

## ÖLFLEX® CHAIN 819 CP 2X1,0

**Article No.:** 1027920

Power and control cable; 2X1; Basic-Line;  $U_0/U$ : 300/500 V; PUR; Core identification: Numbers; Shielded; UL recognized; Cable chain



### Details

#### Benefits

- Durable cable chain use with moderate travel distances or acceleration (LAPP performance class “Basic Line”).
- Ideal protection against electromagnetic interference thanks to copper shielding braiding with a high degree of coverage.
- UL/CSA certification according to technical data enables the product to be used on the North American market.
- Operating voltage of 1000 V according to UL, permitted for North America.
- Product with multiple certifications enables universal use and reduces the variety of parts, thus guaranteeing logistics savings.
- High oil resistance according to DIN EN 50363-4-1 (TM5).

#### Application

- The cable design allows flexible, continuously flexing use in moving machine parts and in the cable chain.
- Especially for environments where electromagnetic compatibility (EMC) is required.
- Can be used in dry interiors.
- Suitable for light to medium mechanical stress.

- The outer jacket made of a special PU mix from LAPP is resistant to many mineral oil-based lubricants, diluted acids, aqueous alkaline solutions and other chemical media.

### Notes

Inductance and operating capacitance are neither defined nor controlled electrical parameters. The specified values were determined by calculation and may deviate due to tolerances.

Unless specified otherwise, the product values shown are rated values at room temperature. You can receive additional values, such as tolerances, upon request if they are available and have been released for publication.

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

The absence of PWIS raw materials does not protect against the potential risk of contamination with substances that interfere with the paint wetting during subsequent handling of the product(s) during transport, storage or further processing after delivery.

If applicable, the prices are solid metal prices without additional charges and VAT. Sales only to business customers.

### Remarks

When used in cable chains: please follow the T3 technical assembly guidelines

Bending cycles and usage parameters: please refer to the A2-1 selection table

### Technical Data

#### General information

Brand	ÖLFLEX®
Product type	Power and control cable
Copper index	237.21 lb/10000 ft
Performance class	Basic-Line

#### Electrical parameters

Nominal voltage	$U_0/U$ : 300/500 V AC rms according to IEC
Rated voltage	1000 V AC rms according to cRU AWM 1000 V AC rms according to UL AWM

Test voltage conductor/conductor	4 kV
Test voltage conductor/shielding	3 kV
Current rating according to	VDE 0298-4

**Product design**

Cable dimension	2X1
Nominal cross section conductor (mm <sup>2</sup> )	1 mm <sup>2</sup>
Nominal cross section conductor (AWG)	18 AWG
Leading conductor cross-section	mm <sup>2</sup>
Conductor material	Bare Copper
Conductor design	IEC 60228 class 5: fine-wire
Including protective ground	No
Number of cores	2
Stranding type	Layered Stranding
Wrapping above stranding	Fleece Wrapping
Shielded	Yes
Type of overall shielding	Tin-plated copper braiding
Nominal outer diameter	0.256 in
Cable form	Round
Core insulation base material	Polyvinylchloride
Conductor insulation basic material, short form	PVC
Basic material of outer jacket	Polyurethane
Base material of outer sheath, shortname	PUR
Outer jacket color	black
Colour outer sheath RAL code	RAL 9005
Core identification	Numbers
Conductor color code	EN 50334 VDE 0293-1

**Product features**

Application area	Cable chain Flexible
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For permanent bending	Yes
For torsional load	Yes
Minimum bending radius, stationary	4 x outer diameter
Minimum bending radius in inch, fixed installation	1.024 in
Minimum bending radius, dynamic continuously flexing	10 x outer diameter
Minimum bending radius in inch, dynamic continuously flexing	2.559 in
Minimum bending radius, occasionally moved	10 x outer diameter
Minimum bending radius in mm, occasionally moved	2.559 in
Maximum bending cycles	5,000,000
Maximum travel distance	32.808 ft
Maximum speed sliding	9.843 ft/s
Maximum speed unsupported	16.404 ft/s
Maximum acceleration	16.404 ft/s <sup>2</sup>
Torsion	For +/- 150 °/m and min. -20 °C up to 2000 Torsion cycles For +/- 150 °/m and min. 5 °C up to 5000 Torsion cycles
Temperature, fixed installation	to 80 °C according to UL AWM to 80 °C according to CSA AWM -40 °C to 80 °C according to IEC
Temperature, fixed installation max	80 °C
Temperature, fixed installation min	-40 °C
Temperature, occasionally moved	-5 °C to 80 °C according to UL AWM -5 °C to 80 °C according to CSA AWM -5 °C to 70 °C according to IEC
Temperature, occasionally moved max	80 °C
Temperature, occasionally moved min	-5 °C
temperature, dynamic permanently moved	-5 °C to 80 °C according to CSA AWM -5 °C to 80 °C according to UL AWM -5 °C to 70 °C according to IEC
temperature, dynamic permanently moved max	80 °C

