LAPP GROUP	**DATA SHEET**	DB0037000EN
	ÖLFLEX® SERVO 9YSLCY-JB with UL AWM approvals for USA & Canada	Valid from : 10.06.2010

Application

ÖLFLEX® SERVO 9YSLCY-JB are flexible cables having special EMC- performance due double shielded, low capacitance design. UL -AWM approvals for USA & Canada. Ideal for frequency converters for variable speed of 3 ~ AC motors, small, medium and large sizes. Contrary to usage of PVC-insulated cables, PP -insulated cables shows significant reduction of useless reactive power always needed for charging and discharging the cable during operating of the frequency converter. Type 9YSLCY-JB BK has a special concentric conductor array design, where the PE- functionality is to split into 3 individual conductors and its screen. Its highly symmetrical and concentric design avoids from all cable-relevant parts of high frequency discharge currents, passing lubricating film of motors bearings. This effect may damage motors bearing, especially if switching frequency of the frequency converter is very high (up to 20 kHz) and / or long cable lengths are required. This balanced design also improves EMC noise situation due reduction of the common mode coupling effects of the whole drive system.

Cables are suitable in dry, damp and wet rooms/ locations. 9YSLCY-JB BK version is UV-light protected for outdoor use incl. direct burial. Its AWM approval does not cover an outdoor usage in USA and Canada. Good resistance against acids, caustic solutions and certain oils at room temperature. Suitable for occasional, non repeatable flexing, as well as for static use. Not suitable for continuously moving appliance under tensile load or if during flexing, accompanied by guidance. Conform to Europeans LVD & ROHS directives.

Design

Conductor	fine wire strand of bare copper, in acc. to IEC/EN/DIN 60228 / VDE 0295 Cl. 5
Insulation:	Polypropylene (PP) Type 9Y, low capacitance
Cond.-Ident-Code:	acc. HD 308 S2 / VDE 0293-308 with one common or to split gnye protectiv conductor.
Twisting	4 -conductors or 3 + 3 -conductors, twisted together in one layer.
Screening:	Aluminium -Mylar tape wrap, metal-side outwards, on top a tinned copper wire braid.
Sheath:	9YSLCY: PVC sheath transparent flame retardant & self-extinguishing. 9YSLCY BK: PVC sheath black, allows outdoor- and direct burial use, flame retardant & self-extinguishing acc. IEC 60332.1-2, VW-1, FT1

Marking on the sheath:

P/N 003700 up to 0037014: Black imprint on transparent sheet:
Example: # 0037011

LAPPKABEL STUTTGART ÖLFLEX® SERVO 9YSLCY-JB 4G120 IEC 0.6/1kV 80° ROHS CE
AWM Style 2570 1000V 80° VW-1 c AWM II A/B 1000V 80° FT-1 E63634

P/N 0037015 up to 0037028: White imprint on black sheet:
Example: # 0037026

LAPPKABEL STUTTGART ÖLFLEX® SERVO 9YSLCY-JB BK 3X120+3G16 IEC 0.6/1kV 90° ROHS CE
AWM Style 2570 1000V 80° VW-1 c AWM II A/B 1000V 80° FT-1 E63634

Electrical properties at 20°C

Specific insulation resistance		min. 20 GΩ x cm
Transfer impedance		max. 250 Ω / km at 30MHz
Nominal voltage	IEC U0/U:	600/1000V
	UL/CSA:	1000V
Test voltage:	core/core & core/braid	4000V
Further data:		see page 2 and 3

Mechanical and thermal characteristics:

Minimum bending radius	static:	4 x cable outer diameter
	flexing:	20 x cable outer diameter

Temperature range PN #003700 up to 0037014, ÖLFLEX SERVO 9YSLCY-JB, **transparent**

Static:	IEC/VDE/UL:	-40°C up to +80°C,
Occasional flexing:	IEC/VDE:	-5°C up to +80°C

Temperature range PN #0037015 up to 0037028, ÖLFLEX SERVO 9YSLCY-JB BK **black**

Static:	IEC/VDE:	-40°C up to +90°C,
	UL:	-40°C up to +80°C
Occasional flexing:	IEC/VDE:	-5°C up to +90°C

