

# ÖLFLEX-FD® 90

Catalogue Page 132

The powerful single core cable with AWG/MCM core sizes, UL/CSA-approved CE-conform

## Info

see also:  
[Technical Data](#)  
[Part Number List](#)

For the European +  
North American  
market



## Application

ÖLFLEX-FD® 90 is a highly flexible single core cable for working voltages of up to 600 V, and for a temperature range of up to +90 °C. This UL- and CSA-approved cable is especially suitable for power circuits as external connection lines, or for internal wiring of electric and electronic equipment in machine tools devices, production plants, conveyor lines, auto body presses, etc. in industrial environments.

## Special Feature

The high resistance to cooling lubricants, to mineral oils, to synthetic oils (improved oil resistance to VDE 0472 T.803), as well as the high flame resistance to CSA FT1 and IEC 332.1 make this cable extremely suitable for applications in the automotive industry. The approval up to 600 V allows parallel laying together with other cables carrying working voltages of up to 600 V. Thus it is unnecessary in most cases to use two different conduits.

## Note

More cables with UL/CSA approval can be found in this catalog under the following names:

- ÖLFLEX® 150/150 CY QUATTRO [Page 68](#)
- ÖLFLEX® 190/190 CY [Page 71](#)
- ÖLFLEX-FD® 890/890 CY [Page 133](#)
- Wiring cable UL + CSA [Page 205](#)

The product conforms to EEC directive 73/23 (Low Voltage Directive) CE.

When ordering please state which core colour code and outer sheath colour you require.

## Cable Make-up

Superfine wire strands of plain copper wire to UL strand-class K, core insulation based on special PVC, core identification code according to table or to client specification (colour). Outer sheath on special PVC basis, improved oil-resistance, flame-retardant to UL AWM FT1 and IEC 332.1. Sheath colour black, grey or green/yellow.

# ÖLFLEX-FD® 90

Catalogue Page 132

The powerful single core cable with AWG/MCM core sizes, UL/CSA-approved CE-conform

## Part Number List

see also:  
[Technical Data](#)  
[Information](#)

For the European +  
North American  
market

Part Number	Conductor cross-section in mm <sup>2</sup>	Conductor cross-section AWG/MCM	Cores colour	Approx. outside diameter in mm max.	Copperweight kg/km	Approx. weight kg/km
<b>ÖLFLEX-FD 90</b>						
<a href="#">0026 600 R+T</a>	10	8	gn/ge	10	96	176
<a href="#">0026 601 R+T</a>	10	8	black	10	96	176
<a href="#">0026 603 R+T</a>	16	6	gn/ge	10,8	153,6	240
<a href="#">0026 604 R+T</a>	16	6	black	10,8	153,6	240
<a href="#">0026 607 T</a>	25	4	gn/ge	12,8	240	361
<a href="#">0026 608 T</a>	25	4	black	12,8	240	361
<a href="#">0026 610 T</a>	35	2	gn/ge	15	336	482
<a href="#">0026 611 T</a>	35	2	black	15	336	482
<a href="#">0026 613 T</a>	50	1	gn/ge	16,9	480	660
<a href="#">0026 614 T</a>	50	1	black	16,9	480	660
<a href="#">0026 616 T</a>	70	0	gn/ge	18,7	672	898
<a href="#">0026 617 T</a>	70	0	black	18,7	672	898
<a href="#">0026 619 T</a>	95	3/0	gn/ge	20,3	912	1179
<a href="#">0026 620 T</a>	95	3/0	black	20,3	912	1179
<a href="#">0026 622 T</a>	120	4/0	gn/ge	23,8	1152	1521
<a href="#">0026 623 T</a>	120	4/0	black	23,8	1152	1521
<a href="#">0026 625 T</a>	150	250	gn/ge	25,2	1341,1	1739
<a href="#">0026 626 T</a>	150	250	black	25,2	1341,1	1739

<a href="#">0026 628 T</a>	185	300	gn/ge	26,4	1440	2305
<a href="#">0026 629 T</a>	185	300	black	26,4	1440	2305
<a href="#">0026 634 T</a>	240	400	gn/ge	31,5	1920	2527
<a href="#">0026 635 T</a>	240	400	black	31,5	1920	2527
<a href="#">0026 640 T</a>	300	500	gn/ge	34,4	2671,6	3387
<a href="#">0026 641 T</a>	300	500	black	34,4	2671,6	3387

R = Coils up to 30 kg, T = Drums

No surplus sectioning for the length: 50m, 100m, 500m, 1000m

LAPPKABEL recommendation: Handle FD cable on drums until you are ready to install them.

