

Quick Select Chart

Product	Jacket Material	Temperature Range		Voltage	Flexing Cycles	Page
		Flexing	Stationary			
ÖLFLEX® CHAIN 896 P	PUR	-40°C to +80°C	-50°C to +80°C	AWM: 1000V European: 600/1000V	10 million	63
ÖLFLEX® FD 855 P/855 CP	PUR	-40°C to +80°C	-50°C to +80°C	AWM: 1000V European: 300/500V	10 million	64
ÖLFLEX® FD 890/890 CY	PVC	-5°C to +90°C	-25°C to +90°C	600V	5 million	66
ÖLFLEX® CHAIN 809/809 CY	PVC	0°C to +80°C	-40°C to +80°C	AWM: 1000V European: 300/500V	2 million	68
ÖLFLEX® CLASSIC FD 810/810 CY	PVC	0°C to +70°C	-40°C to +70°C	300/500V	5 million	70
ÖLFLEX® FD 90/90 CY	PVC	-5°C to +90°C	-40°C to +90°C	AWM: 600V European: 600/1000V	5 million	72
ÖLFLEX® FD AUTO-X	TPE	-5°C to +90°C	-40°C to +105°C	UL TC/AWM: 600V UL WTTC: 1000V	5 million	74

ÖLFLEX® CHAIN 896 P

High-Acceleration Continuous Flex Power & Control Cable with PUR Jacket



ÖLFLEX® CHAIN 896 P is specially designed, manufactured, and tested by Lapp for usage in modern high-acceleration cable track applications as well as long travel lengths.

Construction

Conductors: Extra fine bare copper conductors

Insulation: Polypropylene; non-woven wrapping

Jacket: Polyurethane; black

Recommended Applications

Factory automation; industrial machinery; cable tracks used in assembly & pick and place machinery; machine tools; transfer lines

Approvals



Application Advantage

- High dynamic performance in cable tracks:
 - Acceleration up to 50 m/s²
 - Travel speed up to 5 m/s
 - Travel lengths up to 100 m
- Oil resistant, halogen-free, flame retardant & flexes at low temperatures

Cable Attributes		page 640	
OIL	OR-05	FLAME	FR-02
MOTION	CF-04A	MECH.	MP-05

Complete the Installation	
SKINTOP® MS-SC page 516	Power M12 page 429

ÖLFLEX® CONNECT Solution	
ÖLFLEX® CONNECT CHAIN page 609	

Technical Data

<p> Minimum Bend Radius:</p> <ul style="list-style-type: none"> - for continuous flexing: <ul style="list-style-type: none"> - up to 6 AWG: 7.5 x cable diameter - 4 AWG: 10 x cable diameter - for stationary use: 4 x cable diameter 	<p> Test Voltage: 4000V</p>
<p> Temperature Range:</p> <ul style="list-style-type: none"> - for continuous flexing: -40°C to +80°C - for stationary use: -50°C to +80°C 	<p> Conductor Stranding: Class 6 super fine wire</p>
<p> Nominal Voltage:</p> <ul style="list-style-type: none"> - UL/CSA: 1000V - IEC U₀/U: 600/1000V 	<p> Color Code: Black with white numbers, plus green/yellow ground</p>
	<p> Approvals:</p> <ul style="list-style-type: none"> UL: AWM 20234 Attributes: NFPA 79 Canada: cRU AWM FT 1 Additional: VDE Reg. no 8661 CE & RoHS MUD acc. to IEC 61892-4 Annex D

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	Nominal Outer Diameter (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	Nominal Outer Diameter (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread
16 AWG (1.50 mm²)							8 AWG (10 mm²)						
1023229	4	0.378	9.6	39	81	S2113	1023250	4	0.670	17.0	258	338	S2121
1023230	5	0.394	10.0	48	96	S2113	1023251	5	0.745	18.9	323	446	S2129
14 AWG (2.50 mm²)							6 AWG (16 mm²)						
1023238	4	0.433	11.0	65	117	S2113	1023252	4	0.835	21.2	413	544	S2129
1023239	5	0.473	12.0	81	141	S2116	1023253	5	0.938	23.8	516	716	S2129
12 AWG (4 mm²)							4 AWG (25 mm²)						
1023245	4	0.493	12.5	103	163	S2116	1023254	4	1.020	25.9	645	843	S2136
1023246	5	0.540	13.7	129	212	S2121	1023255	5	1.143	29.0	806	1063	S2136
10 AWG (6 mm²)													
1023248	4	0.563	14.3	155	225	S2121							
1023249	5	0.619	15.7	194	295	S2121							

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section. If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question. For current information go to our website.

ÖLFLEX® FD 855 P/855 CP

Halogen-Free Highly Flexible Cable with PUR Jacket



ÖLFLEX® FD 855 P is designed for extreme mechanical stresses due to a tighter bend radius in continuous flex applications. Materials are halogen-free and environmentally friendly with an expanded temperature range. The polyurethane jacket is mechanically and chemically resistant to many environments. ÖLFLEX® FD 855 CP is a shielded version available with an overall tinned copper braid. This is recommended when electrical interference needs to be suppressed.

