

#### M12 female 90° A-cod. with cable LED

PUR 5x0.34 gy UL/CSA+robot+drag ch. 5m

Art.No.: 7000-12441-2550500

Weight: 0.226 Country of origin: DE

Model designation: MSDL2-U255 5.0-DS

## Advantages of our connectors:

Our connectors are versatile and specially optimised for industrial environments. All connectors are 100% tested during the manufacturing process to ensure the highest quality and reliability.

The contacts are gold-plated, which ensures optimum conductivity. Thanks to the high degree of protection, the connectors are ideal for demanding industrial environments. They are also vibration-resistant - this is ensured by the union nut with vibration protection.

Our connectors are resistant to oils and cooling lubricants, but resistance to aggressive media should be tested for each specific application. Different cable lengths available on request

If you are missing technical information? Please feel free to use our dictionary to find more technical details.

#### **Product details:**

Zinc die casting, save-cover coated

Female 90°

M12, 5-pole

3× LED (PNP)

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

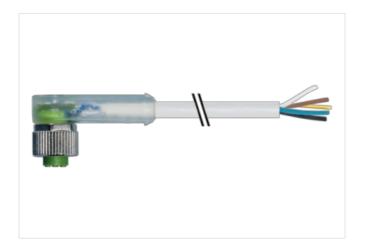
Plastic housings with good resistance against chemicals and oils.

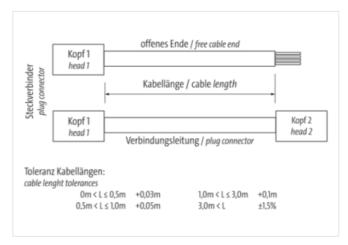
The resistance to aggressive media should be individually tested for your application. Further details on request.

Further cable lengths on request.

# **Link to Product**

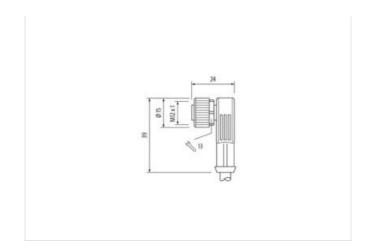
### Illustration

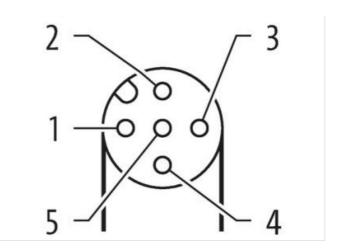


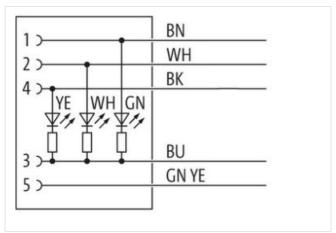




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Product may differ from Image











Cable length	5 m
Side 1	
Tightening torque	0,6 Nm
Mounting method	inserted, screwed
Coating contact	gold plated
Family construction form	M12
Thread	M12 x 1
suitable for corrugated tube (internal Ø)	10 mm
Cable outlet	angled
Coding	A
Material contact	Copper alloy
Material	PUR
No. of poles	5
Width across flats	SW13
Degree of protection (EN IEC 60529)	IP65, IP66K, IP67
Side 2	
Stripping length (jacket)	20 mm
Family construction form	free cable end

The information in this Product-PDF has been compiled with the utmost care. Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2025-05-12



Commercial data	
ECLASS-6.0	27279218
ECLASS-6.1	27279218
ECLASS-7.0	27279218
ECLASS-8.0	27279218
ECLASS-9.0	27060311
ECLASS-10.1	27060311
ECLASS-11.1	27060311
ECLASS-12.0	27060311
ETIM-5.0	EC001855
ETIM-6.0	EC001855
ETIM-7.0	EC001855
ETIM-8.0	EC001855
customs tariff number	85444290
customs tariff number	85444290
GTIN	4048879202107
GTIN	4048879202107
Packaging unit	1
Packaging unit	1
Electrical data   Supply	
Operating voltage DC	24 V
Operating voltage DC min.	18 V
Operating voltage DC max.	30 V
Operating voltage DC max. (UL-listed)	30 V
Current operating per contact max.	4 A
	10
Diagnostics	
Status indication LED	green, white, yellow
Installation   Connection	
Stripping length (jacket)	20 mm
Mounting set	M12 x 1
Gender	female
Device protection   Electrical	
Additional condition protection degree	inserted, screwed
Pollution Degree	3
Rated surge voltage	0,8 kV
Material group (IEC 60664-1)	<u> </u>
Mechanical data   Material data	
	safe-cover coated
Coating locking  Coating of fitting	nickel plated
Locking material	Zinc die-casting
Material screw connection	Zinc die-casting Zinc die-casting
	Zinc die-Casting
Mechanical data   Mounting data	
Mounting method	inserted, screwed, Shaking protection
Environmental characteristics   Climatic	
Operating temperature min.	-30 °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.
-	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be
Note on bending radius	endangered by excessive bending forces.



