		· ·
Type of Certificate CURus Amount stranding 1 Stranding 3 wives twisted wis a strangement black 1, Neak 2, green-yellow Cabib weight 55.1 g/m Material jacket PLR Shore hardness jacket 90.5 Shore A Freedom from ingrediants (jacket) 9.5 mm Outer-diameter (jacket) 5.9 mm Toterance outer diameter (sheath) 5.9 mm Toterance outer diameter (sheath) 5.9 mm Toterance outer diameter (sheath) 5.9 mm Outer diameter insulation 1.85 mm Outer diameter insulation 1.85 mm Outer diameter insulation 1.5 mm Outer diameter insulation 1.5 mm Printing color of wire insulation 1.0 ± Shore D Ingredient freeness wire insulation 1.0 ± Shore D Ingredient freeness wire insulation 1.0 ± Shore D Printing color of wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0.15 mm Conductor oversection (vivire) 0.75 mm² <td></td> <td>, ,</td>		, ,
Amount stranding 1 Stranding 3 wires twisted wire arrangement black 1, black 2, groen-yellow Cable weight 56.1 g/m Material jacket PUR Shore harrinesi jacket 90.2 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 1,85 mm 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 70 ± 5 Shore D Ingredient freeness wire insulation 42 Diameter of single wires 0,15 mm Conductor of single wires 0,15 mm Conductor type (wire) 5 stranded copper wire, bare Material conductor wire Stranded copper wire, bare Conductor type (wire) strand dass 6 Conductor yellow (wire) 300 V Current load capacity (standard) to DIN VDE (298-4		
Stranding 3 wires twisted black 1, black 2, green yellow		cURus
wire arrangement black 1, black 2, green yellow Cable weight 56,1 g/m Material jackel PUR Shore hardness jackel 90 ± 5 Shore A Freedom from impredents (jacket) 5,9 mm Outer-diameter (jacket) 5,9 mm Tolerance outer dameter (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 Frinting color of wire insulation lead-free, calminum-free, CFC-free, halogen-free, silicone-free Frinting color of wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² 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 (standard) to DIN VDE 0298-4		
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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 Under diameter insulation 1,85 mm Outer diameter insulation 1,85 mm Outer diameter insulation 1,85 mm Ingredient freeness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation 10 ± 5 Shore D Ingredient freeness wire insulation 42 ± 2 Diameter of single wires 0,15 mm Conductor of single wires 0,15 mm Material conductor wire Stranded copper wire, bare Conductor type (vire) 3 stranded copper wire, bare Material conductor wire Stranded dopper wire, bare Conductor type (vire) 3 stranded dopper wire, bare Material conductor wire 25 Km @ 60 s Current load capacity (standard) to		
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 Per Shore D Ingredient freeness wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor vire outer or single wires 0,15 mm Conductor vire outer or vire wire wire wire wire wire wire wire w		<u>-</u>
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Outer-diameter (jacketh) 5,9 mm Tolerance outer diameter (sheath) ± 5 % Material Wire Issulation 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 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) 25 kV @ 60 s Power frequency withstand voltage (wire wire) 25 kV @ 60 s	•	90 ± 5 Shore A
Tolerance outer diameter (sheath) ± 5 % Material wire insulation PP Amount wires 3 Outer diameter insulation 1,85 mm Outer diameter loterance core insulation ± 5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation white (isolation black) Printing color of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor or sessection (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/m @ 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 (fixed) 80 °C / 90 °C @ 10000 h Operation Max. operating temperature (min. (dynamic) 25 °C	Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Material wire insulation PP Amount wires 3 Outer dameter insulation 1,85 mm Outer dameter tolerance core insulation 25 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation white (isolation black) 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 O/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 min. (dynamic) -25 °C Operating temperature min. (dynamic) -25 °C Operating tempera	Outer-diameter (jacket)	5,9 mm
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 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 G/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 (fixed) 40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 100000 h Operation Flame resistance	Tolerance outer diameter (sheath)	± 5 %
Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 170 ± 5 Shore D Ingredient freeness wire insulation white (isolation black) 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 wini. 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 - diapenerature (static) 40 °C Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature em (dynamic) -25 °C Operating temperature min. (dynamic) -05 °C @ 10000 h Operation	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 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 DN VED 6298-4 Current load capacity (wire - wire) 2.5 kV @ 60 s Electrical resistance line constant wire 2.6 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - izicket) 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 Flame resistance Good, application-related	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 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 vire) 2.5 kW 60 s Electrical resistance line constant wire 2.6 Ω/km @ 20 °C AC withstand voltage (wire - vire) 2.5 kW 60 s Power frequency withstand voltage (wire - vire) 2.5 kW 60 s Max. operating temperature (static) 40 °C Max. operating temperature max. (dynamic) 2.5 °C Operating temperature max. (dynamic) 30 °C / 90 °C @ 10000 h Operation Flame resistance Good, application-related testing Gascline resistance Good, application-related testing	Outer diameter insulation	1,85 mm
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 Conductor type (wire) strand class 6 Conductor type (wire) strand class 6 Courtent load capacity (standard) to DIN VDE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Ellectrical resistance ine constant wire 26 Ω/km @ 20 °C CAC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - wire) 2.5 kV @ 60 s 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 Operating temperature max. (dynamic) 1 L 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 Oil resistance DIN EN 60811-404 Good, application-related testing Bending radius (fixed) 10 x 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 2 £ 180 °/m	Outer diameter tolerance core insulation	± 5 %
Printing cotor of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0.15 mm Conductor crossection (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 - wire) 2.5 kV @ 60 s Min. operating temperature (static) 40 °C Max. operating temperature (iked) 80 °C / 90 °C@ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) -25 °C Operating temperature max. (dynamic) -25 °C Chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance DIN EN 60811-40 Good, application-related testing Bending radius (fi	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 Q/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 (ixed) 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 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gli resistance DIN EN 60811-404 Good, application-related testing Bending radius (fixed) 5 x Outer diameter	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 (in. 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 (mix. (dynamic) 25 °C Operating temperature mix. (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)	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 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 § 1990 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 Traver sing distance (C-track)	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 - iacket) 4.0 °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 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 Bending radius (dynamic) 10 × Outer diameter Bending radius (dynamic) 10 × Outer diameter No. of bending cycles (C-track)	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 Good, application-related testing Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing Gil resistance DIN EN 60811-404 Good, application-related testing Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Book of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 3 m/s @ 2	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 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Gil 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	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 § 1090 IEC 60332-2-2 UL 1581 § 1100 FT2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Gil 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	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 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 min. (dynamic) -25 °C 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	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) S0 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) B0 °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 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) Mor. operating temperature (fixed) Mor. operating temperature (fixed) Mor. operating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Mor. 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 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 ± 180 °/m	Electrical resistance line constant wire	26 Ω/km @ 20 °C
Jacket) Min. operating temperature (static) Max. operating temperature (fixed) Moverating temperature (fixed) Moverating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) Boverating temperature max. (dynamic) 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 ± 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 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		2,5 kV @ 60 s
Operating temperature min. (dynamic) Operating temperature max. (dynamic) So °C / 90 °C @ 10000 h Operation 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 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	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 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	Operating temperature min. (dynamic)	-25 °C
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	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
No. of torsion cycles 2 Mio. 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