Flame propagation characteristic: Flame retardant acc. VDE 0282-332-1-2/IEC60332-1-2; VW-1, FT1

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U.I. Lapp GmbH
Schulze-Delitzsch Straße 25
D 70565 Stuttgart

USA & Canada		IEC	
U 1000 V		U0/U 0,6/1kV	
TRANSPARENT	80°C	TRANSAPRENT	80°C
BLACK	80°C	BLACK	90°C

UL AWM Approvals for USA & Canada

ÖLFLEX® SERVO 9YSLCY-JB

Table technical datas

U. I. Lapp part number	Products short name	No of conductors & size per conductor	Leiter- querschnitt entspricht mindestens	Cond. Spec. No of wires (nominal) x wire diameter (max)	Core-identcode HD 308 S2 / VDE 0293-308	features PVC jacket	EMC Copper braid's wire diameter (max)	Copper braid's nominal cross section (min)	Outer diameter (nominal)	(IEC) Power ampacity per line conductor	Inductance per conductor	Capacitance Cond/Cond	Capacitance cond/braid	Transfer Impedance		
														1 MHz Ohm/km max.	10 MHz Ohm/km max.	30 MHz Ohm/km max.
		mm²	AWG/kcmil	x mm			in mm	mm²	mm	A	approx. mH/km	approx. uF/km	approx. uF/km			
	ÖLFLEX SERVO 9YSLCY 4 Conductor design, Transparent															
0037000	9YSLCY-JB	4G1,5	16AWG	29x0,25	GNYE, BN, BK, GY	TM2 transparent	0,2	2,5	10,5	18	0,37	0,07	0,11	18	175	240
0037001	9YSLCY-JB	4G2,5	14AWG	50x0,25	GNYE, BN, BK, GY	TM2 transparent	0,2	4	11,8	26	0,34	0,08	0,13	11	95	210
0037002	9YSLCY-JB	4G4	12AWG	54x0,3	GNYE, BN, BK, GY	TM2 transparent	0,2	4	13,3	34	0,34	0,09	0,15	6	50	210
0037003	9YSLCY-JB	4G6	10AWG	82x0,3	GNYE, BN, BK, GY	TM2 transparent	0,2	6	14,9	44	0,32	0,12	0,15	7	60	150
0037004	9YSLCY-JB	4G10	8AWG	78x0,4	GNYE, BN, BK, GY	TM2 transparent	0,25	6	17,7	61	0,30	0,14	0,2	9	80	180
0037005	9YSLCY-JB	4G16	6AWG	126x0,4	GNYE, BN, BK, GY	TM2 transparent	0,25	6	21,5	82	0,29	0,12	0,23	4	32	190
0037006	9YSLCY-JB	4G25	4AWG	196x0,4	GNYE, BN, BK, GY	TM2 transparent	0,25	16	26,3	108	0,28	0,15	0,21	3	26	95
0037007	9YSLCY-JB	4G35	2AWG	276x0,4	GNYE, BN, BK, GY	TM2 transparent	0,3	16	29,7	135	0,27	0,19	0,26	2	13	85
0037008	9YSLCY-JB	4G50	1AWG	396x0,4	GNYE, BN, BK, GY	TM2 transparent	0,3	16	34,1	168	0,27	0,19	0,32	2	18	40
0037009	9YSLCY-JB	4G70	2/0AWG	532x0,4	GNYE, BN, BK, GY	TM2 transparent	0,3	16	40,9	207	0,26	0,25	0,32	2	18	45