Recommended Applications

Cable tracks; power chains; most automated manufacturing systems; gantry robots; pick and place units; conveyor systems; machine tools, continuous flexing applications

Approvals



Unshielded Construction

Conductors: Finely stranded bare copper

Insulation: TPE; dry lubricant; non-woven wrapping over outer layer

Jacket: Polyurethane; gray

Shielded Construction

Conductors: Finely stranded bare copper

Insulation: TPE; dry lubricant; non-woven wrapping over outer layer

Inner Jacket: TPE

Shielding: Tinned copper braid (85% coverage)

Jacket: Polyurethane; gray

Application Advantage

- Our highest-performing continuous flexing cable
- Bend radius of 5 x cable diameter
- Designed for long travel distances up to 100 m horizontal
- Oil- and abrasion-resistant PUR jacket
- Cold temperature resistant to -40°C

Cable Attributes		page 640	
OIL	OR-05	FLAME	FR-02
MOTION	CF-04	MECH.	MP-05

Complete the Installation	
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Technical Data

Minimum Bend Radius: - for continuous flexing: 5 x cable diameter - shielded: 7.5 x cable diameter	Conductor Stranding: Class 6 super fine wire
Temperature Range: - for continuous flexing: -40°C to +80°C - for stationary use: -50°C to +80°C	Color Code: Black with white numbers, plus green/yellow ground
Nominal Voltage: - UL/c(UL): 1000V - U ₀ /U: 300/500V	Approvals: UL: AWM 21576 Attributes: NFPA 79 Canada: cRU AWM I/II A/B Additional: CE & RoHS MUD acc. to IEC 61892-4 Annex D Halogen-free: VDE 0472-815
Test Voltage: 3000V	

If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question. For current information go to our website.

ÖLFLEX® FD 855 P

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread
20 AWG (0.50 mm²)							18 AWG (1.00 mm²)						
0027530*	2	0.201	5.1	7	23	S1107	0027560*	2	0.236	6.0	13	34	S1107
0027531	3	0.217	5.5	9	27	S1107	0027561	3	0.256	6.5	19	41	S1109
0027532	5	0.260	6.6	16	37	S1109	0027562	4	0.283	7.2	26	47	S1111
0027533	6	0.280	7.1	19	42	S1111	0027563	5	0.307	7.8	32	62	S1111
0027534	7	0.303	7.7	23	51	S1111	0027564	7	0.374	9.5	45	82	S1111
0027535	12	0.358	9.1	39	77	S1111	0027565	12	0.441	11.2	77	132	S1113
0027536	18	0.429	10.9	58	111	S1113	0027566	18	0.539	13.7	116	184	S1121
0027537	20	0.453	11.5	65	121	S1113	0027568	25	0.661	16.8	161	259	S1121
0027538	25	0.528	13.4	81	147	S1116	16 AWG (1.50 mm²)						
0027540	30	0.535	13.6	97	169	S1121	0027575*	2	0.264	6.7	19	46	S1109
0027541	36	0.579	14.7	116	195	S1121	0027576	3	0.287	7.3	29	56	S1111
19 AWG (0.75 mm²)							0027586	4	0.315	8.0	39	67	S1111
0027545*	2	0.220	5.6	9	28	S1107	0027577	5	0.354	9.0	48	86	S1111
0027546	3	0.236	6.0	15	34	S1107	0027578	7	0.422	10.7	68	119	S1113
0027547	4	0.264	6.7	19	40	S1109	0027579	12	0.500	12.7	116	185	S1116
0027548	5	0.287	7.3	24	48	S1111	0027580	18	0.598	15.2	174	272	S1121
0027549	7	0.346	8.8	34	67	S1111	0027582	25	0.740	18.8	242	380	S1129
0027550	12	0.406	10.3	58	106	S1113	0027585	36	0.811	20.6	348	510	S1129
0027551	18	0.488	12.4	87	147	S1116	0027587	41	0.882	22.4	413	657	S1129
0027552	20	0.524	13.3	97	161	S1116	14 AWG (2.50 mm²)						
0027553	25	0.610	15.5	121	208	S1121	0027370	3	0.350	8.9	48	81	S1111
0027555	36	0.665	16.9	174	276	S1121	0027371	4	0.390	9.9	65	110	S1113
							0027372	5	0.433	11.0	81	132	S1113
							0027373	7	0.528	13.4	113	179	S1116
							0027374	12	0.622	15.8	194	300	S1121
							0027375	18	0.744	18.9	290	447	S1129
							0027376	25	0.925	23.5	403	624	S1129