# ÖLFLEX-FD® 90

Catalogue Page 132

The powerful single core cable with AWG/MCM core sizes, UL/CSA-approved CE-conform

## Technical Data

see also:  
[Information](#)  
[Part Number List](#)

For the European +  
North American  
market



Approval:  
UL-Style 10107  
CSA AWM IA/B FT 1



Conductor stranding:  
super fine wire



Core ident code:  
black cores; other colours on request



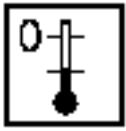
Insulation: specific insulation resistance:  
> 20 GOhm x cm



Minimum bending radius for  
flexing: 10 x cable diameter  
static: 5 x cable diameter



Nominal voltage U<sub>0</sub>/U:  
VDE: 300/500 V  
UL & CSA: 600 V



Temperature range:  
flexing: -5 °C to +90 °C  
static: -40 °C to +90 °C



Test voltage:  
3000 V

# ÖLFLEX-FD® 891

Catalogue Page 133

Highly flexible cable for power chains with UL and CSA approval for the European and North American market

## Info

see also:  
[Technical Data](#)  
[Part Number List](#)

UL and CSA approved  
CE-conform



## Application

ÖLFLEX-FD® 891/891 CY -highly flexible power chain cable of the ÖLFLEX-FD® series, with UL and CSA-AWM approvals for the European and North American market. For internal and external wiring of electrical and electronic equipment under medium mechanical stresses in dry and damp interiors; for outdoor applications the temperature range must be observed. The PVC-compound sheath of improved oil resistance permits use of the cable particularly under industrial conditions, such as machine tools, car body presses, in machine components of transfer lines or production plant, at nominal voltage range to UL and CSA: 600 V; to IEC-Standards UoU: 300/500 V. Max. permitted temperature at the conductor: + 90°C.

## Special Feature

ÖLFLEX-SERVO-FD® 891 is ideal for the export-oriented machine tool, plant and appliance manufacturing industry, and features the essential characteristics: designed for up to 5 million bending change cycles in the power chain. UL and CSA approvals, CE-conformity, oil-resistant and flame-retardant. The use of only one cable also saves costs in documentation, procurement, stockholding and spare parts supply. The cable is free from substances harmful to lacquer. The 600 V approval according to UL permits parallel installation with other cables which also carry an operating voltage of up to 600 V.

## Note

Please observe the assembly guidelines for ÖLFLEX-FD® cables in power chains. Details of further UL and/or CSA approved cables can be found under the following product designations:

- ÖLFLEX® 150/150 CY QUATTRO [page 68](#)
- ÖLFLEX® 190/190 CY Seite 71
- ÖLFLEX-SERVO-FD® 790 CP [page 118](#)
- ÖLFLEX-FD® 90 [page 132](#)
- ÖLFLEX-FD® 890 P/-890 CP [page 135](#)
- Multinorm wiring single core [page 205](#)
- UNITRONIC® UL/CSA [page 285](#)

This product conforms to EC Directive 73/23 (Low Voltage Directive) CE.

# ÖLFLEX-FD® 891

Catalogue Page 133

Highly flexible cable for power chains with UL and CSA approval for the European and North American market

## Part Number List

see also:  
[Technical Data](#)  
[Information](#)

UL and CSA approved  
CE-conform

Part Number	No. of cores and mm <sup>2</sup> per conductor	Conductor cross-section AWG	Approx. Outside diameter in mm max.	Copperweight kg/km	Approx. weight kg/km
<b>ÖLFLEX-FD 891</b>					
<a href="#">1026 003 R+T</a>	3	20 AWG (0,5 mm <sup>2</sup> )	6,7	14,4	52
<a href="#">1026 004 R+T</a>	4	20 AWG (0,5 mm <sup>2</sup> )	7,4	19,2	67
<a href="#">1026 005 R+T</a>	5	20 AWG (0,5 mm <sup>2</sup> )	8	24	82
<a href="#">1026 007 R+T</a>	7	20 AWG (0,5 mm <sup>2</sup> )	9,6	33,6	121
<a href="#">1026 012 R+T</a>	12	20 AWG (0,5 mm <sup>2</sup> )	11,4	57,6	170
<a href="#">1026 018 R+T</a>	18	20 AWG (0,5 mm <sup>2</sup> )	13,6	86,4	256
<a href="#">1026 025 T</a>	25	20 AWG (0,5 mm <sup>2</sup> )	16,3	120	357
<a href="#">1026 103 R+T</a>	3	18 AWG (0,75 mm <sup>2</sup> )	7,1	21,6	62
<a href="#">1026 104 R+T</a>	4	18 AWG (0,75 mm <sup>2</sup> )	7,9	28,8	81
<a href="#">1026 105 R+T</a>	5	18 AWG (0,75 mm <sup>2</sup> )	8,6	36	100
<a href="#">1026 107 R+T</a>	7	18 AWG (0,75 mm <sup>2</sup> )	10,3	50,4	148
<a href="#">1026 112 R+T</a>	12	18 AWG (0,75 mm <sup>2</sup> )	12,4	86,5	215
<a href="#">1026 118 T</a>	18	18 AWG (0,75 mm <sup>2</sup> )	14,8	129,6	313
<a href="#">1026 125 T</a>	25	18 AWG (0,75 mm <sup>2</sup> )	17,7	180	449
<a href="#">1026 303 R+T</a>	3	16 AWG (1,5 mm <sup>2</sup> )	8	43,2	93
<a href="#">1026 304 R+T</a>	4	16 AWG (1,5 mm <sup>2</sup> )	9,1	57,6	125
<a href="#">1026 305 R+T</a>	5	16 AWG (1,5 mm <sup>2</sup> )	9,9	72	155
<a href="#">1026 307 R+T</a>	7	16 AWG (1,5 mm <sup>2</sup> )	11,9	100,8	228

