

Torsional Robotic Cable



Torsional Robotic Cable

OLFLEX®-ROBOT 900 P/ 900 DP

CE

98

Robotic Cable for Continuous Twisting Motion

OLFLEX® ROBOT F1

UL/CE

100



OLFLEX®-ROBOT 900 P/ 900 DP

Robotic Cable for Continuous Twisting Motion

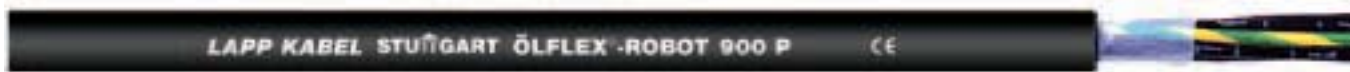


OLFLEX®-ROBOT 900 P is used in applications where combined twisting and bending stresses occur. This unique cable accurately transmits control signals and power supply to welding robots, rotary tables, and other automated applications requiring twisting movement. The high-quality insulation with its smooth surface and slide wrappings increases cable life expectancy under extreme twisting and bending stresses. The outer jacket of

specially formulated polyurethane is highly resistant to abrasion, oil, notching, microbes and hydrolysis. In addition, the surface quality prevents adhesion to adjacently installed cables. The OLFLEX®-ROBOT 900 DP with a tinned copper spiral shield is used for applications where EMI emissions need to be suppressed.

OLFLEX®-ROBOT 900 P Construction:

Finely stranded bare copper conductors; special elastomeric insulation; low friction core wrap; specially formulated UV resistant black polyurethane jacket with matte finish.



OLFLEX®-ROBOT 900 DP Construction:

Finely stranded bare copper conductors; special elastomeric insulation; low friction core wrap; tinned copper spiral shield, specially formulated UV resistant black polyurethane jacket with matte finish.



Cable Attributes							
	OR-05		FR-02		T-01		MP-05

Technical Data:

- | | |
|---|---|
| Minimum Bending Radius for continuous flexing: 15 x cable diameter | Color Code: from 0.5 mm ² up to 0.34 mm ² Black with white numbers, plus green/yellow ground Cores according to DIN 47100 |
| Max. Torsion (twist): +/- 360° per Meter | |
| Temperature Range: -30°C to +80°C | |
| Rated Voltage: 300/500V | Nominal Capacitance: Cond./ cond. approx. 30.5 pF/Ft Cond./ cond./ shield approx. 36.6 pF/Ft |
| Test Voltage: from 0.5 mm ² up to 0.34 mm ² 3000V 1500V | Conforms to CE Low Voltage Directive |
| Conductor Stranding: Flexible Fine Wire | |

OLFLEX®-ROBOT 900 P/ 900 DP

Robotic Cable for Continuous Twisting Motion



OLFLEX®-ROBOT 900 P: Robotic Cable for Continuous Twisting Motion

Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Approx. Weight lbs/mft	kg/km	Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Approx. Weight lbs/mft	kg/km
26 AWG (18/38) 0.14 mm ²						16 AWG (30/30) 1.50 mm ²					
811440	3	.169	4.3	13	19	28198	18	.622	15.8	300	446
24 AWG (14/34) 0.25 mm ²						14 AWG (50/30) 2.50 mm ²					
811442	3	.189	4.8	15	22	28200	25	.776	19.7	429	638
811443	4	.201	5.1	19	28	28181 3 .366 9.3 91 136					
21 AWG (16/32) 0.50 mm ²						28182 4 .398 10.1 115 171					
28145	18	.441	11.2	81	120	12 AWG (50/28) 4 mm ²					
28146	25	.524	13.3	171	254	28184 3 .484 12.3 152 226					
19 AWG (24/32) 0.75 mm ²						8 AWG (80/26) 10 mm ²					
28160	4	.260	6.6	42	63	28300 3 .720 18.3 347 517					
28164	14	.449	11.4	134	199	6 AWG (128/26) 16 mm ²					
18 AWG (32/32) 1.00 mm ²						28400 3 .843 21.4 484 721					
28170	2	.244	6.2	32	47	4 AWG (200/26) 25 mm ²					
28171	3	.256	6.5	41	61	28187 3 1.031 26.2 791 1178					
28172	4	.283	7.2	51	76	2 AWG (280/26) 35 mm ²					
28174	7	.366	9.3	88	131	28189 3 1.134 28.8 1047 1559					
28176	12	.453	11.5	145	216						
28185*	18	.650	16.5	253	376						
28178	18	.520	13.2	204	304						
28186*	25	.681	17.3	316	470						
28180	25	.646	16.4	291	433						
28190	34	.744	18.9	380	565						
28191	41	.843	21.4	468	696						