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Product standard   DIN EN 61076-2-101 (M12)     Installation   Cable		
Installation   Cable	Conformity	
wire arrangement brown, black, blue, white, green-yellow Cable identification 255  Jacket Color gray Type of Certificate cUPus  Amount stranding 1  Stranding 5 wires around Core filler twisted  Amount stranding 1  Filter yes wire arrangement brown, black, blue, white, green-yellow Cable weight 41,8 gm Material jacket PUR  Shore hardness picket 58 a 3 5 Nore D  Freedom from ingradients (jacket) 1 lead-free, cadmium-free, CFC-free, halogen-free, sillicone-free  Outer-diameter (jacket) 5 mm  Tolerance outer diameter (sheath) 1 ± 5 %  Material wire insulation PP  Amount wires 5  Outer diameter insulation 1,25 mm  Outer diameter insulation 74 ± 3 Shore D  Ingredient freeness wire insulation 74 ± 3 Shore D  Ingredient freeness wire insulation 1 and-free, cadmium-free, CFC-free, halogen-free, sillicone-free  Amount wires 5  Outer diameter (sheath) 5 mm  Outer diameter (sheath) 6 mm  Outer diameter (sheath) 74 ± 3 Shore D  Ingredient freeness wire insulation 74 ± 3 Shore D  Ingredient freeness wire insulation 1 and-free, cadmium-free, CFC-free, halogen-free, sillicone-free  Amount strand (swire) 42  Diameter of single wires 0, fi mm  Conductor crosssection (wire) 0, 34 mm²  Material conductor wire Stranded copper wire, barre  Conductor type (wire) strand class 6  Olikin @ 20 °C  Current load capacity (standard) 1 DIN VISE 0394 4  Current load capacity (standard) 1 DIN VISE 0394 4  Current load capacity (standard) 1 DIN VISE 0394 4  Current load capacity withstand voltage (wire) 2, 5 k 0 ⊕ 60 s  Power frequency withstand voltage (wire) 2, 5 k 0 ⊕ 60 s  Operating temperature mix. (dynamic) 40 °C 90 °C	Product standard	DIN EN 61076-2-101 (M12)
Cable Type         5           Jackel Color         gray           Type of Certificate         cURus           Amount stranding         1           Stranding         5 wires around Core filler twisted           Filler         yes           via arrangement         brown, lack, blue, white, green-yellow           Cable weight         41,8 gm           Material jacket         PUR           Shore hardness jackel         58 ± 3 Shore D           Freedom from ingredients (jacket)         58 ± 3 Shore D           Colure-diameter (jacket)         5 mm           Tolerance outer diameter (jacket)         5 mm           Tolerance outer diameter (jacket)         5 %           Material wire insulation         PP           Amount wires         5           Outer diameter insulation         1,25 mm           Under diameter insulation         1,25 mm           Ingredient freewase wire insulation         1,25 mm           Ingredient freewase wire insulation         1,24 ± 3 Shore D           Ingredient freewase wire insulation         1,4 ± 3 Shore D           Ingredient freewase wire insulation         1,6 mm           Ingredient freewase wire insulation         1,6 mm           Ingredient freewase wire insulation </td <td>Installation   Cable</td> <td></td>	Installation   Cable	
Cable Type         5           Jacket Color         gray           Type of Certificate         cURus           Amount stranding         1           Stranding         5 wice seround Core filler twisted           Filler         yes           wire arrangement         brown, black, blue, while, green-yellow           Cable weight         41.8 gm           Material jacket         FUR           Shore hardness jacket         89.2 3 Shore D           Freedom from ingredients (jacket)         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free           Outer-diameter (jacket)         5 mm           Tolerance outer diameter (sheath)         2.5 %           Material wire insulation         PP           Amount wires         5           Outer diameter insulation         74.3 Shore D           Ingredient freeness wire insulation         74.3 Shore D           Ingredient freeness wire insulation         74.3 Shore D           Ingredient freeness wire insulation         1.25 mm           Outer diameter (wire)         24           Dameter of single wires         0.1 mm           Conductor type (wire)         3.4 mm²           Material conductor wire         Stranded copper wire, bare           Conducto	wire arrangement	brown, black, blue, white, green-yellow
Jacket Color	Cable identification	255
