

ÖLFLEX® ROBOT 900 P/900 DP

Robotic cable for flexing & torsion motion

LAPP KABEL STUTTGART ÖLFLEX® ROBOT 900 P

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ÖLFLEX® ROBOT 900 P is a multi-conductor control and signal monitoring cable. It is designed to withstand the extreme demands of twisting and bending stresses in robotic applications. ÖLFLEX® ROBOT 900 DP has a tinned copper spiral shield and is designed for use where EMI emissions need to be suppressed.

Recommended applications

Multi-axis articulated robots with twisting and bending motion; automated handling equipment; cable tracks or moving machine parts.

Approvals



Cable attributes		page 648	
OIL	OR-05	FLAME	FR-02
MOTION	T-01	MECH.	MP-05

Unshielded construction

Conductors: finely stranded bare copper

Insulation: TPE; conductors twisted in layers with low-friction core wrap

Jacket: polyurethane; black

Shielded construction

Conductors: finely stranded bare copper

Insulation: TPE; conductors twisted in layers with low-friction core wrap

Shielding: tinned copper spiral shield

Jacket: polyurethane; black

Application advantage

- Designed for applications where combined twisting and bending occur
- Specially formulated PUR jacket protects against the harshest of industrial plant environments
- Maximum twist of $\pm 360^\circ/\text{m}$ (unshielded) for wide variety of robot applications

Complete the installation



SKINTOP®
strain relief
page 492



EPIC®
connectors
page 284

Technical data

Minimum bend radius:

- unshielded: 15 x cable diameter
- shielded: 15 x cable diameter

Maximum torsion (twist):

- unshielded: $\pm 360^\circ/\text{m}$
- shielded: $\pm 180^\circ/\text{m}$

Temperature range:

- for flexible use: -40°C to $+80^\circ\text{C}$

Nominal voltage:

- up to 22 AWG: 48V AC
- 20 AWG & larger: $300/500\text{V}$

Test voltage:

- up to 22 AWG: 1500V
- 20 AWG & larger: 3000V

Conductor stranding:

extra fine wire

Color code:

- up to 22 AWG: DIN 47100: chart 8, page 682
- 20 AWG & larger: black with white numbers, plus green/yellow ground

Approvals:

CE & RoHS
based on VDE 0281/0282 & 0812

Torsional & robotic cable

ÖLFLEX® ROBOT 900 P

Part number	Number of conductors incl. ground*	Nominal outer diameter		Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® SL PG thread
		in	mm			
24 AWG (0.25 mm²)						
0028110	7	0.244	6.2	11	32	S2107
0028116	25	0.402	10.2	40	95	S2113
20 AWG (0.5 mm²)						
0028145	18	0.441	11.2	58	81	S2113
0028146	25	0.524	13.3	81	171	S2116
19 AWG (0.75 mm²)						
0028160	4	0.260	6.6	19	42	S2109
0028164	14	0.441	11.2	68	134	S2113
18 AWG (1 mm²)						
0028170*	2	0.244	6.2	13	32	S2107
0028171	3	0.256	6.5	19	41	S2109
0028172	4	0.276	7.0	26	51	S2111
0028174	7	0.366	9.3	45	88	S2111
0028176	12	0.453	11.5	77	145	S2113
0028185	16 + 1pr	0.630	16.0	131	253	S2121

* 2c cable does not include ground

Part number	Number of conductors incl. ground*	Nominal outer diameter		Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® SL PG thread
		in	mm			
0028178	18	0.520	13.2	116	193	S2116
0028186	23 + 1 pr	0.681	17.3	176	316	S2129
0028180	25	0.646	16.4	161	291	S2121
0028190	34	0.783	19.9	219	384	S2129
0028191	41	0.878	22.3	264	474	S2129
16 AWG (1.5 mm²)						
0028198	18	0.622	15.8	174	300	S2121
14 AWG (2.5 mm²)						
0028181	3	0.366	9.3	48	91	S2111
0028182	4	0.398	10.1	65	115	S2113
6 AWG (10 mm²)						
0028400	3	0.843	21.4	310	484	S2129
4 AWG (25 mm²)						
0028187	3	1.031	26.2	484	791	S2136
2 AWG (35 mm²)						
0028189	3	1.134	28.8	677	1047	S2136

ÖLFLEX® ROBOT 900 DP

Part number	Number of conductors incl. ground	Nominal outer diameter		Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread
		in	mm			
26 AWG (0.14 mm²)						
0028100	12	0.264	6.7	29	46	53112210
0028105	3pr	0.244	6.2	11	30	53112210
24 AWG (0.25 mm²)						
0028126	25	0.437	11.1	70	123	53112230

Part number	Number of conductors incl. ground	Nominal outer diameter		Copper weight lbs/mft	Approx. weight lbs/mft	SKINTOP® MS-SC PG thread
		in	mm			
22 AWG (0.34 mm²)						
0028135	4	0.224	5.7	14	31	53112210
0028136	5pr	0.358	9.1	43	77	53112220
16 AWG (1.5 mm²)						
0028195	12	0.551	14.0	174	265	53112250

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.