* 2c cable does not include ground

ÖLFLEX® FD 855 CP

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread
20 AWG (0.50 mm²)							18 AWG (1.00 mm²)						
0027605*	2	0.264	6.7	22	45	53112210	0027635*	2	0.299	7.6	30	62	53112220
0027606	3	0.280	7.1	27	53	53112210	0027636	3	0.319	8.1	37	73	53112220
0027607	5	0.323	8.2	36	72	53112220	0027637	4	0.346	8.8	46	85	53112220
0027608	6	0.343	8.7	40	81	53112220	0027638	5	0.378	9.6	54	99	53112230
0027609	7	0.374	9.5	45	89	53112230	0027639	7	0.445	11.3	71	132	53112240
0027610	12	0.429	10.9	65	128	53112230	0027640	12	0.520	13.2	118	196	53112240
0027611	18	0.508	12.9	88	165	53112240	0027641	18	0.626	15.9	163	281	53112250
0027612	20	0.531	13.5	105	189	53112240	0027643	25	0.768	19.5	221	386	53112260
0027613	25	0.614	15.6	128	247	53112250	16 AWG (1.50 mm²)						
0027615	30	0.622	15.8	149	274	53112250	0027649*	2	0.327	8.3	39	77	53112220
0027616	36	0.665	16.9	169	308	53112250	0027650	3	0.350	8.9	51	93	53112220
19 AWG (0.75 mm²)							0027661	4	0.386	9.8	61	105	53112230
0027620*	2	0.283	7.2	27	53	53112220	0027651	5	0.425	10.8	75	133	53112230
0027621	3	0.299	7.6	32	65	53112220	0027652	7	0.492	12.5	97	171	53112240
0027622	4	0.327	8.3	39	75	53112220	0027653	12	0.587	14.9	163	280	53112250
0027623	5	0.350	8.9	44	85	53112220	0027654	18	0.685	17.4	233	379	53112260
0027624	7	0.417	10.6	57	111	53112230	0027656	25	0.843	21.4	327	545	53112260
0027625	12	0.476	12.1	85	155	53112240	14 AWG (2.50 mm²)						
0027626	18	0.575	14.6	133	222	53112250	0027380	3	0.421	10.7	74	130	53112230
0027628	25	0.697	17.7	174	308	53112260	0027381	4	0.461	11.7	91	157	53112240
0027630	36	0.768	19.5	234	407	53112260	0027382	5	0.504	12.8	121	197	53112240
							0027383	7	0.614	15.6	165	281	53112250
							0027384	12	0.709	18.0	253	423	53112260
							0027385	18	0.846	21.5	382	613	53112260
							0027386	25	1.043	26.5	514	851	53112270

* 2c cable does not include ground

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section. If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

ÖLFLEX® FD 890/890 CY

Super Flexible Heavy Duty Continuous Flex Control Cable with PVC Jacket



ÖLFLEX® FD 890 is a time-tested, performance-proven multi-conductor cable designed for continuous flex applications. Fine stranding and specially formulated compounds optimize flexing life and provide excellent resistance to mineral oils, synthetic oils, and water-based coolants. ÖLFLEX® FD 890 CY is a shielded version available with an overall tinned copper braid. This is recommended when electrical interference needs to be suppressed.

Recommended Applications

Cable tracks & power chains; gantry robots; pick and place units; conveyor systems; machine tool and other continuous flexing applications

Approvals



Unshielded Construction

Conductors: Finely stranded bare copper

Insulation: Specially formulated PVC; dry lubricant; non-woven wrapping over outer layer

Jacket: Specially formulated PVC; black

Shielded Construction

Conductors: Finely stranded bare copper

Insulation: Specially formulated PVC; dry lubricant; non-woven wrapping over outer layer

Inner Jacket: PVC

Shielding: Tinned copper braid (85% coverage)

Jacket: Specially formulated PVC; black

Application Advantage

- Meets Oil Res I/II, resistant to harsh environments for long service life
- Pressure-extruded jacket for precision connectorization
- Passes UL 1277 impact and crush tests

Cable Attributes		page 640	
OIL	OR-04	FLAME	FR-02
MOTION	CF-03	MECH.	MP-02

Complete the Installation	
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ÖLFLEX® CONNECT Solution	
ÖLFLEX® CONNECT CHAIN page 609	

Technical Data

Minimum Bend Radius: - for continuous flexing: 7.5 x cable diameter - shielded: 10 x cable diameter	Color Code: Black with white numbers, plus green/yellow ground
Temperature Range: - for continuous flexing: -5°C to +90°C - for stationary use: -25°C to +90°C	Approvals: UL: AWM 2587 AWM 21098 (Oil) Attributes: UL Oil Res I/II Sunlight resistant NFPA 79 UL 758 80°C Oil Test Canada: CSA AWM I/II A/B FT 1 CSA C22.2, 210.2 Additional: CE & RoHS
Nominal Voltage: 600V	
Test Voltage: 2000V	
Conductor Stranding: Better than Class 6 super fine wire	

If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question. For current information go to our website.

ÖLFLEX® FD 890

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread
20 AWG (0.50 mm²)							14 AWG (2.50 mm²)						
8920034	3	0.264	6.7	10	43	S2109	8914044	4	0.456	11.6	67	148	S2113
8920044	4	0.291	7.4	16	53	S2111	8914074	7	0.614	15.6	117	227	S2121
8920054	5	0.323	8.2	19	68	S2111	12 AWG (4 mm²)						
8920074	7	0.382	9.7	27	75	S2113	8912044	4	0.531	13.5	104	208	S2121
8920124	12	0.457	11.6	39	124	S2113	8912074	7	0.740	18.8	181	335	S2129
8920184	18	0.539	13.7	69	183	S2121	10 AWG (6 mm²)						
8920254	25	0.677	17.2	96	265	S2121	8910044	4	0.640	16.3	155	275	S2121
18 AWG (1.00 mm²)							8 AWG (10 mm²)						
8918034	3	0.287	7.3	18	46	S2111	8908044	4	0.756	19.2	259	481	S2129
8918044	4	0.327	8.3	24	60	S2111	6 AWG (16 mm²)						
8918054	5	0.355	9.0	29	74	S2111	8906044	4	0.909	23.1	413	709	S2129
8918074	7	0.429	10.9	41	102	S2113	4 AWG (25 mm²)						
8918124	12	0.500	12.7	70	158	S2116	8904044	4	1.059	26.9	646	1005	S2136
8918154	15	0.559	14.2	88	202	S2121	2 AWG (35 mm²)						
8918184	18	0.614	15.6	105	234	S2121	8902044	4	1.252	31.8	904	1240	S2248
8918254	25	0.763	19.4	146	336	S2129							
8918344	34	0.826	21.0	211	434	S2129							
16 AWG (1.50 mm²)													
8916034	3	0.323	8.2	30	79	S2111							
8916044	4	0.358	9.1	39	106	S2111							
8916054	5	0.393	10.0	49	132	S2113							
8916074	7	0.480	12.2	68	138	S2116							
8916124	12	0.555	14.1	117	214	S2121							
8916184	18	0.685	17.4	175	323	S2129							
8916254	25	0.854	21.7	242	505	S2129							
8916344	34	0.925	23.5	329	623	S2129							
8916504	50	1.094	27.8	437	880	S2136							