* Includes one individually shielded pair (17 AWG)

OLFLEX®-ROBOT 900 DP: Shielded Robotic Cable for Continuous Twisting Motion

Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Approx. Weight lbs/mft	kg/km	Part Number	Number of Conductors includes ground	Nominal Outer Diameter inches	mm	Approx. Weight lbs/mft	kg/km
26 AWG (18/38) 0.14 mm ²						22 AWG (19/34) 0.34 mm ²					
28100	12	.264	6.7	46	69	28135	4	.224	5.7	31	46
28105	3 pairs	.232	5.9	30	44	28136	5 pairs	.358	9.1	77	114
24 AWG (14/34) 0.25 mm ²						16 AWG (30/30) 1.50 mm ²					
28126	25	.437	11.1	123	183	28195	12	.551	14.0	265	395
						28199 18 .665 16.9 396 590					

OLFLEX® ROBOT F1



OLFLEX® ROBOT F1 is designed to provide high mechanical performance on multi-axis robots, polyarticulated robots, gantry cranes, long length

drag-chains and other applications requiring bending and torsion movements. A combination of motor, servo-motor, and data/signal configurations are available.

OLFLEX® ROBOT F1 Construction:

Highly flexible bare copper conductors; special polymer insulation; non-friction tape, overall tinned copper spiral shield (when applicable); oil, abrasion, and welding spark resistant polyurethane elastomer jacket



Minimums may apply.

Cable Attributes							
	OR-04		FR-02		TCF-01		MP-04

Technical Data:

	Minimum Bending Radius for continuous flexing:	8 x cable diameter		Color Code:	Numbered plus green/yellow ground or colors plus green/yellow ground depending on construction
	Max. Torsion (Robot Wrist):	+/- 360° per Meter		Conductor Stranding:	Class 6 IEC 228
	Temperature Range:	-20°C to + 80°C		Approvals:	UL-AWM CSA-AWM
	Rated Voltage:	600 V	Conforms to CE Low Voltage Directive		
	Test Voltage:	2500 V			

Part Number	Part Number	Description	Nominal Outer Diameter		Approx. Weight	
UL Style	Non UL Style		inches	mm	lbs/mft	kg/km
Motor Cable						
57287	52689	1 Pair (24 AWG) I.S. + 4c (22 AWG) with overall spiral shield	.276	7.0	40	60
57288	51796	1 Pair (22 AWG) I.S. + 4c (20 AWG) with overall spiral shield	.335	8.5	67	100
57289	47746	1 Pair (20 AWG) I.S. + 4c (16 AWG) with overall spiral shield	.492	12.5	141	210
57290	47744	1 Pair (16 AWG) I.S. + 4c (10 AWG) with overall spiral shield	.709	18.0	330	490
Servo Motor Cable						
57291	47855	5 Pair (24 AWG) I.S. + 1 pr (20 AWG) + 4c 16AWG with overall spiral shield	.669	17.0	215	320
57292	45006	4 Pair (24 AWG) Overall Shielded. + 4 tri (20 AWG)	.531	13.5	155	230
Data/Signal Cable						
57293	52150	3 Pair (26 AWG) with overall spiral shield	.256	6.5	26	38
57294	47747	5 Pair (24 AWG) with overall spiral shield	.374	9.5	64	95
57295	47748	4 Quads (22 AWG) with overall spiral shield	.453	11.5	94	140
57296	52690	4 Pair (24 AWG) with overall spiral shield	.315	8.0	50	75
57297	56373	1 Pair (18 AWG) I.S.+ 4 Quads (18 AWG)	.590	15.0	228	340
57298	49297	2 Pair (20 AWG) I.S. + 5 Quads (20 AWG) + 4c (20 AWG) with overall spiral shield	.669	17.0	235	350