Type of Certificate         cURus           Amount stranding         1           Stranding         5 wires around Core filler twisted           Filler         yes           wire arrangement         brown, black, blue, white, green-yellow           Cable weigh         41.8 gm           Material jacket         PUR           Shore hardness jacket         58 ± 3 Shore D           Freedom from ingredients (jacket)         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free           Outer-diameter (jacket)         5 mm           Tolerance outer diameter (sheath)         ± 5 %           Material wire insulation         PP           Amount wires         5           Outer diameter tolerance core insulation         1,25 mm           Outer diameter tolerance core insulation         1,25 mm           Outer diameter insulation         1,25 mm           Outer diameter insulation         74 ± 3 Shore D           Ingredient freeness wire insulation         74 ± 3 Shore D           Ingredient freeness wire insulation         1,0 mm           Conductor or subjective free vires         0,1 mm           Conductor or subjective free vires         0,1 mm           Conductor type (wire)         strand class 8           Nominal voltage (wire vi	Cable Type	5
Amount stranding   1	Jacket Color	gray
Stranding 5 wires around Core filler twisted Filler yes wire arrangement brown, black, blue, white, green-yellow Cable weight 41.8 g/m Material jacket PUR Shore hardness jacket 58 3 Shore D Freedom from ingredients (jacket) lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Outer-diameter (jacket) 5 mm Tolerance outer diameter (sheath) 2 \$ % Material wire insulation PP Material wire insulation PP Outer diameter insulation 1,25 mm Outer diameter insulation 1,25 mm Outer diameter insulation 1,25 mm Outer diameter insulation 74 3 Shore D Ingredient freeness wire insulation 8 % Shore hardness wire insulation 1 (add the property of the pro	Type of Certificate	cURus
Filler yes wire arrangement brown, black, blue, white, green-yellow Cable weight 41,8 g/m Material jacket PUR Shore hardness jacket PUR Material wire insulation PP Amount wires 5 Shore hardness wire insulation PP Amount wires 5 Shore hardness wire insulation 1,25 mm Outer diameter of single wires wire insulation 1,25 mm Outer diameter of single wires wire insulation 1,25 mm Outer diameter of single wires wire insulation 1,25 mm Outer diameter of single wires 1,25 mm Outer diameter of single wires 1,25 mm Outer diameter 1,25 mm Out	Amount stranding	1
wire arrangement brown, black, blue, white, green-yellow  Cable weight 41,8 g/m  Material jacket PUR  Shore hardness jacket 58 ± 3 Shore D  Freedom from ingredients (jacket) 5 mm  Tolerance outer diameter (sheath) ± 5 %  Material wire insulation PP  Amount wires 5  Outer diameter insulation 7.4 ± 3 Shore D  Ingredient freeness wire insulation 7.4 ± 3 Shore D  Ingredient freeness wire insulation 7.4 ± 3 Shore D  Ingredient freeness wire insulation 8.4 mm  Ingredient freeness wire insulation 7.4 ± 3 Shore D  Ingredient freeness wire insulation 1.5 mm  Conductor or crossection (wire) 42  Diameter of single wires 0,1 mm  Material conductor wire Stranded copper wire, bare  Conductor type (wire) \$ Stranded copper wire, bare  Conductor 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  Current load capacity (withatand voltage (wire - wire) 2.5 kV @ 60 s  Power frequency withstand voltage (wire - wire) 2.5 kV @ 60 s  Min. operating temperature (sted) 80 °C. 90 °C @ 10000 h Operation  Operating temperature (sted) 90 °C. 90 °C @ 10000 h Operation  Operating temperature (sted) 90 °C. 90 °C @ 10000 h Operation  Operating temperature (sted) 90 °C. 90 °C @ 10000 h Operation  Flame resistance Good, application-related testing 1 DIN EN 6881+404  Welding spark resistance Good, application-related testing 1 DIN EN 6881+404  Welding spark resistance Good, application-related testing 1 DIN EN 6881+404  Welding spark resistance (C-track) 10 Mio. @ 25 °C  Traversing distance (C-track) 10 Mio. @ 25 °C  Traversing distan	Stranding	5 wires around Core filler twisted
Cable weighh         41,8 g/m           Material jacket         PUR           Material jacket         58 ± 3 Shore D           Freedom from ingredients (jacket)         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free           Outer-diameter (jacket)         5 mm           Tolerance outer diameter (sheath)         ± 5 %           Material wire insulation         PP           Amount wires         5           Outer diameter insulation         1.25 mm           Outer diameter insulation         1.25 mm           Outer diameter or loverance core insulation         ± 5 %           Shore hardness wire insulation         7 4 ± 3 Shore D           Ingredient freeness wire insulation         42 Pm           Dameter of single wires         0,1 mm           Conductor spingle wires         0,1 mm           Conductor spingle wires         0,1 mm           Conductor type (wire)         strand class 6           Nominal voltage AC max         300 V           Current load capacity min. wire         4,5 A           Electrical resistance line constant wire         60 Ok In @ 0° °C           CW withstand voltage (wire- vire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire- jacket)         40 °C           Max. oper	Filler	yes