ÖLFLEX® FD 890 CY

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread
20 AWG (0.50 mm²)							14 AWG (2.50 mm²)						
8920034S	3	0.342	8.7	27	82	53112220	8914044S	4	0.551	14.0	103	181	53112250
8920044S	4	0.370	9.4	38	97	53112230	8914074S	7	0.709	18.0	175	347	53112260
8920054S	5	0.409	10.4	44	108	53112230	8914184S	18	1.012	25.7	385	762	53112270
8920074S	7	0.468	11.9	52	137	53112240	12 AWG (4 mm²)						
8920124S	12	0.551	14.0	68	214	53112250	8912044S	4	0.650	16.5	160	302	53112250
8920184S	18	0.657	16.7	112	293	53112250	8912074S	7	0.858	21.8	251	194	53112260
8920254S	25	0.803	20.4	158	421	53112260	10 AWG (6 mm²)						
18 AWG (1.00 mm²)							8910044S	4	0.752	19.1	215	333	53112260
8918034S	3	0.375	9.5	40	91	53112230	8 AWG (10 mm²)						
8918044S	4	0.419	10.6	48	112	53112230	8908044S	4	0.882	22.4	330	701	53112260
8918054S	5	0.447	11.4	57	131	53112240	6 AWG (16 mm²)						
8918074S	7	0.528	13.4	76	198	53112240	8906044S	4	1.066	27.1	498	986	53112270
8918124S	12	0.636	16.2	125	271	53112250							
8918184S	18	0.719	18.3	162	357	53112260							
8918254S	25	0.887	22.5	218	538	53112260							
8918344S	34	0.986	25.0	211	660	53112270							
16 AWG (1.50 mm²)													
8916034S	3	0.409	10.4	54	121	53112230							
8916044S	4	0.444	11.3	68	154	53112240							
8916054S	5	0.480	12.2	81	170	53112240							
8916074S	7	0.598	15.2	125	258	53112250							
8916124S	12	0.673	17.1	174	366	53112260							
8916184S	18	0.826	21.0	239	493	53112260							
8916254S	25	0.996	25.3	320	687	53112270							
8916344S	34	1.067	27.1	446	769	53112270							

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section. If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

ÖLFLEX® CHAIN 809/809 CY

Continuous Flex Control Cable with PVC Jacket



ÖLFLEX® CHAIN 809 is a flexible multi-conductor cable designed for basic continuous flexing applications. ÖLFLEX® CHAIN 809 CY is a shielded version available with an overall tinned copper braid. This is recommended when electrical interference needs to be suppressed.

Recommended Applications

Cable tracks; power chains; gantry robots; pick and place units; conveyor systems; machine tools; basic continuous flexing applications

Approvals



Unshielded Construction

- Conductors:** Finely stranded bare copper
- Insulation:** PVC; dry lubricant; non-woven wrapping over outer layer
- Jacket:** PVC; gray

Shielded Construction

- Conductors:** Finely stranded bare copper
- Insulation:** PVC; dry lubricant; non-woven wrapping over outer layer
- Shielding:** Tinned copper braid (85% coverage)
- Jacket:** PVC; gray

Application Advantage

- Designed with North American and European approvals
- Reduced-diameter shielded design
- Flame retardant: UL/CSA VW-1, FT1

Cable Attributes		page 640
OIL	OR-01	FLAME FR-02
MOTION	CF-01	MECH. MP-01

Complete the Installation	
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Technical Data

<p> Minimum Bend Radius: - for continuous flexing: 10 x cable diameter - sliding applications: 12 x cable diameter</p>	<p> Test Voltage: - Conductor/conductor: 4000V - Conductor/shield: 2000V</p>
<p> Temperature Range: - for continuous flexing: 0°C to +80°C - for stationary use: -40°C to +80°C</p>	<p> Conductor Stranding: Class 5 fine wire</p>
<p> Nominal Voltage: - UL/CSA: 1000V - VDE U₀/U: 300/500V</p>	<p> Color Code: Black with white numbers, plus green/yellow ground</p>
	<p> Approvals: UL: AWM 20886 Attributes: NFPA 79 Canada: cRU AWM I/II A/B FT1 Additional: CE & RoHS Based on VDE 0281 Part 13</p>

If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question. For current information go to our website.

