

## M12 male 0° A-cod. / MSUD valve plug C-8mm

PUR 3x0.75 gy UL/CSA+drag ch. 1m

Form C (8 mm) – M12, male straight 24 V AC ±20% / DC ±25% LED and suppression

Further cable lengths on request.

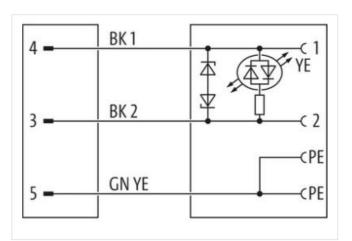
Plastic housings with good resistance against chemicals and oils.

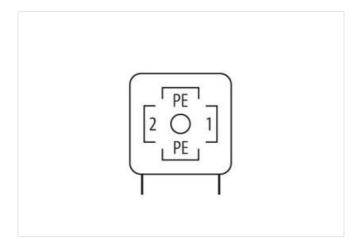
The resistance to aggressive media should be individually tested for your application. Further details on request.

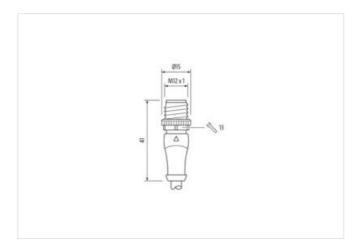
## **Link to Product**

## Illustration



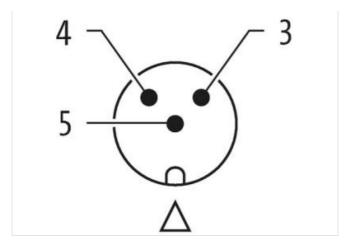


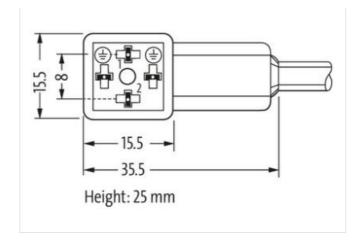






stay connected





Product may differ from Image









Cable length	1 m
Side 1	
Tightening torque	0,6 Nm
Mounting method	inserted, screwed
Family construction form	M12
Thread	M12 x 1
suitable for corrugated tube (internal Ø)	10 mm
Coding	A
No. of poles	3
Width across flats	SW13
Degree of protection (EN IEC 60529)	IP67
Side 2	
Tightening torque	0,4 Nm
Family construction form	MSUD C
Thread	M2.5
No. of poles	4
Degree of protection (EN IEC 60529)	IP67
Commercial data	
ECLASS-6.0	27279218
ECLASS-6.1	27279218
ECLASS-7.0	27279218
ECLASS-8.0	27279218
ECLASS-9.0	27060312
ECLASS-10.1	27060312
ECLASS-11.1	27060312
ECLASS-12.0	27060312
ETIM-5.0	EC001855
customs tariff number	85444290
GTIN	4048879145947
Packaging unit	1
Electrical data	
Capacity CX	20 ms



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Operating voltage AC	24 V
Operating voltage AC min.	19,2 V
Operating voltage AC max.	28,8 V
Operating voltage DC	24 V
Operating voltage DC min.	18 V
Operating voltage DC max.	30 V
Cut-off peak voltage max.	55 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
Rated surge voltage	0,8 kV
Material group (IEC 60664-1)	1
Additional suppressor	Z-Diode Z-Diode
Mechanical data   Material data	
Coating locking	Nickeled
Color housing	black
Material housing	Plastic
ocking material	Zinc die-casting
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 61076-2-101 (M12); DIN EN 175301-803 (Valve Plug)
Installation   Cable	
Cable identification	236
Cable Type	3
Printing color of wire insulation	white (isolation black)
Jacket Color	gray
Type of Certificate	cURus
Amount stranding	1
Stranding	3 wires twisted
wire arrangement	black 1, black 2, green-yellow
Cable weigth	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, silicone-free
Outer-diameter (jacket)	5,9 mm
Tolerance outer diameter (sheath)	± 5 %
Material wire insulation	PP

The information in this Product-PDF has been compiled with the utmost care. Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2024-05-15