Material jacket	wire arrangement	brown, black, blue, white, green-yellow
Shore hardness jacket   58 ± 3 Shore D	Cable weigth	41,8 g/m
Freedom from Ingredients (jacket)   lead-free, cadmium-free, CFC-free, halogen-free, silicone-free	Material jacket	PUR
Outer-diameter (jacket)         5 mm           Tolerance outer diameter (sheath)         ± 5 %           Material wire insulation         PP           Amount wires         5           Outer diameter insulation         1,25 mm           Outer diameter tolerance core insulation         ± 5 %           Shore hardness wire insulation         74 ± 3 Shore D           Ingredient freeness wire insulation         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free           Amount strands (wire)         42           Diameter of single wires         0,1 mm           Conductor ressection (wire)         0,34 mm²           Material conductor wire         Strand class 6           Conductor tye (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         60 Ω/km @ 20 °C           AC withstand voltage (wire-wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire-iscket)         2,5 kV @ 60 s           Min. operating temperature (static)         40 °C           Max. operating temperature (static)         80 °C / 90 °C @ 100000 h Operation	Shore hardness jacket	58 ± 3 Shore D
Tolerance outer diameter (sheath)   ± 5 %	Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Material wire insulation         PP           Amount wires         5           Outer diameter insulation         1,25 mm           Outer diameter tolerance core insulation         25 %           Shore hardness wire insulation         74 ± 3 Shore D           Ingredient freeness wire insulation         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free           Amount strands (wire)         42           Diameter of single wires         0,1 mm           Conductor crosssection (wire)         0.34 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 (win- wire)         4,5 A           Electrical resistance line constant wire         60 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 (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 § 10		<u> </u>
Material wire insulation         PP           Amount wires         5           Outer diameter insulation         1,25 mm           Outer diameter tolerance core insulation         25 %           Shore hardness wire insulation         74 ± 3 Shore D           Ingredient freeness wire insulation         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free           Amount strands (wire)         42           Diameter of single wires         0,1 mm           Conductor crosssection (wire)         0.34 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 (win- wire)         4,5 A           Electrical resistance line constant wire         60 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 (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 § 10	Tolerance outer diameter (sheath)	±5%
Outer diameter insulation 1,25 mm Outer diameter tolerance core insulation ± 55% Shore hardness wire insulation 14 ± 3 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Amount strands (wire) 42 Diameter of single wires 0,1 mm Conductor crossection (wire) 0,34 mm Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 4,5 A Electrical resistance line constant wire 60 Ω/km @ 20 °C AC withstand voltage (wire-wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire-gacket) Nin. operating temperature (static) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Max. operating temperature min. (dynamic) -25 °C Chemical resistance UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2 Chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Directing radius (fixed) 5 x Outer diameter Bending radius (fixed) 5 x Outer diameter Bending radius (fixed) 5 m @ 25 °C Traversing distance (C-track) 5 m @ 25 °C Traversing distance (C-track) 5 m @ 25 °C Traversing distance (C-track) 1 Min. Torsion stress ± ± 360 °/m		PP
Outer diameter tolerance core insulation	Amount wires	5
Shore hardness wire insulation 74 ± 3 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free Amount strands (wire) 42 Diameter of single wires 0,1 mm Conductor crosssection (wire) 0,34 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) to DIN VDE 0298-4 Current load capacity (standard) to DIN VDE 0298-4 Current load capacity min. wire 4,5 A Electrical resistance line constant wire 60 Ω/km @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - jacket) Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation Operating temperature min. (dynamic) -25 °C Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 60 °C, 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 60 °C, 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 70 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation Operating temperature max. (dynamic) 90 °C © 10000 h Operation Operating temperature max. (dynamic) 90 °C © 10000 h Operation Operating temperature max. (dynamic) 90 °C © 10000 h Operation Operating temperature max. (dynamic) 90 °C © 10000 h Operation Operating temperature max. (dynamic) 90 °C © 10000 h Operation Operating temperature max. (dynamic) 90 °C © 10000 h Operation Operating temperature max. (dynamic) 90 °C © 10000 h Opera	Outer diameter insulation	1,25 mm