ÖLFLEX® CHAIN 809

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread
20 AWG (0.50 mm²)							16 AWG (1.50 mm²)						
1026700*	2	0.205	5.2	7	27	S1107	1026724*	2	0.256	6.5	19	50	S1109
1026701	3	0.217	5.5	10	32	S1107	1026725	3	0.272	6.9	29	62	S1109
1026702	4	0.236	6.0	13	39	S1107	1026726	4	0.299	7.6	39	77	S1111
1026703	5	0.256	6.5	16	45	S1109	1026727	5	0.335	8.5	48	93	S1111
1026704	7	0.303	7.7	23	59	S1111	1026728	7	0.406	10.3	68	127	S1113
1026705	12	0.362	9.2	39	91	S1111	1026729	12	0.484	12.3	116	198	S1116
1026706	18	0.433	11.0	58	131	S1113	1026730	18	0.584	14.9	174	288	S1121
1026707	25	0.524	13.3	81	184	S1116	1026731	25	0.705	17.9	242	401	S1129
19 AWG (0.75 mm²)							14 AWG (2.50 mm²)						
1026708*	2	0.220	5.6	10	33	S1107	1026732	3	0.331	8.4	48	97	S1111
1026709	3	0.236	6.0	15	40	S1107	1026733	4	0.366	9.3	65	120	S1111
1026710	4	0.256	6.5	19	49	S1109	1026734	7	0.500	12.7	81	146	S1116
1026711	5	0.280	7.1	25	58	S1111	12 AWG (4 mm²)						
1026712	7	0.335	8.5	34	79	S1111	1026737	4	0.437	11.1	108	179	S1113
1026713	12	0.406	10.3	58	122	S1113							
1026714	18	0.480	12.2	87	174	S1116							
1026715	25	0.583	14.8	122	244	S1121							
18 AWG (1.00 mm²)													
1026716*	2	0.232	5.9	13	39	S1107							
1026717	3	0.248	6.3	19	48	S1109							
1026718	4	0.272	6.9	26	59	S1109							
1026719	5	0.295	7.5	32	70	S1111							
1026720	7	0.354	9.0	45	95	S1111							
1026721	12	0.429	10.9	77	149	S1113							
1026722	18	0.520	13.2	116	218	S1116							
1026723	25	0.618	15.7	161	299	S1121							

* 2c cable does not include ground

ÖLFLEX® CHAIN 809 CY

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread
20 AWG (0.50 mm²)							1026769	4	0.295	7.5	50	87	53112220
1026751*	2	0.228	5.8	24	30	53112210	1026770	5	0.327	8.3	59	105	53112220
1026752	3	0.240	6.1	29	40	53112210	1026771	7	0.386	9.8	75	129	53112230
1026753	4	0.260	6.6	33	56	53112210	1026772	12	0.461	11.7	124	192	53112240
1026754	5	0.280	7.1	38	65	53112210	1026773	18	0.551	14.0	180	265	53112250
1026755	7	0.335	8.5	46	91	53112220	1026774	25	0.657	16.7	238	327	53112250
1026756	12	0.394	10.0	70	134	53112230	16 AWG (1.50 mm²)						
1026757	18	0.465	11.8	95	185	53112240	1026775*	2	0.280	7.1	44	65	53112210
1026758	25	0.555	14.1	142	235	53112250	1026776	3	0.295	7.5	55	84	53112220
19 AWG (0.75 mm²)							1026777	4	0.331	8.4	67	111	53112220
1026759*	2	0.244	6.2	29	38	53112210	1026778	5	0.358	9.1	80	130	53112220
1026760	3	0.260	6.6	35	47	53112210	1026779	7	0.429	10.9	103	165	53112230
1026761	4	0.280	7.1	41	64	53112210	1026780	12	0.524	13.3	180	245	53112240
1026762	5	0.303	7.7	48	87	53112220	1026781	18	0.618	15.7	251	372	53112250
1026763	7	0.358	9.1	60	113	53112220	1026782	25	0.736	18.7	356	493	53112260
1026764	12	0.429	10.9	93	156	53112230	14 AWG (2.50 mm²)						
1026765	18	0.512	13.0	142	212	53112240	1026783	3	0.354	9.0	79	126	53112220
1026766	25	0.614	15.6	188	292	53112250	1026784	4	0.398	10.1	99	159	53112230
18 AWG (1.00 mm²)							1026785	7	0.531	13.5	170	228	53112240
1026767*	2	0.256	6.5	34	56	53112210	12 AWG (4 mm²)						
1026768	3	0.272	6.9	42	74	53112210	1026788	4	0.469	11.9	167	205	53112240

* 2c cable does not include ground

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section. If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

ÖLFLEX® CLASSIC FD 810/810 CY

Continuous Flex Control Cable with PVC Jacket



ÖLFLEX® CLASSIC FD 810 is a flexible multi-conductor cable designed for continuous flex applications. It is specially designed to optimize flex life and provides excellent resistance to minerals oils, synthetic oils, and water-based coolants. ÖLFLEX® CLASSIC FD 810 CY is a shielded version available with an overall tinned copper braid. This is recommended when electrical interference needs to be suppressed.