<a href="#">1026 312 T</a>	12	16 AWG (1,5 mm <sup>2</sup> )	14,3	172,8	337
<a href="#">1026 318 T</a>	18	16 AWG (1,5 mm <sup>2</sup> )	17,4	259,2	513
<a href="#">1026 325 T</a>	25	16 AWG (1,5 mm <sup>2</sup> )	20,7	360	712
<a href="#">1026 334 T</a>	34	16 AWG (1,5 mm <sup>2</sup> )	23,7	489,6	965
<a href="#">1026 952 R+T</a>	2	14 AWG (2,5 mm <sup>2</sup> )	8,8	48	103
<a href="#">1026 403 R+T</a>	3	14 AWG (2,5 mm <sup>2</sup> )	9,6	72	140
<a href="#">1026 404 R+T</a>	4	14 AWG (2,5 mm <sup>2</sup> )	10,9	96	194
<a href="#">1026 405 R+T</a>	5	14 AWG (2,5 mm <sup>2</sup> )	11,9	120	234
<a href="#">1026 407 T</a>	7	14 AWG (2,5 mm <sup>2</sup> )	14,5	168	350
<a href="#">1026 412 T</a>	12	14 AWG (2,5 mm <sup>2</sup> )	17,4	288	519
<a href="#">1026 503 R+T</a>	3	12 AWG (4,0 mm <sup>2</sup> )	11,2	115,2	204
<a href="#">1026 504 R+T</a>	4	12 AWG (4,0 mm <sup>2</sup> )	12,6	153,6	273
<a href="#">1026 505 T</a>	5	12 AWG (4,0 mm <sup>2</sup> )	14,1	192	348
<a href="#">1026 507 T</a>	7	12 AWG (4,0 mm <sup>2</sup> )	17,1	268,8	505
<a href="#">1026 604 T</a>	4	10 AWG (6,0 mm <sup>2</sup> )	14,6	230,4	631
<a href="#">1026 614 T</a>	4	8 AWG (10,0 mm <sup>2</sup> )	18,4	384	800
<a href="#">1026 624 T</a>	4	6 AWG (16,0 mm <sup>2</sup> )	23,7	614,4	1032
<a href="#">1026 634 T</a>	4	4 AWG (25,0 mm <sup>2</sup> )	27,7	960	1497
<a href="#">1026 644 T</a>	4	2 AWG (35,0 mm <sup>2</sup> )	32,8	1344	2098

R = Coils up to 30 kg, T = Drums

No surplus sectioning for the length: 50m, 100m, 500m, 1000m

LAPPKABEL recommendation: Handle FD cable on drums until you are ready to install them.



# ÖLFLEX-FD® 891

Catalogue Page 133

Highly flexible cable for power chains with UL and CSA approval for the European and North American market

## Technical Data

see also:  
[Information](#)  
[Part Number List](#)

UL and CSA approved  
CE-conform



Approval:  
UL-AWM-Style 2587  
CSA AWM IA/B; IIA/B FT 1



Conductor stranding:  
super fine wire to VDE 0295, class 6 / IEC 228 Cl.6



Core ident code:  
black cores with white numbers (VDE 0293)



In accordance to:  
VDE 0245, 0250, 0281



Insulation: specific insulation resistance:  
> 20 GOhm x cm



Minimum bending radius for  
flexing: 7,5 x cable diameter  
static: 4 x cable diameter



Nominal voltage  $U_0/U$ :  
IEC: 300/500 V  
UL & CSA: 600 V



Protective conductor:  
G = GNYE  
X = without



Temperature range:  
flexing: -5 °C to +90 °C  
static: -30 °C to +90 °C



Test voltage:  
4000 V

# ÖLFLEX-FD® 891 CY

Catalogue Page 133

Highly flexible cable for power chains with UL and CSA approval for the European and North American market

## Info

see also:  
[Technical Data](#)  
[Part Number List](#)

UL and CSA approved  
CE-conform



## Application

ÖLFLEX-FD® 891/891 CY -highly flexible power chain cable of the ÖLFLEX-FD® series, with UL and CSA-AWM approvals for the European and North American market. For internal and external wiring of electrical and electronic equipment under medium mechanical stresses in dry and damp interiors; for outdoor applications the temperature range must be observed. The PVC-compound sheath of improved oil resistance permits use of the cable particularly under industrial conditions, such as machine tools, car body presses, in machine components of transfer lines or production plant, at nominal voltage range to UL and CSA: 600 V; to IEC-Standards UoU: 300/500 V. Max. permitted temperature at the conductor: + 90°C.

