

## MSUD valve plug A-18mm with cable V4A

PUR 3x0.75 gy UL/CSA+drag ch. 25m

**MSUD** Form A (18 mm) 110 V AC/DC ±10% LED and suppression

Screw, Stainless Steel 1.4404 (V4A)

Art-No. 7005 - M12 Lite - (plastic hexagonal screw) on request

Further cable lengths on request.

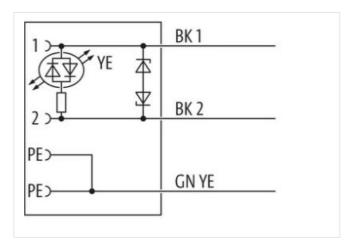
Plastic housings with good resistance against chemicals and oils.

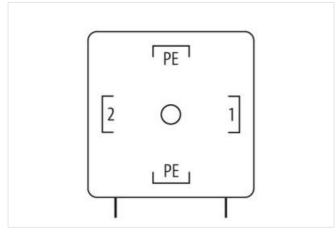
The resistance to aggressive media should be individually tested for your application. Further details on request.

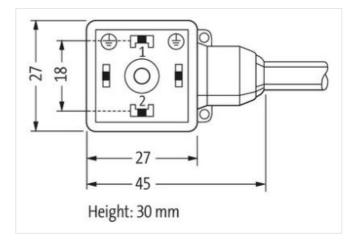
## **Link to Product**

## Illustration









Product may differ from Image



Cable length

25 m



stay connected

Tightening torque	0,4 Nm
Family construction form	M12
Thread	M3
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	4048879808682
Packaging unit	1
Electrical data	
Drop-out delay time max.	20 ms
Electrical data   Supply	
Operating voltage AC	110 V
Operating voltage AC min.	99 V
Operating voltage AC max.	121 V
Operating voltage DC	110 V
Operating voltage DC min.	99 V
Operating voltage DC max.	121 V
Cut-off peak voltage max.	250 V
Current operating per contact max.	4 A
Diagnostics	
Status indication LED	yellow
Device protection   Electrical	
Additional condition protection degree	inserted, screwed
Pollution Degree	3
Material group (IEC 60664-1)	I
Additional suppressor	Diode, Z-Diode
Mechanical data   Material data	
Color housing	black
Material gasket	PUR
Material housing	PBT
Locking material	Stainless steel 1.4404 (V4A)
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	<b>Attention:</b> 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