Torsion speed



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 (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           Traversing distance (C-track)         10 m @ 25 °C   horizontal           Nominal voltage AC max         300 V           Current load capacity (slandard)         to DIN VDE 0298-4           Current load capacity (slandard)         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 (min. (dynamic)         -25 °C           Operating temperature min. (dynamic)         -26 °C           Flame resistance         UL 1581 § 1900   IEC 60332-2-2   UL 1581 § 1100 FT2		
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           Traversing distance (C-track)         10 m @ 25 °C   horizontal           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 (rise - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire - wire)         2,5 kV @ 60 s           Power frequency withstand voltage (wire) - siacket)         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           Riam resistance         UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2           Chemical r	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  Traversing distance (C-track) 10 m @ 25 °C   horizontal    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 \( \Omega \text{km} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	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           Traversing distance (C-track)         10 m @ 25 °C   horizontal           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 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           Gaodine resistance         Good, application-related testing           Oil resistance         DIN EN 60811-404   Good, application-related testing	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  Traversing distance (C-track) 10 m @ 25 °C   horizontal  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 \(\Omega\text{C}\text{ kV @ 60 s}\)  Power frequency withstand voltage (wire - wire) 2,5 kV @ 60 s  Power frequency withstand voltage (wire - acceptable) 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 UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance DIN EN 60811-404   Good, application-related testing  Bending radius (fixed) 5 × Outer diameter  Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.	Printing color of wire insulation	white (isolation black)
Conductor crosssection (wire)  Material conductor wire  Stranded copper wire, bare  Conductor type (wire)  Strand class 6  Traversing distance (C-track)  10 m @ 25 °C   horizontal  Nominal voltage AC max.  300 V  Current load capacity (standard)  Lo DIN VDE 0298-4  Current load capacity min. wire  12 A  Electrical resistance line constant wire  26 \( \Omega \text{kV} \@ 60 \text{ s} \)  Power frequency 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  Max. operating temperature (fixed)  80 °C / 90 °C @ 10000 h Operation  Operating temperature min. (dynamic)  25 °C  Operating temperature max. (dynamic)  80 °C / 90 °C @ 10000 h Operation  Flame resistance  UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  DIN EN 60811-404   Good, application-related testing  Bending radius (fixed)  5 x Outer diameter  Travel speed (C-track)  10 Mio. @ 25 °C  No. of torsion cycles  2 Mio.	Amount strands (wire)	42
Material conductor wire Stranded copper wire, bare  Conductor type (wire) strand class 6  Traversing distance (C-track) 10 m @ 25 °C   horizontal  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 - ack wire) 2,5 kV @ 60 s  Power frequency withstand voltage (wire - ack 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 UL 1581 § 1990   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Oil resistance DIN EN 60811-404   Good, application-related testing  Bending radius (fixed) 5 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.	Diameter of single wires	0,15 mm
Conductor type (wire)       strand class 6         Traversing distance (C-track)       10 m @ 25 °C   horizontal         Nominal voltage AC max.       300 V         Current load capacity (standard)       to DIN VDE 0298-4         Current load capacity min. wire       12 A         Electrical resistance line constant wire       26 Ω/km @ 20 °C         AC withstand voltage (wire - wire)       2.5 kV @ 60 s         Power frequency withstand voltage (wire - jacket)       2.5 kV @ 60 s         Min. operating temperature (static)       -40 °C         Max. operating temperature (fixed)       80 °C / 90 °C @ 10000 h Operation         Operating temperature min. (dynamic)       -25 °C         Operating temperature max. (dynamic)       80 °C / 90 °C @ 10000 h Operation         Flame resistance       UL 1581 § 1100 FT2         chemical resistance       Good, application-related testing         Gasoline resistance       Good, application-related testing         Gir esistance       DIN EN 60811-404   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.	Conductor crosssection (wire)	0,75 mm <sup>2</sup>
Traversing distance (C-track)  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)  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   EC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  DIN EN 60811-404   Good, application-related testing  Bending radius (fixed)  5 x Outer diameter  Travel speed (C-track)  10 Mio. @ 25 °C  No. of torsion cycles  2 Mio.	Material conductor wire	Stranded copper wire, bare