## Special Feature

ÖLFLEX-SERVO-FD® 891 is ideal for the export-oriented machine tool, plant and appliance manufacturing industry, and features the essential characteristics: designed for up to 5 million bending change cycles in the power chain. UL and CSA approvals, CE-conformity, oil-resistant and flame-retardant. The use of only one cable also saves costs in documentation, procurement, stockholding and spare parts supply. The cable is free from substances harmful to lacquer. The 600 V approval according to UL permits parallel installation with other cables which also carry an operating voltage of up to 600 V.

## Note

Please observe the assembly guidelines for ÖLFLEX-FD® cables in power chains. Details of further UL and/or CSA approved cables can be found under the following product designations:

- ÖLFLEX® 150/150 CY QUATTRO [page 68](#)
- ÖLFLEX® 190/190 CY Seite 71
- ÖLFLEX-SERVO-FD® 790 CP [page 118](#)
- ÖLFLEX-FD® 90 [page 132](#)
- ÖLFLEX-FD® 890 P/-890 CP [page 135](#)
- Multinorm wiring single core [page 205](#)
- UNITRONIC® UL/CSA [page 285](#)

This product conforms to EC Directive 73/23 (Low Voltage Directive) CE.

# ÖLFLEX-FD® 891 CY

Catalogue Page 133

Highly flexible cable for power chains with UL and CSA approval for the European and North American market

## Part Number List

see also:  
[Technical Data](#)  
[Information](#)

UL and CSA approved  
CE-conform

Part Number	Conductor cross-section in mm <sup>2</sup>	Conductor cross-section AWG	Approx. Outside diameter in mm max.	Copperweight kg/km	Approx. weight kg/km
<b>ÖLFLEX-FD 891 CY</b>					
<a href="#">1027 003 R+T</a>	3	0,5mm <sup>2</sup> /AWG20	8,8	39,1	100
<a href="#">1027 004 R+T</a>	4	0,5mm <sup>2</sup> /AWG20	9	47,3	121
<a href="#">1027 005 R+T</a>	5	0,5mm <sup>2</sup> /AWG20	9,6	55,3	142
<a href="#">1027 007 R+T</a>	7	0,5mm <sup>2</sup> /AWG20	11,5	81,1	200
<a href="#">1027 012 R+T</a>	12	0,5mm <sup>2</sup> /AWG20	13,4	114,7	280
<a href="#">1027 018 T</a>	18	0,5mm <sup>2</sup> /AWG20	15,9	160,1	403
<a href="#">1027 025 T</a>	25	0,5mm <sup>2</sup> /AWG20	18,5	203,9	533
<a href="#">1027 103 R+T</a>	3	0,75mm <sup>2</sup> /AWG18	8,7	49,2	115
<a href="#">1027 104 R+T</a>	4	0,75mm <sup>2</sup> /AWG18	9,5	59,9	141
<a href="#">1027 105 R+T</a>	5	0,75mm <sup>2</sup> /AWG18	10,5	68,6	169
<a href="#">1027 107 T</a>	7	0,75mm <sup>2</sup> /AWG18	12,2	91,7	235
<a href="#">1027 112 T</a>	12	0,75mm <sup>2</sup> /AWG18	14,6	152,1	346
<a href="#">1027 118 T</a>	18	0,75mm <sup>2</sup> /AWG18	17,1	204,4	470
<a href="#">1027 125 T</a>	25	0,75mm <sup>2</sup> /AWG18	20,3	295	678
<a href="#">1027 303 R+T</a>	3	1,5mm <sup>2</sup> /AWG16	9,8	74,8	158
<a href="#">1027 304 R+T</a>	4	1,5mm <sup>2</sup> /AWG16	11	94,2	201
<a href="#">1027 305 R+T</a>	5	1,5mm <sup>2</sup> /AWG16	11,8	101,1	227
<a href="#">1027 307 T</a>	7	1,5mm <sup>2</sup> /AWG16	14	165,6	349