Ingredient freeness wire insulation Amount strands (wire) 42 Diameter of single wires 0,1 mm Conductor crosssection (wire) 0,34 mm² Material conductor wire Stranded copper wire, bare Conductor type (wire) strand class 6 Nominal voltage AC max. 300 V Current load capacity (standard) Current load capacity min. wire 4,5 A Electrical resistance line constant wire 3,5 kV ⊕ 60 s  Min. operating temperature (static) Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation 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 Good, application-related testing Bending radius (fixed) 5 x Outer diameter No. of bending cycles (C-track) 1 Min. op cycles (C-track) 1 Min. Qe 25 °C Traversing distance (C-track) 1 0 Min. @ 25 °C Traversing distance (C-track) 1 0 Min. @ 25 °C Traversing distance (C-track) 1 0 Min. @ 25 °C Traversing distance (C-track) 3,3 m/s @ 25 °C Traversing distance (C-track) 3,3 m/s @ 25 °C Traversing distance (C-track) 1 Min. Qe 1 Min. Qe 25 °C Traversing distance (C-track) 1 Min. Qe 25 °C Traversing distance (C-track) 3,3 m/s @ 25 °C Traversing distance (C-track) 3,3 m/s @ 25 °C Traversing distance (C-track) 3,3 m/s @ 25 °C Traversing distance (C-track) 1 Min. Torsion stress  ± 360 °/m	Outer diameter tolerance core insulation	±5%
Amount strands (wire)  Diameter of single wires  0,1 mm  Conductor crosssection (wire)  0,34 mm²  Material conductor wire  Stranded copper wire, bare  Conductor type (wire)  strand class 6  Nominal voltage AC max.  300 V  Current load capacity (standard)  Current load capacity (standard)  Current load capacity min. wire  4,5 A  Electrical resistance line constant wire  60 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)  Max. operating temperature (fixed)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  Operating temperature wax. (dynamic)  Capical resistance  UL 1581 § 1909   EC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  Good, application-related testing  Oil resistance  Good, application-related testing  Bending radius (fixed)  5 x Outer diameter  Bending radius (fixed)  5 x Outer diameter  Bending radius (dynamic)  10 x Outer diameter  No. of bending cycles (C-track)  5 m @ 25 °C   horizontal  Travel speed (C-track)  5 m @ 25 °C   horizontal  Travel speed (C-track)  7 min 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/m	Shore hardness wire insulation	74 ± 3 Shore D
Diameter of single wires 0,1 mm  Conductor crosssection (wire) 0,34 mm²  Material conductor wire Stranded copper wire, bare  Conductor type (wire) strand class 6  Nominal voltage AC max. 300 V  Current load capacity (standard) to DIN VDE 0298-4  Current load capacity (standard) to DIN VDE 0298-4  Current load capacity min. wire 4,5 A  Electrical resistance line constant wire 60 0/km @ 20 °C  AC withstand voltage (wire - wire) 2,5 kV @ 60 s  Power frequency withstand voltage (wire - jacket) 80 °C / 90 °C @ 10000 h Operation  Operating temperature (static) -40 °C  Min. operating temperature (static) 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  Bending radius (ffixed) 5 x Outer diameter  No. of bending cycles (C-track) 10 Mio. @ 25 °C  Traversing distance (C-track) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Conductor crosssection (wire)     0,34 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     4,5 A       Electrical resistance line constant wire     60 Ω/km @ 20 °C       AC withstand voltage (wire - wire)     2,5 kV @ 60 s       Power frequency withstand voltage (wire - ajacket)     40 °C       Min. operating temperature (static)     40 °C       Max. operating temperature (fixed)     80 °C / 90 °C @ 10000 h Operation       Operating temperature min. (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     Good, application-related testing   DIN EN 60811-404       Welding spark resistance     Good, application-related testing       Bending radius (fixed)     5 x Outer diameter       Bending radius (dynamic)     10 x Outer diameter       Bending radius (dynamic)     10 x Outer diameter       Traver sing distance (C-track)     5 m @ 25 °C   horizontal       Traver sing distance (C-track)     5 m @ 25 °C   horizontal	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 4,5 A  Electrical resistance line constant wire 60 Ω/km @ 20 °C  AC withstand voltage (wire - wire) 2,5 kV @ 60 s  Power frequency withstand voltage (wire - lacket) 40 °C  Max. operating temperature (static) 40 °C  Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation  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   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Oil resistance Good, application-related testing  Bending radius (dynamic) 5 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  No. of bending cycles (C-track) 10 Mio. @ 25 °C  Traversing distance (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Diameter of single wires	0,1 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 4,5 A  Electrical resistance line constant wire 60 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  Min. 