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)  Min. operating temperature (static)  40 °C  Max. operating temperature (fixed)  Operating temperature min. (dynamic)  -25 °C  Operating temperature max. (dynamic)  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  Oil resistance  DiN EN 60811-404   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.	Conductor type (wire)	strand class 6
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 - ack to the constant wire) 2.5 kV @ 60 s  Min. operating temperature (static) -40 °C  Max. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation  Operating temperature min. (dynamic) -25 °C  Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation  Flame resistance UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Oil resistance DIN EN 60811-404   Good, application-related testing  Bending radius (fixed) 5 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.	Traversing distance (C-track)	10 m @ 25 °C   horizontal
Current load capacity min. wire       12 A         Electrical resistance line constant wire       26 Ω/km @ 20 °C         AC withstand voltage (wire - wire)       2,5 kV @ 60 s         Power frequency withstand voltage (wire - jacket)       2,5 kV @ 60 s         Min. operating temperature (static)       -40 °C         Max. operating temperature (fixed)       80 °C / 90 °C @ 10000 h Operation         Operating temperature min. (dynamic)       -25 °C         Operating temperature max. (dynamic)       80 °C / 90 °C @ 10000 h Operation         Flame resistance       UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2         chemical resistance       Good, application-related testing         Gasoline resistance       Good, application-related testing         Oil resistance       DIN EN 60811-404   Good, application-related testing         Bending radius (fixed)       5 x Outer diameter         Bending radius (dynamic)       10 x Outer diameter         Travel speed (C-track)       10 Mio. @ 25 °C         No. of torsion cycles       2 Mio.	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 - 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  Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.	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)  Min. operating temperature (static)  Max. operating temperature (fixed)  Operating temperature (fixed)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  Operating temperature max. (dynamic)  Elame 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  Travel speed (C-track)  No. of torsion cycles  2,5 kV @ 60 s  2,5 kV @ 60 s  2,5 kV @ 60 s  40 s  Completed to settion  At the set of the set	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)  Elame 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  Travel speed (C-track)  No. of torsion cycles  2,5 kV @ 60 s  2,5 kV @ 60 s  2,5 kV @ 60 s  40 °C  10000 h Operation  Operat	Electrical resistance line constant wire	26 Ω/km @ 20 °C
Min. operating temperature (static)  Max. operating temperature (fixed)  Max. operating temperature (fixed)  Operating temperature min. (dynamic)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  Operating temperature min. (dynamic)  Operating temperature max. (dynamic)	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   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  Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.		2,5 kV @ 60 s
Operating temperature min. (dynamic)  Operating temperature max. (dynamic)  80 °C / 90 °C @ 10000 h Operation  Flame resistance  UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance  Good, application-related testing  Gasoline resistance  Oil resistance  DIN EN 60811-404   Good, application-related testing  Bending radius (fixed)  5 x Outer diameter  Bending radius (dynamic)  10 x Outer diameter  Travel speed (C-track)  10 Mio. @ 25 °C  No. of torsion cycles  2 Mio.	Min. operating temperature (static)	-40 °C
Operating temperature max. (dynamic) 80 °C / 90 °C @ 10000 h Operation  Flame resistance UL 1581 § 1090   IEC 60332-2-2   UL 1581 § 1100 FT2  chemical resistance Good, application-related testing  Gasoline resistance Good, application-related testing  Oil resistance DIN EN 60811-404   Good, application-related testing  Bending radius (fixed) 5 x Outer diameter  Bending radius (dynamic) 10 x Outer diameter  Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.	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  Glood, application-related testing  DIN EN 60811-404   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.	Operating temperature min. (dynamic)	-25 °C
chemical resistance Good, application-related testing Gasoline resistance Good, application-related testing Oil resistance DIN EN 60811-404   Good, application-related testing Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Travel speed (C-track) 10 Mio. @ 25 °C No. of torsion cycles 2 Mio.	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  Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.	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  Travel speed (C-track)  10 Mio. @ 25 °C  No. of torsion cycles  2 Mio.	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.	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.	Oil resistance	DIN EN 60811-404   Good, application-related testing
Travel speed (C-track) 10 Mio. @ 25 °C  No. of torsion cycles 2 Mio.	Bending radius (fixed)	5 x Outer diameter
No. of torsion cycles 2 Mio.	Bending radius (dynamic)	10 x Outer diameter
	Travel speed (C-track)	10 Mio. @ 25 °C
Torsion stress ± 180 °/m	No. of torsion cycles	2 Mio.
	Torsion stress	± 180 °/m

35 cycles/min