<a href="#">1027 312 T</a>	12	1,5mm <sup>2</sup> /AWG16	16,6	246,5	489
<a href="#">1027 318 T</a>	18	1,5mm <sup>2</sup> /AWG16	20	374,7	740
<a href="#">1027 325 T</a>	25	1,5mm <sup>2</sup> /AWG16	23,3	489,4	981
<a href="#">1027 334 T</a>	34	1,5mm <sup>2</sup> /AWG16	26,9	663,3	1321
<a href="#">1027 403 R+T</a>	3	2,5mm <sup>2</sup> /AWG14	11,5	103,9	214
<a href="#">1027 404 T</a>	4	2,5mm <sup>2</sup> /AWG14	12,7	161,8	334
<a href="#">1027 405 T</a>	5	2,5mm <sup>2</sup> /AWG14	13,9	184,6	354
<a href="#">1027 407 T</a>	7	2,5mm <sup>2</sup> /AWG14	16,8	242,1	503
<a href="#">1027 412 T</a>	12	2,5mm <sup>2</sup> /AWG14	20	403,5	746
<a href="#">1027 503 R+T</a>	3	4,0mm <sup>2</sup> /AWG12	13	157,5	296
<a href="#">1027 504 T</a>	4	4,0mm <sup>2</sup> /AWG12	14,8	218,1	404
<a href="#">1027 505 T</a>	5	4,0mm <sup>2</sup> /AWG12	16,4	266,4	498
<a href="#">1027 507 T</a>	7	4,0mm <sup>2</sup> /AWG12	19,5	373,2	717
<a href="#">1027 604 T</a>	4	6,0mm <sup>2</sup> /AWG10	16,9	304,7	541
<a href="#">1027 614 T</a>	4	10mm <sup>2</sup> /AWG8	21,4	500,9	881
<a href="#">1027 624 T</a>	4	16mm <sup>2</sup> /AWG6	26,9	803,6	1405
<a href="#">1027 634 T</a>	4	25mm <sup>2</sup> /AWG4	31,6	1180,4	1991
<a href="#">1027 644 T</a>	4	35mm <sup>2</sup> /AWG2	36,2	1593,7	2667

R = Coils up to 30 kg, T = Drums

No surplus sectioning for the length: 50m, 100m, 500m, 1000m

LAPPKABEL recommendation: Handle FD cable on drums until you are ready to install them.

# ÖLFLEX-FD® 891 CY

Catalogue Page 133

Highly flexible cable for power chains with UL and CSA approval for the European and North American market

## Technical Data

see also:  
[Information](#)  
[Part Number List](#)

UL and CSA approved  
CE-conform



Approval:  
UL-AWM-Style 2587  
CSA AWM IA/B; IIA/B FT 1



Conductor stranding:  
super fine wire to VDE 0295, class 6 / IEC 228 Cl.6



Core ident code:  
black cores with white numbers (VDE 0293)



In accordance to:  
VDE 0245, 0250, 0281



Insulation: specific insulation resistance:  
> 20 GOhm x cm



Minimum bending radius for  
flexing: 7,5 x cable diameter  
static: 4 x cable diameter



Nominal voltage  $U_0/U$ :  
IEC: 300/500 V  
UL & CSA: 600 V



Protective conductor:  
G = GNYE  
X = without



Temperature range:  
flexing: -5 °C to +90 °C  
static: -30 °C to +90 °C



Test voltage:  
4000 V

# ÖLFLEX-FD® 890 P

Catalogue Page 135

Notch resistant, robust, superfine wire control cable with or without complete screening, approved by UL/CSA

## Info

see also:  
[Technical Data](#)  
[Part Number List](#)

Now for the European market



### Application

ÖLFLEX-FD® 890 P/-890 CP, the highly flexible power chain cable of the ÖLFLEX-FD® series, approved by UL/CSA for the European and North American market. Typical applications include machine-tool manufacture, conveyor equipment, air conditioning equipment, data processing, etc. For internal or external wiring of electric and electronic devices, under light to medium stresses, in dry and damp rooms, but not outdoors.

### Special Feature

This ÖLFLEX® product is characterized by its highly improved stability which in turn increases productive machine time. One power chain cable with both UL and CSA approvals. AWG cross-sections, working voltage 600 V, maximum permitted temperature at the conductor 90 °C, sheath material has improved oil-resistance - the ideal power chain cable for any export-oriented plant and machine manufacturer. Flame-retardant to CSA FT1 and IEC 332.1. The approval up to 600 V enables the cables to be laid in parallel with other cables of the same working voltage up to 600 V. Thus it is often unnecessary to use a second conduit for our product. UL/CSA approvals: core style: UL 10012 sheath style: UL 200232

### Note

Please observe the installation guidelines for ÖLFLEX-FD® cables in power chains, appendix T3. The polyurethane used is flame-retardant to IEC 332.1.

The product conforms to EEC directive 73/23 (Low Voltage Directive) CE.