## stay connected

Jacket Color	Cable Type	3
Type of Certificate cURus  Amount stranding 1  Amount stranding 3  3 wires twisted  Stranding 3  3 wires twisted  Stranding 5  56.1 g/m  Marraig jacket 7  Freedom from ingenderist (jacket) 59.9 mm  Tolerance outer diameter (jacket) 15.9 mm  Tolerance outer diameter insulation PP  Amount wires 3  Outer diameter insulation PP  Amount wires 3  Outer diameter insulation 70.5 %  Shore bardness wire insulation 70.5 %  Shore bardness wire insulation 70.5 %  Shore bardness wire insulation 70.5 %  Marting door of wire insulation white (solation black)  Amount stardis (wire) 42  Diameter of single wires 0,15 mm  Conductor crosssection (wire) 0,75 mm²  Marting conductor crosssection (wire) 0,75 mm²  Marting conductor wire 5 stranded copper wire, bare  Conductor type (wire) strand class 6  Nominal violage AC max. 300 V  Current load capacity (standard) to DIN VDE 0288-4  Curr	Printing color of wire insulation	white (isolation black)
Amount stranding         1           Stranding         3 wives twisted           wive arrangement         black 1, black 2, green yellow           Cable weight         55.1 gm           Shore hardness jacket         PUR           Shore hardness jacket         90 ± 5 Shore A           Freedom from ingredients (jacket)         lead-free, cadmiun-free, CFC-free, halogen-free, silicone-free           Cuter diameter (jacket)         5 9 mm           Tolerance outer diameter (sheath)         ± 5 %           Matterial wire insulation         PP           Annount wires         3           Outer diameter (sheath)         ± 5 %           Shore hardness wire insulation         1, 185 mm           Outer diameter (sheath)         ± 5 %           Shore hardness wire insulation         70 ± 5 Shore D           Ingredient freeness wire insulation         70 ± 5 Shore D           Ingredient freeness wire insulation         white (solation black)           Amount strands (vier)         42           Diameter of single wire         0,15 mm           Conductor crossection (wire)         0,75 mm²           Matterial conductor wire         Stranded copper wire, bare           Conductor type (wire)         strand class 6           Nominal voltage, AC max.<	Jacket Color	gray
Stranding         3 wires twisted           wire arrangement         black 1, black 2, green-yellow           Cable weight         56.1 g/m           Material jacket         PUR           Shore hardness jacket         90.2 5 Shore A           Freedom from Ingredients (jacket)         1 security           Outer-diameter (jacket)         5,9 mm           Tolerance outer drameter (sheath)         1 s %           Material wire insulation         PP           Annount wires         3           Outer diameter 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           Unamed over of wire insulation         40 ± 5 Shore D           Unsured of single wires         0,15 mm           Conductor by region of wire insulation         white (solation black)           Amount strands (wire)         42           Diameter of single wires         0,15 mm           Conductor by region wires         0,15 mm           Conductor by region wires         Stranded copper wire, bare           Conductor by region wires         Stranded copper wire, bare           Conductor by region wires	Type of Certificate	cURus
wire arrangement         black 1, black 2, green-yellow           Cable weight         56,1 g/m           Material jacket         PUR           Shore hardness jacket         90 ± 5 Shore A           Freedom from ingredients (jacket)         5,9 mm           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         70 ± 5 Shore D           Shore hardness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ± 5 Shore D           Ingresient feeness wire insulation         70 ±	Amount stranding	1
Cable weigh         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, eilicone-free           Outer-diameter (jacket)         5,9 mm           Orderance 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           Impedient freeness wire insulation         1,85 mm           Printing color of were insulation         1,85 mm           Amount strands (wire)         42           Diameter of single wires         0,15 mm           Conductor type (wire)         0,75 mm²           Material conductor were         5 randed copper wire, bare           Conductor type (wire)         300 V           Current load capacity (standard)         10 DIN VDE 0298-4           Current load capacity (standard)         12 A           Electrical resistance line constant wire         26 Dkm @ 20 °C           Courient load capacity (standard)         20 INV @ 05 s           Power frequen	Stranding	3 wires twisted
Material jacket   PUR   Shore hardness jacket   Shore A   90 ± 5 Shore D   90 ± 5 Shore	wire arrangement	black 1, black 2, green-yellow
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 insulation         1,85 mm           Outer diameter insulation         1,85 mm           Outer diameter 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 opper wire, bare           Conductor type (wire)         strand class 6           Nominal voltage AC max.         300 V           Current load capacity (standard)         to DIN VDE (298-4           Current load capacity (standard)         to DIN VDE (298-4           Current load capacity (standard)         25 kV @ 60 s	Cable weigth	56,1 g/m
Freedom from Ingredients (jacket)   lead-free, cadmium-free, CFC-free, halogen-free, silicone-free	Material jacket	PUR
Outer-diameter (jacket)         5,9 mm           Tolerance outer diameter (sheath)         ± 5 %           Material wire insulation         PP           Amount wires         3           Outer diameter insulation         1,85 mm           Outer diameter insulation         70 ± 5 Shore D           Churer diameter 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         Strand class 6           Conductor type (wire)         strand class 6           Nominal voltage AC max         300 V           Current load capacity (standard)         to DIN VDE 0298-4           Current load capacity 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 (sted)         40 °C           Max. operating temperature (sted)         80 °C / 90 °C @ 10000 h Operation	Shore hardness jacket	90 ± 5 Shore A
