

stay connected

MSUD valve plug A-18mm with cable

PUR 4x0.75 gy UL/CSA+drag ch. 5m

MSUD Form A (18 mm) 0...230 V AC/DC without components

PE opposite cable entry (0°)

Further cable lengths on request.

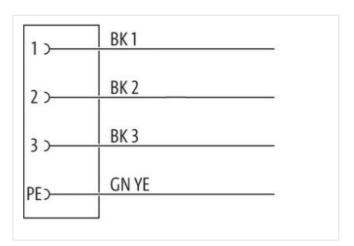
Plastic housings with good resistance against chemicals and oils.

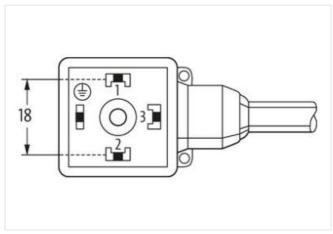
The resistance to aggressive media should be individually tested for your application. Further details on request.

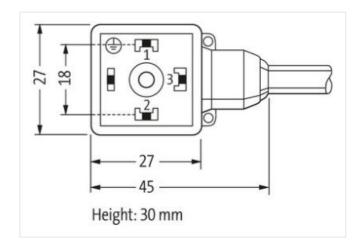
Link to Product

Illustration









Product may differ from Image











Cable length

5 m

Side 1



stay connected

Tightening torque	0,4 Nm
Mounting method	inserted, screwed
Family construction form	MSUD A
Thread	M3
Material	PBT
Degree of protection (EN IEC 60529)	IP66K, 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	4048879191135
Packaging unit	1
Electrical data Supply	
Operating voltage AC max.	230 V
Operating voltage DC max.	230 V
Current operating per contact max.	10 A
Installation Connection	
Mounting set	M3
Device protection Electrical	
Additional condition protection degree	inserted, screwed
Pollution Degree	3
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.
Conformity	
Product standard	DIN EN 175301-803
Installation Cable	
Cable identification	237
Cable Type	3
Printing color of wire insulation	white (isolation black)
Jacket Color	gray
Type of Certificate	cURus