### Cable Make-up

#### ÖLFLEX-FD® 890 P

Superfine strands of plain copper wires, core insulation of PVC compound, cores black with white numbers, cores twisted in layers in short lay lengths, one core marked green-yellow as protective conductor, wrapping on each layer, outer sheath of special compound based on polyurethane resistant to microbes and hydrolysis, adhesion-free, silver-grey (RAL 7001)



# ÖLFLEX-FD® 890 P

Catalogue Page 135

Notch resistant, robust, superfine wire control cable with or without complete screening, approved by UL/CSA

## Part Number List

see also:  
[Technical Data](#)  
[Information](#)

Now for the European market

Part Number	No. of cores and mm <sup>2</sup> per conductor	AWG	Approx. Outside diameter in mm max.	Copperweight kg/km	Approx. weight kg/km
<b>ÖLFLEX-FD® 890 P</b>					
<a href="#">3022 112 T</a>	3 G 0,5	AWG 20	7,0	16	46
<a href="#">3022 113 T</a>	4 G 0,5	AWG 20	8,0	21	58
<a href="#">3022 114 T</a>	5 G 0,5	AWG 20	9,0	26	72
<a href="#">3022 115 T</a>	7 G 0,5	AWG 20	10,0	37	104
<a href="#">3022 116 T</a>	12 G 0,5	AWG 20	12,0	53	156
<a href="#">3022 117 T</a>	18 G 0,5	AWG 20	14,0	95	226
<a href="#">3022 118 T</a>	25 G 0,5	AWG 20	17,0	132	315
<a href="#">3022 119 T</a>	34 G 0,5	AWG 20	19,0	189	405
<a href="#">3022 120 T</a>	3 G 0,75	AWG 18	7,0	25	68
<a href="#">3022 121 T</a>	4 G 0,75	AWG 18	8,0	33	89
<a href="#">3022 122 T</a>	5 G 0,75	AWG 18	9,0	42	110
<a href="#">3022 123 T</a>	7 G 0,75	AWG 18	10,0	58	152
<a href="#">3022 124 T</a>	12 G 0,75	AWG 18	13,0	98	236
<a href="#">3022 125 T</a>	18 G 0,75	AWG 18	14,0	123	301
<a href="#">3022 126 T</a>	25 G 0,75	AWG 18	15,0	147	345
<a href="#">3022 127 T</a>	34 G 0,75	AWG 18	18,0	205	501
<a href="#">3022 128 T</a>	40 G 0,75	AWG 18	20,0	278	646

<a href="#">3022 129 T</a>	3 G 1,5	AWG 16	9,0	44	88
<a href="#">3022 130 T</a>	4 G 1,5	AWG 16	10,0	53	118
<a href="#">3022 131 T</a>	5 G 1,5	AWG 16	10,0	66	140
<a href="#">3022 132 T</a>	7 G 1,5	AWG 16	13,0	93	202
<a href="#">3022 133 T</a>	12 G 1,5	AWG 16	15,0	159	312
<a href="#">3022 134 T</a>	18 G 1,5	AWG 16	18,0	238	455
<a href="#">3022 135 T</a>	25 G 1,5	AWG 16	23,0	330	636
<a href="#">3022 136 T</a>	34 G 1,5	AWG 16	24,0	450	856
<a href="#">3022 137 T</a>	50 G 1,5	AWG 16	29,0	660	1258
<a href="#">3022 138 T</a>	60 G 1,5	AWG 16	32,0	791	1534
<a href="#">3022 139 T</a>	4 G 2,5	AWG 14	11,0	84	155
<a href="#">3022 140 T</a>	7 G 2,5	AWG 14	15,0	147	295
<a href="#">3022 141 T</a>	4 G 4,0	AWG 12	14,0	133	264
<a href="#">3022 142 T</a>	7 G 4,0	AWG 12	19,0	233	343
<a href="#">3022 143 T</a>	4 G 6,0	AWG 10	16,0	203	371
<a href="#">3022 144 T</a>	4 G 10,0	AWG 8	20,0	323	620

G = with protective conductor, All prices on request. No regular on stock.

# ÖLFLEX-FD® 890 P

Catalogue Page 135

Notch resistant, robust, superfine wire control cable with or without complete screening, approved by UL/CSA

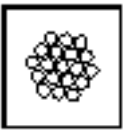
## Technical Data

see also:  
[Information](#)  
[Part Number List](#)

Now for the European market



Approval:  
core style: UL 10012  
sheath style: UL 20234



Conductor stranding:  
superfine wire



Core ident code:  
black cores with white numbers (VDE 0293)



Insulation: specific insulation resistance:  
> 20 GOhm x cm



Minimum bending radius for flexing: 7,5 x cable diameter



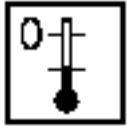
Nominal voltage U<sub>0</sub>/U:  
UL + CSA: 600 V  
VDE: U<sub>0</sub>/U: 300/500 V



Protective conductor:

G = GNYE

X = without



Temperature range:

static: -40 °C to +70 °C

flexing: -5 °C to +70 °C



Test voltage:

3000 V

# ÖLFLEX-ROBOT® 900 P

Catalogue Page 137

The robot cable. Screened versions identified with DP

## Info

see also:  
[Technical Data](#)  
[Part Number List](#)

**Bending and Torsion**



### Application

This special cable handles the transmission of control and monitoring signals as well as power supply in any installation where combined torsion and bending stresses occur. It is therefore suitable for connecting handling tools to assembly and welding robots and to manipulators; for connection to rotating or tilting tables or in installations, in which it is not possible through design, for any defined cable runs to occur (such as power chains).