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  Flame resistance UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Oil resistance Good, application-related testing  Oil resistance Good, application-related testing  Bending radius (fixed) 5 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  Bending radius (dynamic) 5 m @ 25 °C  Traver sing distance (C-track) 5 m @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Conductor crosssection (wire)	0,34 mm <sup>2</sup>
Nominal voltage AC max. 300 V  Current load capacity (standard) to DIN VDE 0298-4  Current load capacity min. wire 4,5 A  Electrical resistance line constant wire 60 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 (fixed) 80 °C / 90 °C @ 10000 h Operation  Operating temperature min. (dynamic) -25 °C  Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation  Flame resistance UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Oil resistance Good, application-related testing   DIN EN 60811-404  Welding spark resistance Good, application-related testing  Bending radius (fixed) 5 x Outer diameter  Bending radius (fixed) 5 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  Bending cycles (C-track) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Material conductor wire	Stranded copper wire, bare
Current load capacity (standard) to DIN VDE 0298-4  Current load capacity min. wire 4,5 A  Electrical resistance line constant wire 60 Ω/km @ 20 °C  AC withstand voltage (wire - wire) 2,5 kV @ 60 s  Power frequency withstand voltage (wire - a0 °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 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Gil resistance Good, application-related testing   DIN EN 60811-404  Welding spark resistance Good, application-related testing  Bending radius (fixed) 5 x Outer diameter  No. of bending cycles (C-track) 10 Mio. @ 25 °C  Traversing distance (C-track) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Conductor type (wire)	strand class 6
Current load capacity min. wire 4,5 A  Electrical resistance line constant wire 60 Ω/km @ 20 °C  AC withstand voltage (wire - wire) 2,5 kV @ 60 s  Power frequency withstand voltage (wire - jacket) 2,5 kV @ 60 s  Min. operating temperature (static) -40 °C  Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation  Operating temperature min. (dynamic) -25 °C  Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation  Flame resistance UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Oil resistance Good, application-related testing   DIN EN 60811-404  Welding spark 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) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Nominal voltage AC max.	300 V
Electrical resistance line constant wire 60 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 § 1909   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Oil resistance Good, application-related testing   DIN EN 60811-404  Welding spark resistance Good, application-related testing   DIN EN 60811-404  Welding spark resistance Good, application-related testing   DIN EN 60811-404  Welding spark resistance Good, application-related testing   DIN EN 60811-404  To x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  No. of bending cycles (C-track) 10 Mio. @ 25 °C  Traversing distance (C-track) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/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 - 2,5 kV @ 60 s  Min. operating temperature (static)  Max. operating temperature (fixed)  Operating temperature min. (dynamic)  Operating temperature min. (dynamic)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  Operating temperature max. (dynamic)  80 °C / 90 °C @ 10000 h Operation  Flame resistance  UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  Chemical resistance  Good, application-related testing  Gasoline resistance  Good, application-related testing  Oil resistance  Good, application-related testing  Bending spark 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)  5 m @ 25 °C   horizontal  Travel speed (C-track)  3,3 m/s @ 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/m	Current load capacity min. wire	4,5 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)  UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  Good, application-related testing  Oil resistance  Good, application-related testing   DIN EN 60811-404  Welding spark 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)  5 m @ 25 °C   horizontal  Travel speed (C-track)  3,3 m/s @ 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/m	Electrical resistance line constant wire	60 Ω/km @ 20 °C