Recommended Applications

Cable tracks; power chains; gantry robots; pick and place units; conveyor systems; machine tools; continuous flexing applications

Approvals



Unshielded Construction

Conductors: Finely stranded bare copper

Insulation: PVC; dry lubricant; non-woven wrapping over outer layer

Jacket: PVC; gray

Shielded Construction

Conductors: Finely stranded bare copper

Insulation: PVC; dry lubricant; non-woven wrapping over outer layer

Inner Jacket: PVC

Shielding: Tinned copper braid (85% coverage)

Jacket: PVC; gray

Application Advantage

- European version with CE approvals
- Number-coded conductors for easier installation

Cable Attributes		page 640
OIL	OR-01	FLAME
MOTION	CF-02	MECH.
		FR-02
		MP-01

Complete the Installation	
SKINTOP® Strain Relief	EPIC® Connectors
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ÖLFLEX® CONNECT Solution
ÖLFLEX® CONNECT CHAIN
page 609

Technical Data			
Minimum Bend Radius: - for continuous flexing:	7.5 x cable diameter	Test Voltage:	4000V
Temperature Range: - for continuous flexing: - for stationary use:	0°C to +70°C -40°C to +70°C	Conductor Stranding:	Class 6 super fine wire
Nominal Voltage:	300/500V	Color Code:	Black with white numbers, plus green/yellow ground
		Approvals:	CE & RoHS Based on VDE 0245/0281

If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question. For current information go to our website.

ÖLFLEX® CLASSIC FD 810

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread
20 AWG (0.50 mm²)							16 AWG (1.50 mm²)						
0026100*	2	0.209	5.3	7	27	S1107	0026149*	2	0.268	6.8	19	50	S1109
0026101	3	0.224	5.7	10	32	S1107	0026150	3	0.291	7.4	29	62	S1111
0026102	4	0.248	6.3	13	39	S1109	0026151	4	0.319	8.1	39	77	S1111
0026103	5	0.268	6.8	16	45	S1109	0026152	5	0.358	9.1	48	93	S1111
0026104	7	0.315	8.0	23	59	S1111	0026153	7	0.429	10.9	68	127	S1113
0026105	12	0.374	9.5	39	91	S1111	0026154	12	0.508	12.9	116	198	S1116
0026106	18	0.449	11.4	58	131	S1113	0026156	18	0.614	15.6	174	288	S1121
0026107	25	0.539	13.7	81	184	S1121	0026157	25	0.733	18.6	242	401	S1129
0026109	34	0.614	15.6	110	241	S1121	0026159	34	0.831	21.1	329	526	S1129
0026110	50	0.728	18.5	161	346	S1129	14 AWG (2.50 mm²)						
19 AWG (0.75 mm²)							12 AWG (4 mm²)						
0026119*	2	0.224	5.7	10	33	S1107	0026170	3	0.354	9.0	48	97	S1111
0026120	3	0.244	6.2	15	40	S1107	0026171	4	0.394	10.0	65	120	S1113
0026121	4	0.268	6.8	19	49	S1109	0026172	5	0.441	11.2	81	146	S1113
0026122	5	0.291	7.4	25	58	S1111	0026173	7	0.535	13.6	113	204	S1121
0026123	7	0.350	8.9	34	79	S1111	0026175	14	0.677	17.2	226	368	S1121
0026124	12	0.417	10.6	58	122	S1113	10 AWG (6 mm²)						
0026125	16	0.472	12.0	78	157	S1116	0026180	3	0.417	10.6	81	144	S1113
0026126	18	0.500	12.7	87	174	S1116	0026181	4	0.461	11.7	108	179	S1116
0026127	25	0.598	15.2	122	244	S1121	8 AWG (10 mm²)						
18 AWG (1.00 mm²)							6 AWG (16 mm²)						
0026130*	2	0.240	6.1	13	39	S1107	0026183	4	0.547	13.9	150	266	S1121
0026131	3	0.260	6.6	19	48	S1109	6 AWG (16 mm²)						
0026132	4	0.287	7.3	26	59	S1111	0026185	4	0.693	17.6	258	433	S1129
0026133	5	0.315	8.0	32	70	S1111	0026186	5	0.772	19.6	323	528	S1129
0026134	7	0.378	9.6	45	95	S1113	6 AWG (16 mm²)						
0026135	12	0.449	11.4	77	149	S1113	0026187	4	0.827	21.0	413	620	S1129
0026138	18	0.547	13.9	116	218	S1121							
0026139	25	0.646	16.4	161	299	S1121							
0026142	41	0.811	20.6	265	478	S1129							
0026143	50	0.878	22.3	323	574	S1129							