### Special Feature

The high quality, smooth core insulation and the slip-wrapping improves the working life when there are torsional and bending stresses. The outer sheath is of special polyurethane compound and has enhanced oil-resistance, is abrasion and notch resistant, microbe and hydrolysis resistant and flame-retardant. Its surface properties prevent adjoining moving cables sticking to it.

### Note

Our FD cables are intended for use in power chains (see Selection table A 2). The product conforms to EEC directive 73/23 (Low Voltage Directive) CE.

### Cable Make-up

Fine to superfine strands of plain copper wire, core insulation TPE-E, for core coding see Technical Data, cores (or core pairs) twisted in layers, slip-wrapping. Screen version (DP): layer of tinned copper wires, outer sheath of special polyurethane compound, black (RAL 7016), flame-retardant.

# ÖLFLEX-ROBOT® 900 P

Catalogue Page 137

The robot cable. Screened versions identified with DP

## Part Number List

see also:  
[Technical Data](#)  
[Information](#)

**Bending and Torsion**

Part Number	No. of cores and mm <sup>2</sup> per conductor	Approx. Outside diameter in mm max.	Copperweight kg/km	Approx. weight kg/km
<b>ÖLFLEX-ROBOT® 900 P</b>				
<a href="#">0028 105 R+T</a>	3 x 2 x 0,14 DP	5,9	17	44
<a href="#">0028 100 R+T</a>	12 x 0,14 DP	6,7	42,5	69
<a href="#">0028 110 R+T</a>	7 x 0,25	6,2	16,8	48
<a href="#">0028 116 R+T</a>	25 x 0,25	10,2	60	141
<a href="#">0028 126 R+T</a>	25 x 0,25 DP	11,1	103,5	183
<a href="#">0028 188 R+T</a>	2 x 0,34	5	7	27
<a href="#">0028 135 R+T</a>	4 x 0,34	5,7	21,3	46
<a href="#">0028 136 R+T</a>	5 x 2 x 0,34 DP	9,1	64,4	114
<a href="#">0028 145 R+T</a>	18 G 0,5	11,2	84,6	120
<a href="#">0028 146 R+T</a>	25 G 0,5	13,3	120	254
<a href="#">0028 160 R+T</a>	4 G 0,75	6,6	28,8	63
<a href="#">0028 164 R+T</a>	14 G 0,75	11,4	100,8	199
<a href="#">0028 170 R+T</a>	2 X 1,0	6,2	19,2	47
<a href="#">0028 171 R+T</a>	3 G 1,0	6,5	29	61
<a href="#">0028 172 R+T</a>	4 G 1,0	7,2	38,4	76

<a href="#">0028 174 R+T</a>	7 G 1,0	9,3	67,2	131
<a href="#">0028 176 R+T</a>	12 G 1,0	11,5	115,2	216
<a href="#">0028 185 T</a>	16 G 1,0 + (2 x 1 DP) P	16,5	195	376
<a href="#">0028 178 T</a>	18 G 1,0	13,2	172,8	304
<a href="#">0028 186 T</a>	23 G 1,0 + (2 x 1 DP) P	17,3	262	470
<a href="#">0028 180 T</a>	25 G 1,0	16,4	240	433
<a href="#">0028 190 T</a>	34 G 1,0	18,9	326,4	565
<a href="#">0028 191 T</a>	41 G 1,0	21,4	393,6	696
<a href="#">0028 198 T</a>	18 G 1,5	15,8	259,2	446
<a href="#">0028 200 T</a>	25 G 1,5	19,7	360	638
<a href="#">0028 181 R+T</a>	3 G 2,5	9,3	72	136
<a href="#">0028 182 R+T</a>	4 G 2,5	10,1	96	171
<a href="#">0028 184 T</a>	3 G 4	12,3	116	226
<a href="#">0028 300 T</a>	3 G 10	18,3	288	517

# ÖLFLEX-ROBOT® 900 P

Catalogue Page 137

The robot cable. Screened versions identified with DP

## Technical Data

see also:  
[Information](#)  
[Part Number List](#)

**Bending and Torsion**



Conductor stranding:  
fine to super fine wire



Core ident code:  
up to 0,34 mm<sup>2</sup>: DIN 47100; cores  
0,50 mm<sup>2</sup> and above: black cores with white numbers

Max. torsion angle:  
+/- 360 degrees/metre



Inductance:  
approx. 0,7 mH/km



Insulation: specific insulation resistance:  
> 20 GOhm x cm



Minimum bending radius for  
flexing: 15 x cable diameter  
static: 4 x cable diameter