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         70 ± 5 Shore D           Churer diameter 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         Strand class 6           Conductor type (wire)         strand class 6           Nominal voltage AC max         300 V           Current load capacity (standard)         to DIN VDE 0298-4           Current load capacity 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 (sted)         40 °C           Max. operating temperature (sted)         80 °C / 90 °C @ 10000 h Operation	Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Material wire insulation         PP           Amount wires         3           Outer diameter insulation         1,85 mm           Outer diameter folerance core insulation         70 ± 5 Shore D           Ingredient freeness 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)         to DIN VDE 0298-4           Current load capacity (wire wire)         25 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 @ 10000 h Operation           Gearding temperature max. (dynamic)         25 °C           Operating temperature	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 strank (wire)         42           Diameter of single wires         0,15 mm           Conductor crosssection (wire)         0,75 mm²           Material conductor wire         Stranded copper wire, bare           Conductor type (wire)         strand class 6           Nominal voltage AC max.         300 V           Current load capacity (standard)         to DIN VDE 0298-4           Current load capacity min. wire         12 A           Electrical resistance line constant wire         26 Ω/km @ 20 °C           AC wirbstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - wire)         2,5 kV @ 60 s           Min. operating temperature (istatic)         -40 °C           Max. operating temperature (istatic)         -40 °C           Max. operating temperature (istatic)         80 °C / 90 °C @ 10000 h Operation           Flame resistance         UL 1581 § 1090	Tolerance outer diameter (sheath)	±5%
Outer diameter insulation         1,85 mm           Outer diameter tolerance core insulation         ± 5 %           Shore hardness wire insulation         10± 5 Shore D           Ingredient freeness wire insulation         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free           Printing color of wire insulation         white (isolation black)           Amount strands (wire)         42           Diameter of single wires         0,15 mm           Conductor crosssection (wire)         0.75 mm²           Material conductor wire         Stranded copper wire, bare           Conductor type (wire)         strand class 6           Nominal voltage AC max.         300 V           Current load capacity (standard)         to DIN VDE 0298-4           Current load capacity min. wire         12 A           Electrical resistance line constant wire         26 Ω/km @ 20 °C           AC withstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - wire)         2,5 kV @ 60 s           Min. operating temperature (static)         -40 °C           Max. operating temperature (static)         -40 °C           Operating temperature min. (dynamic)         25 °C           Operating temperature max. (dynamic)         80 °C / 90 °C @ 10000 h Operation           Flame re	Material wire insulation	PP
Outer diameter tolerance core insulation         ± 5 %           Shore bardness 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)         stranded copper wire, bare           Onductor type (wire)         stranded copper wire, bare           Conductor type (wire)         stranded copper wire, bare           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 - wire)         2,5 kV @ 60 s           Min. operating temperature (static)         4	Amount wires	3
Outer diameter tolerance core insulation         ± 5 %           Shore bardness 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 (standard)         to DIN VDE 0298-4           Electrical resistance line constant wire         26 Ω/km @ 20 °C           AC withstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - wire)         2,5 kV @ 60 s           Min. operating temperature (static)         40 °C           Max. operating temperature (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-rela	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 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 (standard) to DIN VDE 0298-4 Current load capacity min. wire 12 A Electrical resistance line constant wire 25 kW @ 60 s Power frequency withstand voltage (wire - wire) 2,5 kW @ 60 s Power frequency withstand voltage (wire - lack title) 40 °C Max. operating temperature (sted) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) 25 °C Operating temperature min. (dynamic) 38 °C / 90 °C @ 10000 h Operation Filame resistance 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 (fixed) 10 × Outer diameter Bending radius (dynamic) 10 × Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traver sing distance (C-track) 3 m/s @ 25 °C No. of torsion cycles 2 Mio. Torsion stress 2 ± 180 °/m	Outer diameter tolerance core insulation	· · · · · · · · · · · · · · · · · · ·
Printing color of wire insulation         white (isolation black)           Amount strands (wire)         42           Diameter of single wires         0,15 mm           Conductor crosssection (wire)         0,75 mm²           Material conductor wire         Stranded copper wire, bare           Conductor type (wire)         strand class 6           Nominal voltage AC max.         300 V           Current load capacity (standard)         to DIN VDE 0298-4           Current load capacity min. wire         12 A           Electrical resistance line constant wire         26 Ω/km @ 20 °C           AC withstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - wire)         2,5 kV @ 60 s           Min. operating temperature (fixed)         80 °C / 90 °C @ 10000 h Operation           Operating temperature (fixed)         80 °C / 90 °C @ 10000 h Operation           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 60811-404 [Good, application-related testing           Bending radius (fixed)         5 x Outer diameter	Shore hardness wire insulation	70 ± 5 Shore D