Jacket)  Min. operating temperature (static)  Max. operating temperature (fixed)  Operating temperature min. (dynamic)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  Operating temperature max. (dynamic)  Operating temperature max. (dynamic)  Bo °C / 90 °C @ 10000 h Operation  Flame resistance  UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  Good, application-related testing  Oil resistance  Good, application-related testing   DIN EN 60811-404  Welding spark 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)  5 m @ 25 °C   horizontal  Travel speed (C-track)  3,3 m/s @ 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/m	AC withstand voltage (wire - wire)	2,5 kV @ 60 s
Max. operating temperature (fixed)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  Operating temperature max. (dynamic)  80 °C / 90 °C @ 10000 h Operation  Flame resistance  UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  Good, application-related testing  Oil resistance  Good, application-related testing   DIN EN 60811-404  Welding spark 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)  5 m @ 25 °C   horizontal  Travel speed (C-track)  3,3 m/s @ 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/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   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  Good, application-related testing  Oil resistance  Good, application-related testing   DIN EN 60811-404  Welding spark 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)  5 m @ 25 °C   horizontal  Travel speed (C-track)  3,3 m/s @ 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/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 Good, application-related testing   DIN EN 60811-404  Welding spark 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) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/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  Gil resistance  Good, application-related testing   DIN EN 60811-404  Welding spark resistance  Good, application-related testing   DIN EN 60811-404  Welding spark resistance  Good, application-related testing   DIN EN 60811-404  Welding spark resistance  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)  5 m @ 25 °C   horizontal  Travel speed (C-track)  3,3 m/s @ 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/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  Welding spark 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) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
Gasoline resistance Good, application-related testing   DIN EN 60811-404  Welding spark resistance Good, application-related testing   DIN EN 60811-404  Welding spark 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) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Flame resistance	UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2
Oil resistance Good, application-related testing   DIN EN 60811-404  Welding spark 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) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	chemical resistance	Good, application-related testing
Welding spark 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)  5 m @ 25 °C   horizontal  Travel speed (C-track)  3,3 m/s @ 25 °C  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/m	Gasoline 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) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Oil resistance	Good, application-related testing   DIN EN 60811-404
Bending radius (dynamic) 10 x Outer diameter  No. of bending cycles (C-track) 10 Mio. @ 25 °C  Traversing distance (C-track) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Welding spark resistance	Good, application-related testing
No. of bending cycles (C-track)  Traversing distance (C-track)  Travel speed (C-track)  No. of torsion cycles  1 Mio.  Torsion stress  ± 360 °/m	Bending radius (fixed)	5 x Outer diameter
Traversing distance (C-track) 5 m @ 25 °C   horizontal  Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	Bending radius (dynamic)	10 x Outer diameter
Travel speed (C-track) 3,3 m/s @ 25 °C  No. of torsion cycles 1 Mio.  Torsion stress ± 360 °/m	No. of bending cycles (C-track)	10 Mio. @ 25 °C
No. of torsion cycles 1 Mio. Torsion stress $\pm$ 360 $^{\circ}$ /m	Traversing distance (C-track)	5 m @ 25 °C   horizontal
Torsion stress ± 360 °/m	Travel speed (C-track)	3,3 m/s @ 25 °C
	No. of torsion cycles	1 Mio.
Torsion speed 35 cycles/min	Torsion stress	± 360 °/m
	Torsion speed	35 cycles/min