* 2c cable does not include ground

ÖLFLEX® CLASSIC FD 810 CY

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread
20 AWG (0.50 mm²)							16 AWG (1.50 mm²)						
0026200*	2	0.272	6.9	22	50	53112210	0026249*	2	0.331	8.4	39	79	53112220
0026201	3	0.287	7.3	26	56	53112220	0026250	3	0.354	9.0	50	93	53112220
0026202	4	0.311	7.9	31	66	53112220	0026251	4	0.390	9.9	61	114	53112230
0026203	5	0.331	8.4	36	74	53112220	0026252	5	0.429	10.9	75	135	53112230
0026204	7	0.386	9.8	47	96	53112230	0026253	7	0.500	12.7	97	176	53112240
0026205	12	0.445	11.3	67	135	53112240	0026254	12	0.594	15.1	166	271	53112250
0026206	18	0.528	13.4	103	193	53112240	0026256	18	0.701	17.8	234	376	53112260
0026207	25	0.626	15.9	136	265	53112250	0026257	25	0.835	21.2	335	533	53112260
19 AWG (0.75 mm²)							14 AWG (2.50 mm²)						
0026219*	2	0.287	7.3	26	57	53112220	0026259	34	0.941	23.9	470	675	53112260
0026220	3	0.307	7.8	32	67	53112220	12 AWG (4 mm²)						
0026221	4	0.331	8.4	40	78	53112220	0026270*	2	0.425	10.8	80	139	53112230
0026222	5	0.354	9.0	46	89	53112220	0026271	4	0.465	11.8	108	166	53112240
0026223	7	0.421	10.7	60	120	53112230	0026272	5	0.520	13.2	130	206	53112240
0026224	12	0.488	12.4	87	170	53112240	0026273	7	0.622	15.8	176	281	53112250
0026226	18	0.587	14.9	138	247	53112250	10 AWG (6 mm²)						
0026227	25	0.685	17.4	182	333	53112260	0026281	4	0.539	13.7	160	242	53112250
18 AWG (1.00 mm²)							8 AWG (10 mm²)						
0026230*	2	0.303	7.7	31	65	53112220	0026282	5	0.602	15.3	188	293	53112250
0026231	3	0.323	8.2	38	77	53112220	6 AWG (16 mm²)						
0026232	4	0.350	8.9	47	90	53112220	0026283	4	0.634	16.1	214	345	53112250
0026233	5	0.386	9.8	54	107	53112230	6 AWG (16 mm²)						
0026234	7	0.449	11.4	74	139	53112240	0026285	4	0.795	20.2	350	554	53112260
0026235	12	0.528	13.4	122	211	53112240	6 AWG (16 mm²)						
0026238	18	0.634	16.1	171	298	53112250	0026287	4	0.929	23.6	524	811	53112260
0026239	25	0.740	18.8	245	411	53112260							
0026241	34	0.846	21.5	311	529	53112260							
0026242	41	0.913	23.2	364	617	53112260							

* 2c cable does not include ground

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section. If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

ÖLFLEX® FD 90/90 CY

Flexible Single-Conductor Power Supply Cable with PVC Jacket

LAPP KABEL STUTTGART ÖLFLEX® FD 90

LAPP KABEL STUTTGART ÖLFLEX® FD 90 CY

ÖLFLEX® FD 90 is a flexible, 600V, UL and CSA approved single-conductor cable for continuous flex applications. It is designed with super fine wire stranding and specially formulated PVC compounds that are resistant to most mineral oils and water-based coolants. ÖLFLEX® FD 90 CY with tinned copper braid shielding is used for applications where EMI emissions need to be suppressed.

Recommended Applications

Power circuits and applications requiring flexible power cable to interconnect the power supply to the machine

Approvals



Unshielded Construction

Conductors: Finely stranded bare copper

Insulation: Specially formulated black PVC (also available in green/yellow); non-woven wrapping

Jacket: Specially formulated PVC; black

Shielded Construction

Conductors: Finely stranded bare copper

Insulation: Specially formulated black PVC; non-woven wrapping

Shielding: Tinned copper braid

Jacket: Specially formulated PVC; orange

Application Advantage

- North American UL/CSA and European market approvals
- Suitable for dry, damp interior use
- Available in larger conductor sizes for power applications
- CSA FT1 flame retardant

Cable Attributes page 640

OIL	OR-01	FLAME	FR-02
MOTION	CF-02	MECH.	MP-01

Complete the Installation

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ÖLFLEX® CONNECT Solution

ÖLFLEX® CONNECT CHAIN page 609

Technical Data

Minimum Bend Radius: - for continuous flexing: 7.5 x cable diameter - for stationary use: 3 x cable diameter	Conductor Stranding: Class 6 super fine wire
Temperature Range: - for continuous flexing: -5°C to +90°C - for stationary use: -40°C to +90°C	Approvals: UL: AWM 10107 Attributes: NFPA 79 Canada: CSA AWM I/II A/B FT1 (≤ 4/0 AWG) cRU AWM I/II A/B FT1 (≥ 300 KCMIL) Additional: CE & RoHS Based on VDE 0250/0281
Nominal Voltage: - UL/CSA: 600V - IEC: 600/1000V	
Test Voltage: 4000V	

If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question. For current information go to our website.

ÖLFLEX® FD 90

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread
8 AWG (10 mm²)							3/0 AWG (95 mm²)						
0026601	1	0.354	9.0	65	118	S2111	0026620	1	0.780	19.8	613	792	S2129
6 AWG (16 mm²)							4/0 AWG (120 mm²)						
0026604	1	0.413	10.5	103	161	S2113	0026623	1	0.921	23.4	774	1022	S2129
4 AWG (25 mm²)							250 KCMIL (150 mm²)						
0026608	1	0.465	11.8	161	243	S2116	0026626	1	0.988	25.1	968	1169	S2136
2 AWG (35 mm²)							350 KCMIL (185 mm²)						
0026611	1	0.559	14.2	226	324	S2121	0026629	1	1.106	28.1	1193	1549	S2136
1 AWG (50 mm²)							450 KCMIL (240 mm²)						
0026614	1	0.638	16.2	323	444	S2121	0026635	1	1.244	31.6	1548	1978	S2248
2/0 AWG (70 mm²)							500 KCMIL (300 mm²)						
0026617	1	0.720	18.3	452	603	S2129	0026641	1	1.319	33.5	1935	2382	S2248