0037010	9YSLCY-JB	4G95	3/0AWG	722x0,4	GNYE, BN, BK, GY	TM2 transparent	0,3	25	45,4	250	0,26	0,26	0,41	2	18	45
0037011	9YSLCY-JB	4G120	4/0AWG	931x0,4	GNYE, BN, BK, GY	TM2 transparent	0,3	25	49,8	292	0,26	0,27	0,43	2	18	45
0037012	9YSLCY-JB	4G150	250kcmil	1160x0,4	GNYE, BN, BK, GY	TM2 transparent	0,4	35	56,1	335	0,26	0,28	0,45	2	18	45
0037013	9YSLCY-JB	4G185	350kcmil	1420x0,4	GNYE, BN, BK, GY	TM2 transparent	0,4	35	61,4	382	0,26	0,28	0,47	2	18	45
0037014	9YSLCY-JB	4G240	450kcmil	1924x0,4	GNYE, BN, BK, GY	TM2 transparent	0,4	35	67,9	453	0,25	0,29	0,5	2	18	45
	ÖLFLEX SERVO 9YSLCY BK 3+3 Conductor design: symmetrical, Black															
0037015	9YSLCY-JB BK	3X1,5+3G0,25	16AWG/24AWG	29x0,25	3xGNGE,BN,BK,GY	TM3 black	0,2	2,5	11,1	18	0,37	0,07	0,11	18	175	240
0037016	9YSLCY-JB BK	3X2,5+3G0,5	14AWG/21AWG	50x0,25	3xGNGE,BN,BK,GY	TM3 black	0,2	4	12,9	26	0,34	0,08	0,13	11	95	210
0037017	9YSLCY-JB BK	3X4+3G0,75	12AWG/19AWG	54x0,3	3xGNGE,BN,BK,GY	TM3 black	0,2	4	13,6	34	0,34	0,09	0,15	6	50	210
0037018	9YSLCY-JB BK	3X6+3G1,0	10AWG/18AWG	82x0,3	3xGNGE,BN,BK,GY	TM3 black	0,2	6	15,2	44	0,32	0,09	0,15	7	60	150
0037019	9YSLCY-JB BK	3X10+3G1,5	8AWG/16AWG	78x0,4	3xGNGE,BN,BK,GY	TM3 black	0,25	6	17,4	61	0,30	0,12	0,2	9	80	180
0037020	9YSLCY-JB BK	3X16+3G2,5	6AWG/14AWG	126x0,4	3xGNGE,BN,BK,GY	TM3 black	0,25	6	20,0	82	0,29	0,14	0,23	4	32	190
0037021	9YSLCY-JB BK	3X25+3G4	4AWG/12AWG	196x0,4	3xGNGE,BN,BK,GY	TM3 black	0,25	16	24,3	108	0,28	0,12	0,21	3	26	95
0037022	9YSLCY-JB BK	3X35+3G6	2AWG/10AWG	276x0,4	3xGNGE,BN,BK,GY	TM3 black	0,3	16	27,5	135	0,27	0,15	0,26	2	13	85
0037023	9YSLCY-JB BK	3X50+3G10	1AWG/8AWG	396x0,4	3xGNGE,BN,BK,GY	TM3 black	0,3	16	31,1	168	0,27	0,19	0,32	2	18	40
0037024	9YSLCY-JB BK	3X70+3G10	2/0AWG/8AWG	532x0,4	3xGNGE,BN,BK,GY	TM3 black	0,3	16	37,1	207	0,26	0,19	0,32	2	18	45
0037025	9YSLCY-JB BK	3X95+3G16	3/0AWG/6AWG	722x0,4	3xGNGE,BN,BK,GY	TM3 black	0,3	25	40,0	250	0,26	0,25	0,41	2	18	45
0037026	9YSLCY-JB BK	3X120+3G16	4/0AWG/6AWG	931x0,4	3xGNGE,BN,BK,GY	TM3 black	0,3	25	42,6	292	0,26	0,26	0,43	2	18	45
0037027	9YSLCY-JB BK	3X150+3G25	250kcmil/4AWG	1160x0,4	3xGNGE,BN,BK,GY	TM3 black	0,4	35	50,0	335	0,26	0,27	0,45	2	18	45
0037028	9YSLCY-JB BK	3X185+3G35	350kcmil/AWG2	1420x0,4	3xGNGE,BN,BK,GY	TM3 black	0,4	35	55,6	382	0,26	0,28	0,47	2	18	45