Stranding	Amount stranding	1
Traversing distance (C-track) 10 m @ 25 °C horizontal Cable weight 69,3 g/m Material jacket PUR Shore hardness jacket 90 ± 5 Shore A Freedom from impredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Cuber-diameter (jacket) 6,5 mm Tolerance outer diameter (sheath) ± 5 % Material wire insulation PP Amount wires 4 Cuter diameter insulation 1,85 mm Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation 5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation 1,85 mm Outer diameter tolerance core insulation 70 ± 5 Shore D Ingredient freeness wire insulation 1,85 mm Outer diameter tolerance core insulation 70 ± 5 Shore D Ingredient freeness wire insulation 1,85 mm Outer diameter for the free insulation 1,85 mm Outer diameter for	Stranding	4 wires twisted
Cabbe weight 69.3 g/m Material jacket PUR Shore hardness jacket 90 ± 5 Shore A Freedom from ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) ± 5 % Material wire insulation PP Amount wires 4 Outer diameter insulation 1,85 mm Outer diameter insulation 1,55 mm Outer diameter insulation 70 ± 5 Shore D Ingredient freeness wire insulation 1,65 mm Ingredient freeness wire insulation 1,65 mm Ingredient freeness 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 type (wire) strand class 8 Nominal voltage AC max 300 V Current load capacity (standard) to DIN VDE 0298 4 Current load capacity (standard) to DIN VDE 0298 4 <t< td=""><td>wire arrangement</td><td>black 1, black 2, black 3, green-yellow</td></t<>	wire arrangement	black 1, black 2, black 3, green-yellow
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) 6,5 mm Tolerance outer diameter (Sheath) ± 5 % Material Wire Insulation PP Amount wires 4 Outer diameter Insulation 1,85 mm Outer diameter Insulation 1,85 mm Shore hardness wire insulation 1,85 mm Outer diameter over insulation 1,85 mm Shore hardness wire insulation 42 Prining color of wire insulation 42 4 Ingredient freeness wire insulation 42 Diameter of single wires 0,15 mm Conductor of wires will salation 42 Diameter of single wires 0,15 mm Conductor wire Stranded copper wire, bare Material conductor wire Stranded copper wire, bare Material conductor type (wire) strand class 6 Nominal voltage (Armax.) 300 V Current load capacity min. wire 9,6 A Electrical resistanc	Traversing distance (C-track)	10 m @ 25 °C horizontal
Shore hardness jacket 90 ± 5 Shore A	Cable weigth	69,3 g/m
Freedom from ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 6,5 mm Tolerance outer diameter (sheath) ± 5 % Material wire insulation PP Amount wires 4 Outer diameter fuelance core insulation 1.85 mm Outer diameter trievalution 70 ± 5 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity 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 te	Material jacket	PUR
Outer-diameter (Jacket) 6,5 mm Tolerance outer diameter (sheath) ± 5 % Material wire insulation PP Amount wires 4 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 strank (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Conductor type (wire) stranded copper wire, bare Conductor type (wire) stranded copper wire, bare Conductor type (wire) stranded cape open wire, bare Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 9,6 A Electrical resistance line constant 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 Max. operating temperature (fixed) 80 °C / 90 °C	Shore hardness jacket	90 ± 5 Shore A
Tolerance outer diameter (sheath) ± 5 %	Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Material wire insulation PP	Outer-diameter (jacket)	6,5 mm
Amount wires 4 Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (solation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (wire) in. 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 (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame re	Tolerance outer diameter (sheath)	± 5 %
Outer diameter insulation 1,85 mm Outer diameter tolerance core insulation ± 5 % Shore hardness wire insulation 70 ± 5 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Printing color of wire insulation white (isolation black) Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity finin, wire 9.6 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 - islack!) 2,5 kV @ 60 s Min. operating temperature (static) 40 °C Max. operating temperature (static) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Filame resistance U. 1581 § 1090 U. 1581 § 1100 FT2 IEC 60	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 DIN VDE 0298-4 Current load capacity min. wire 9,6 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 - include) 2,5 kV @ 60 s Min. operating temperature (static) 40 °C Max. operating temperature (static) 40 °C Max. operating temperature (mixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation	Amount wires	4
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 9,6 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire) 2,5 kV @ 60 s Min. operating temperature (static) 40 °C Operating temperature (static) 40 °C Operating temperature (mixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing Directions of the sistence Good application-related testing DIN En 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (fixed) 5 x Outer diameter Fravel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Outer diameter insulation	1,85 mm
Ingredient freeness wire insulation lead-free, cadmium-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 (standard) to DIN VDE 0298-4 Current load capacity min. wire 9.6 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 - isoken) 2.5 kV @ 60 s Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance 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 diamete	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 9,6 A Electrical resistance line constant wire 26 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) 2,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (static) -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 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)	Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 9,6 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 Flame resistance UL 1581 § 1990 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 × Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C <td>Printing color of wire insulation</td> <td>white (isolation black)</td>	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 (standard) 26 O/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) 40 °C Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing Bending radius (fixed) 5 × Cuter diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles ± 180 °/m	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 9,6 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 (static) 40 °C Max. operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 UL 1581 § 1100 FT2 IEC 60332-2-2 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 Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/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 9,6 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 UL 1581 § 1100 FT2 IEC 60332-2-2 Chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	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 9,6 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 - is acket) 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 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles ± 180 °/m	Material conductor wire	Stranded copper wire, bare
Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 9,6 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) 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 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles ± 180 °/m	Conductor type (wire)	strand class 6
Current load capacity min. wire 9,6 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 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 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 (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 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 × Outer diameter Bending radius (dynamic) 10 × Outer diameter Travel speed (C-track) 10 Mio. @ 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) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) Alin. operating temperature (static) At 0 °C Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) As 0 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) Bo °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 UL 1581 § 1100 FT2 IEC 60332-2-2 Chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles ± 180 °/m	Current load capacity min. wire	9,6 A
Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) Max. operating temperature (fixed) Operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) Bo °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) UL 1581 § 1090 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles ± 180 °/m	Electrical resistance line constant wire	26 Ω/km @ 20 °C
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) 80 °C / 90 °C @ 10000 h Operation Flame resistance UL 1581 § 1090 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 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 Flame resistance UL 1581 § 1090 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m		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 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 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 UL 1581 § 1100 FT2 IEC 60332-2-2 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 Travel speed (C-track) 10 Mio. @ 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 UL 1581 § 1100 FT2 IEC 60332-2-2 chemical resistance Good, application-related testing Oil resistance Good, application-related testing Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 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 Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 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 Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Flame resistance	UL 1581 § 1090 UL 1581 § 1100 FT2 IEC 60332-2-2
Oil resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 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 Travel speed (C-track) 10 Mio. @ 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 Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Oil resistance	Good, application-related testing DIN EN 60811-404
Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m	Bending radius (fixed)	5 x Outer diameter
No. of torsion cycles 2 Mio. Torsion stress ± 180 °/m		10 x Outer diameter
Torsion stress ± 180 °/m	Travel speed (C-track)	10 Mio. @ 25 °C
	No. of torsion cycles	2 Mio.
Torsion speed 35 cycles/min	Torsion stress	± 180 °/m
	Torsion speed	35 cycles/min