ÖLFLEX® FD 90 CY

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)		Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® MS-SC PG Thread
8 AWG (10 mm²)							3/0 AWG (95 mm²)						
0026651	1	0.382	9.7	86	153	53112230	0026663	1	0.823	20.9	691	929	53112260
6 AWG (16 mm²)							4/0 AWG (120 mm²)						
0026653	1	0.441	11.2	125	200	53112240	0026665	1	0.965	24.5	862	1177	53112270
4 AWG (25 mm²)							250 KCMIL (150 mm²)						
0026655	1	0.492	12.5	173	276	53112240	0026667	1	1.031	26.2	948	1293	53112270
2 AWG (35 mm²)							350 KCMIL (185 mm²)						
0026657	1	0.594	15.1	269	408	53112250	0026669	1	1.150	29.2	1300	1755	53112270
1 AWG (50 mm²)							450 KCMIL (240 mm²)						
0026659	1	0.673	17.1	373	543	53112260	0026671	1	1.295	32.9	1697	2266	53112670*
2/0 AWG (70 mm²)							500 KCMIL (300 mm²)						
0026661	1	0.764	19.4	521	726	53112260	0026673	1	1.370	34.8	2103	2759	53112670*

* SKINTOP® MS-SC with metric thread.

ÖLFLEX® FD AUTO-X

Heavy Duty Continuous Flex Control Cable

LAPP KABEL STUTTGART ÖLFLEX® FD AUTO-X



ÖLFLEX® FD AUTO-X is a flexible oil- and UV-resistant multi-conductor control cable designed for continuous flexing industrial applications. It has worldwide approvals, including UL Type TC-ER, CSA AWM, and CE.

Recommended Applications

Cable tracks; power chains; gantry robots; pick and place units; conveyor systems; machine tools; continuous flexing applications

Approvals



Construction

Conductors: Finely stranded bare copper

Insulation: PVC/nylon; dry lubricant

Jack: Specially formulated thermoplastic elastomer (TPE); black

Application Advantage

- Meets Oil Res I/II
- Resistant to harsh environments for long service life
- Meets NFPA 79 machine wiring standard
- Available in number-coded blue or red conductors
- Round jacket for optimal seal with a SKINTOP® strain relief cable gland

Cable Attributes		page 640	
OIL	OR-03	FLAME	FR-03
MOTION	CF-02	MECH.	MP-03

Complete the Installation	
SKINTOP® Strain Relief page 488	EPIC® Connectors page 280

ÖLFLEX® CONNECT Solution	
ÖLFLEX® CONNECT CHAIN page 609	

Technical Data

Minimum Bend Radius: - for continuous flexing:	10 x cable diameter	Color Code: - up to 3c:	Blue with white numbers or red with black numbers, plus green/yellow ground
Temperature Range: - for continuous flexing: - for stationary use: - UL TC-ER:	-5°C to +90°C -40°C to +105°C -25°C to +90°C	- 4c & higher (blue): - 4c & higher (red):	No. 2 conductor is white/blue No. 2 conductor is white
Nominal Voltage: - UL TC: - UL WTTC:	600V 1000V	Approvals:	UL: TC-ER per UL 1277 WTTC per UL 2277 AWM 20626 Attributes: UL Oil Res I/II 75°C Wet; 90°C Dry -40°C Cold Bend; -25°C Cold Impact NFPA 79 NEC: Class 1 Division 2 per NEC Articles 501, 336 Canada: CSA AWM I/II A/B FT4 c(UL) CIC/TC FT4 Additional: CE & RoHS
Test Voltage:	2000V		
Conductor Stranding:	Class M fine wire		

* Optional colors for conductors include orange, yellow, and black, which are available upon request. Minimums may apply.

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in) (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINTOP® Non-Metallic PG Thread
18 AWG (1.00 mm²)						16 AWG (1.5 mm²)					
251803XB	3	0.309 7.8	16	55	S2111	251603XB	3	0.335 8.5	26	71	S2111
251805XB	5	0.358 9.1	26	85	S2111	251607XB	7	0.464 11.8	58	126	S2116
251807XB	7	0.425 10.8	36	110	S2113	251611XB	11	0.569 14.5	94	203	S2121
251811XB	11	0.489 12.4	58	145	S2116	251612XB	12	0.569 14.5	103	218	S2121
251812XB	12	0.489 12.4	64	160	S2116	251619XB	19	0.698 17.7	162	284	S2129
251825XB	25	0.720 18.3	134	322	S2129	251625XB	25	0.798 20.3	213	397	S2129
251833XB	33	0.748 19.0	175	385	S2129	251633XB	33	0.877 22.3	280	509	S2129
251842XB	42	0.908 23.1	222	495	S2129	251642XB	42	0.977 24.8	381	628	S2136
251849XB	49	0.942 23.9	259	595	S2129	251649XB	49	1.043 26.5	418	760	S2136
251865XB	65	1.075 27.3	343	860	S2136	251665XB	65	1.191 30.3	547	890	S2136

Note: Replace the 'B' at the end of the P/N with 'R' for red conductors, 'O' for orange conductors, 'Y' for yellow conductors, 'BK' for black conductors

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section. If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question. For current information go to our website.