temperature, dynamic permanently moved min	-5 °C
Flame-retardant	Yes
Flame retardance according to	IEC 60332-1-2 CSA FT2 UL Horizontal Flame Test
UV-resistant	Yes
UV-resistant according to	DIN EN ISO 4892-2 method A
Chemical resistant	Yes
Halogenfree	No
Oil resistant	Yes
Oil resistance according to	EN 50363-4-1: TM5
PWIS-free	Yes
PWIS-free according to	VDMA 24364-B2-L
Low-adhesive jacket surface	Yes

#### Certifications and standards

CE marking	Yes
EAC certified	Yes
EAC certification number	EAЭC N RU Д-DE.АЮ064.В.00130/20
UL recognized	Yes
UL AWM certification	11009 according to UL 758 (e-file number: E63634) 21576 according to UL 758 (e-file number: E63634)
UL listed	No
cUR recognized	Yes
cUR certification	AWM II A according to CSA C22.2 No. 210 (e-file number: E63634) AWM I A according to CSA C22.2 No. 210 (e-file number: E63634) AWM II B according to CSA C22.2 No. 210 (e-file number: E63634) AWM I B according to CSA C22.2 No. 210 (e-file number: E63634)
cUL listed	No
CSA certified	No

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VDE certified	No
DNV-certified	No
Resistance to flame propagation tested according to UN/ECE-R118	No

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**ÖLFLEX® CHAIN 819 CP**

Article No.	Name	Number of cores	Including protective ground	Nominal cross section conductor (mm <sup>2</sup> )	Nominal outer diameter	Copper index
1027900	ÖLFLEX® CHAIN 819 CP 2X0,5	2	No	0.5 mm <sup>2</sup>	0.228 in	151.2 lb/10000 ft
1027901	ÖLFLEX® CHAIN 819 CP 3G0,5	3	Yes	0.5 mm <sup>2</sup>	0.24 in	182.11 lb/10000 ft
1027902	ÖLFLEX® CHAIN 819 CP 4G0,5	4	Yes	0.5 mm <sup>2</sup>	0.26 in	235.86 lb/10000 ft
1027903	ÖLFLEX® CHAIN 819 CP 5G0,5	5	Yes	0.5 mm <sup>2</sup>	0.28 in	289.62 lb/10000 ft
1027904	ÖLFLEX® CHAIN 819 CP 7G0,5	7	Yes	0.5 mm <sup>2</sup>	0.335 in	374.96 lb/10000 ft
1027905	ÖLFLEX® CHAIN 819 CP 12G0,5	12	Yes	0.5 mm <sup>2</sup>	0.394 in	558.41 lb/10000 ft
1027906	ÖLFLEX® CHAIN 819 CP 18G0,5	18	Yes	0.5 mm <sup>2</sup>	0.465 in	806.36 lb/10000 ft
1027907	ÖLFLEX® CHAIN 819 CP 25G0,5	25	Yes	0.5 mm <sup>2</sup>	0.555 in	1149.06 lb/10000 ft
1027910	ÖLFLEX® CHAIN 819 CP 2X0,75	2	No	0.75 mm <sup>2</sup>	0.244 in	204.28 lb/10000 ft
1027911	ÖLFLEX® CHAIN 819 CP 3G0,75	3	Yes	0.75 mm <sup>2</sup>	0.26 in	251.99 lb/10000 ft
1027912	ÖLFLEX® CHAIN 819 CP 4G0,75	4	Yes	0.75 mm <sup>2</sup>	0.28 in	321.87 lb/10000 ft
1027913	ÖLFLEX® CHAIN 819 CP 5G0,75	5	Yes	0.75 mm <sup>2</sup>	0.303 in	370.93 lb/10000 ft
1027914	ÖLFLEX® CHAIN 819 CP 7G0,75	7	Yes	0.75 mm <sup>2</sup>	0.358 in	510.02 lb/10000 ft
1027915	ÖLFLEX® CHAIN 819 CP 12G0,75	12	Yes	0.75 mm <sup>2</sup>	0.429 in	774.78 lb/10000 ft
1027916	ÖLFLEX® CHAIN 819 CP 18G0,75	18	Yes	0.75 mm <sup>2</sup>	0.512 in	1128.9 lb/10000 ft
1027917	ÖLFLEX® CHAIN 819 CP 25G0,75	25	Yes	0.75 mm <sup>2</sup>	0.614 in	1610.03 lb/10000 ft
1027920	ÖLFLEX® CHAIN 819 CP 2X1,0	2	No	1 mm <sup>2</sup>	0.256 in	237.21 lb/10000 ft
1027921	ÖLFLEX® CHAIN 819 CP 3G1,0	3	Yes	1 mm <sup>2</sup>	0.272 in	300.37 lb/10000 ft
1027922	ÖLFLEX® CHAIN 819 CP 4G1,0	4	Yes	1 mm <sup>2</sup>	0.295 in	387.73 lb/10000 ft
1027923	ÖLFLEX® CHAIN 819 CP 5G1,0	5	Yes	1 mm <sup>2</sup>	0.327 in	472.39 lb/10000 ft
1027924	ÖLFLEX® CHAIN 819 CP 7G1,0	7	Yes	1 mm <sup>2</sup>	0.386 in	622.91 lb/10000 ft
1027925	ÖLFLEX® CHAIN 819 CP 12G1,0	12	Yes	1 mm <sup>2</sup>	0.461 in	999.21 lb/10000 ft
1027926	ÖLFLEX® CHAIN 819 CP 18G1,0	18	Yes	1 mm <sup>2</sup>	0.551 in	1505.87 lb/10000 ft
1027927	ÖLFLEX® CHAIN 819 CP 25G1,0	25	Yes	1 mm <sup>2</sup>	0.657 in	2012.53 lb/10000 ft
1027930	ÖLFLEX® CHAIN 819 CP 2X1,5	2	No	1.5 mm <sup>2</sup>	0.28 in	321.87 lb/10000 ft
1027931	ÖLFLEX® CHAIN 819 CP 3G1,5	3	Yes	1.5 mm <sup>2</sup>	0.295 in	419.98 lb/10000 ft
1027932	ÖLFLEX® CHAIN 819 CP 4G1,5	4	Yes	1.5 mm <sup>2</sup>	0.331 in	537.57 lb/10000 ft
1027933	ÖLFLEX® CHAIN 819 CP 5G1,5	5	Yes	1.5 mm <sup>2</sup>	0.358 in	655.17 lb/10000 ft
1027934	ÖLFLEX® CHAIN 819 CP 7G1,5	7	Yes	1.5 mm <sup>2</sup>	0.429 in	871.54 lb/10000 ft
1027935	ÖLFLEX® CHAIN 819 CP 12G1,5	12	Yes	1.5 mm <sup>2</sup>	0.524 in	1417.84 lb/10000 ft