Mutual capacitance:  
C/C approx. 100 nF/km  
C/S approx. 120 nF/km



Nominal voltage  $U_0/U$ :  
0,5 mm<sup>2</sup> above  $U_0/U$ : 300/500 V



Peak working voltage:  
up to 0,34 mm<sup>2</sup>: Upp 350 V  
Urms: 48 V AC



Protective conductor:  
0,50 mm<sup>2</sup> above, green-yellow



Temperature range:  
flexing: -30 °C to +80 °C  
conductor insulation: short-term overload possible up to +120 °C



Test voltage:  
up to 0,34 mm<sup>2</sup>: 1500 V  
0,5 mm<sup>2</sup> above: 3000 V

# ÖLFLEX-ROBOT® 900 DP

Catalogue Page 137

The robot cable. Screened versions identified with DP

## Info

see also:  
[Technical Data](#)  
[Part Number List](#)

**Bending and Torsion**



### Application

This special cable handles the transmission of control and monitoring signals as well as power supply in any installation where combined torsion and bending stresses occur. It is therefore suitable for connecting handling tools to assembly and welding robots and to manipulators; for connection to rotating or tilting tables or in installations, in which it is not possible through design, for any defined cable runs to occur (such as power chains).

### Special Feature

The high quality, smooth core insulation and the slip-wrapping improves the working life when there are torsional and bending stresses. The outer sheath is of special polyurethane compound and has enhanced oil-resistance, is abrasion and notch resistant, microbe and hydrolysis resistant and flame-retardant. Its surface properties prevent adjoining moving cables sticking to it.

### Note

Our FD cables are intended for use in power chains (see Selection table A 2). The product conforms to EEC directive 73/23 (Low Voltage Directive) CE.

### Cable Make-up

Fine to superfine strands of plain copper wire, core insulation TPE-E, for core coding see Technical Data, cores (or core pairs) twisted in layers, slip-wrapping. Screen version (DP): layer of tinned copper wires, outer sheath of special polyurethane compound, black (RAL 7016), flame-retardant.

# ÖLFLEX-ROBOT® 900 DP

Catalogue Page 137

The robot cable. Screened versions identified with DP

## Part Number List

see also:  
[Technical Data](#)  
[Information](#)

**Bending and Torsion**

Part Number	No. of cores and mm <sup>2</sup> per conductor	Approx. Outside diameter in mm max.	Copperweight kg/km	Approx. weight kg/km
<b>ÖLFLEX-ROBOT® 900 DP</b>				
<a href="#">0028 105 R+T</a>	3 x 2 x 0,14 DP	5,9	17	44
<a href="#">0028 100 R+T</a>	12 x 0,14 DP	6,7	42,5	69
<a href="#">0028 126 R+T</a>	25 x 0,25 DP	11,1	103,5	183
<a href="#">0028 136 R+T</a>	5 x 2 x 0,34 DP	9,1	64,4	114
<a href="#">0028 185 T</a>	16 G 1,0 + (2 x 1 DP) P	16,5	195	376
<a href="#">0028 186 T</a>	23 G 1,0 + (2 x 1 DP) P	17,3	262	470

R = Coils up to 30 kg, T = Drums

No surplus sectioning for the length : 50 m, 100 , 500 m, 1000 m

G = with protective conductor GNYE

X = without protective conductor

# ÖLFLEX-ROBOT® 900 DP

Catalogue Page 137

The robot cable. Screened versions identified with DP

## Technical Data

see also:  
[Information](#)  
[Part Number List](#)

**Bending and Torsion**



Conductor stranding:  
fine to super fine wire



Core ident code:  
up to 0,34 mm<sup>2</sup>: DIN 47100; cores  
0,50 mm<sup>2</sup> and above: black cores with white numbers

Max. torsion angle:  
+/- 360 Degrees/Meter



In accordance to:  
VDE 0281/0282  
VDE 0250/0245



Inductance:  
approx. 0,7 mH/km



Insulation: specific insulation resistance:  
> 20 GOhm x cm



Minimum bending radius for  
flexing: 15 x cable diameter  
static: 4 x cable diameter



Mutual capacitance:  
A/A approx. 100 nF/km  
A/S approx. 120 nF/km



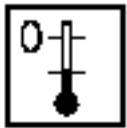
Nominal voltage  $U_0/U$ :  
0,5 mm<sup>2</sup> above  $U_0/U$ : 300/500 V



Peak working voltage:  
up to 0,34 mm<sup>2</sup>:  $U_{pp}$  350 V  
 $U_{rms}$ : 48 V AC



Protective conductor:  
0,50 mm<sup>2</sup> above, green-yellow



Temperature range:  
flexing: -30 °C to +80 °C  
conductor insulation: short-term overload possible up to +120 °C



Test voltage:  
up to 0,34 mm<sup>2</sup>: 1500 V  
0,5 mm<sup>2</sup> above: 3000 V