Printing cotor 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 NDE 0298-4           Current load capacity min. 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 - igacket)         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)         -25 °C           Chemical resistance         Good, application-related testing           Gasoline resistance         Good, application-related testing           Gli resistance         DIN EN 6081404 [Good, application-related testing           Bending radius (fixed)         5 x Outer diameter           Bending radius	Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Diameter of single wires         0,15 mm           Conductor crosssection (wire)         0,75 mm²           Material conductor wire         Stranded copper wire, bare           Conductor type (wire)         strand class 6           Nominal voltage AC max.         300 V           Current load capacity (standard)         to DIN VDE 0298-4           Current load capacity min. wire         12 A           Electrical resistance line constant wire         26 Ω/km @ 20 °C           AC withstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - wire)         2,5 kV @ 60 s           Min. operating temperature (static)         -40 °C           Max. operating temperature (fixed)         80 °C / 90 °C @ 10000 h Operation           Operating temperature min. (dynamic)         -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           Oll 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 - igacket)         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 (dynamic)         <	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 \( \Omega \text{km} \) \( \end{arrange} \) \( \text{constant} \) \( c	Diameter of single wires	0,15 mm
Conductor type (wire)       strand class 6         Nominal voltage AC max.       300 V         Current load capacity (standard)       to DIN VDE 0298-4         Current load capacity min. wire       12 A         Electrical resistance line constant wire       26 Ω/km @ 20 °C         AC withstand voltage (wire - wire)       2,5 kV @ 60 s         Power frequency withstand voltage (wire - jacket)       2,5 kV @ 60 s         Min. operating temperature (static)       -40 °C         Max. operating temperature (fixed)       80 °C / 90 °C @ 10000 h Operation         Operating temperature min. (dynamic)       -25 °C         Operating temperature max. (dynamic)       80 °C / 90 °C @ 10000 h Operation         Flame resistance       0 °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         Boo of bending cycles (C-track)       10 m@ 25 °C   horizontal         Traversing distance (C-track)       10 m@ 25 °C   horizontal         Traver	Conductor crosssection (wire)	0,75 mm²
Nominal voltage AC max.         300 V           Current load capacity (standard)         to DIN VDE 0298-4           Current load capacity min. wire         12 A           Electrical resistance line constant wire         26 Ω/km @ 20 °C           AC withstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - iacket)         2,5 kV @ 60 s           Min. operating temperature (static)         -40 °C           Max. operating temperature (fixed)         80 °C / 90 °C @ 10000 h Operation           Operating temperature min. (dynamic)         -25 °C           Operating temperature max. (dynamic)         80 °C / 90 °C @ 10000 h Operation           Flame resistance         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	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           Oil 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 Mio. @ 25 °C           Traversing distance (C-track)         10 Mio. @ 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 \( \Omega \) / kV \( \omega \) 60 s  Power frequency withstand voltage (wire - wire) 2,5 kV \( \omega \) 60 s  Power frequency withstand voltage (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 \( \gred \) 1909   IEC 60332-2-2   UL 1581 \( \gred \) 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. \( \omega \) 25 °C  Traversing distance (C-track) 10 m \( \omega \) 25 °C  No. of torsion cycles \( \omega \) 480°m  ± 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   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)  Max. operating temperature (fixed)  More and a comparity temperature min. (dynamic)  Poperating temperature min. (dynamic)  Poperating temperature max. (dynamic)  More and a comparity temperature max. (dynamic)  More and a compa	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)  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)  Moverating temperature (fixed)  Moverating temperature min. (dynamic)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  Operating temperature max. (dynamic)  Boverating temperature max. (dynamic)  Wind presistance  Operating temperature max. (dynamic)  Wind presistance  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	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	Power frequency withstand voltage (wire - jacket)	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  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	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 resistanceGood, application-related testingGasoline resistanceGood, application-related testingOil resistanceDIN EN 60811-404   Good, application-related testingBending radius (fixed)5 x Outer diameterBending radius (dynamic)10 x Outer diameterNo. of bending cycles (C-track)10 Mio. @ 25 °CTraversing distance (C-track)10 m @ 25 °C   horizontalTravel speed (C-track)3 m/s @ 25 °CNo. of torsion cycles2 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