Article No.	Name	Number of cores	Including protective ground	Nominal cross section conductor (mm <sup>2</sup> )	Nominal outer diameter	Copper index
1027936	ÖLFLEX® CHAIN 819 CP 18G1,5	18	Yes	1.5 mm <sup>2</sup>	0.618 in	2143.56 lb/10000 ft
1027937	ÖLFLEX® CHAIN 819 CP 25G1,5	25	Yes	1.5 mm <sup>2</sup>	0.736 in	2876.67 lb/10000 ft
1027940	ÖLFLEX® CHAIN 819 CP 3G2,5	3	Yes	2.5 mm <sup>2</sup>	0.354 in	654.5 lb/10000 ft
1027941	ÖLFLEX® CHAIN 819 CP 4G2,5	4	Yes	2.5 mm <sup>2</sup>	0.398 in	838.61 lb/10000 ft
1027942	ÖLFLEX® CHAIN 819 CP 7G2,5	7	Yes	2.5 mm <sup>2</sup>	0.531 in	1387.61 lb/10000 ft
1027943	ÖLFLEX® CHAIN 819 CP 12G2,5	12	Yes	2.5 mm <sup>2</sup>	0.638 in	2335.07 lb/10000 ft
1027944	ÖLFLEX® CHAIN 819 CP 5G2,5	5	Yes	2.5 mm <sup>2</sup>	0.441 in	999.21 lb/10000 ft
1027950	ÖLFLEX® CHAIN 819 CP 4G4	4	Yes	4 mm <sup>2</sup>	0.469 in	1256.57 lb/10000 ft
1027952	ÖLFLEX® CHAIN 819 CP 4G10	4	Yes	10 mm <sup>2</sup>	0.717 in	3037.95 lb/10000 ft
1027955	ÖLFLEX® CHAIN 819 CP 4G16	4	Yes	16 mm <sup>2</sup>	0.839 in	4700.38 lb/10000 ft
1027957	ÖLFLEX® CHAIN 819 CP 4G25	4	Yes	25 mm <sup>2</sup>	1.035 in	7136.91 lb/10000 ft

V1.1