

ÖLFLEX[®] SERVO 2YSLCY-JB
DB 0036425
 valid from: 2014-06-23

Application

ÖLFLEX[®] SERVO 2YSLCY-JB, ÖLFLEX[®] SERVO 2YSLCYK-JB and ÖLFLEX[®] SERVO 2YSLC-JB BK are flexible cables, having special EMC-performance due to double shield, with low capacitance design, PVC sheath and PE insulated cables; ideal suitable for by frequency converters operated three-phase motors of small, medium and large sizes. The cables are designed for use in dry, humid or wet conditions. They are suitable for free, non-continuously recurring movements without tensile load or compulsory guidance and also for fixed installation. At room temperature they are widely resistant to acids, alkali-resistant and resistant to certain oils.

Contrary to usage of PVC insulated cables, PE insulated cables shows significant reduction of useless reactive power always needed for charging and discharging the cable during operating of the frequency converter.

2YSLCYK having a special concentric conductor array design, where PE conductor is split into 3 individuals. Its 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 20kHz) and / or long cable lengths are required. This design also improves EMC noise situation of the whole drive system.

Version Type "a" (2YSLCY-JB): with transparent PVC-outer sheath for use in rooms

Version Type "b" (2YSLCYK-JB): with black UV resistance PVC-outer sheath, flexible at low temperatures, for outdoor use

Version Type "c" (2YSLCY-JB BK): with black UV resistance PVC-outer sheath for outdoor use

Application range:

connecting cable between frequency converter and motor, paper industry, chemical industry, heavy industry

Design

Design	based on DIN VDE 0276-603 / HD 603 S1 + A3 DIN 57250-1 resp. VDE 0250-1
Conductor	fine wire strands of bare copper, acc. to IEC 60228 resp. VDE 0295, Class 5
Core insulation	PE compound acc. to DIN EN 50290-2-23 resp. VDE 0819-103, table 1, column L/MD
Core identification	coloured in acc. to DIN VDE 0293-308 resp. HD 308 S2
Stranding	Type "a", 2YSLCY-JB: 4 conductors twisted together in one layer Type "b", 2YSLCYK-JB: 3+3 cores twisted concentrically, protective conductor divided into three positioned in the gusset Type "c", 2YSLCY-JB BK: 4 conductors twisted together in one layer
Screening	double screening with aluminium-coated plastic foil (metal-side outwards) and braid of tinned copper wires
Outer sheath	Type "a", 2YSLCY: PVC sheath TM2 acc. to EN 50363-4-1 resp. VDE 0207-363-4-1 colour: transparent Type "b", 2YSLCYK: PVC sheath, acc. to EN 50363-4-1 resp. VDE 0207-363-4-1, UV resistant, cold flexible, outdoor and direct burial use colour: black, similar RAL 9005 Type "c", 2YSLCY-BK: PVC sheath TM2 acc. to EN 50363-4-1 resp. VDE 0207-363-4-1 UV resistant, outdoor and direct burial use, colour: black, similar RAL 9005

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Electrical properties

Nominal voltage	U ₀ /U	600 / 1000 V
Test voltage	core/core, core/screen	4000 V AC
Specific insulation resistance		> 20 G Ω x cm
Surface transfer impedance	at 30 MHz	≤ 250 Ω / km

Mechanical and thermal properties

Min. bending radius	occasional flexing: fixed installation:	15 x outer diameter 4 x outer diameter
Temperature range	Type "a", 2YSLCY: occasional flexing fixed installation	-5 °C up to +70 °C max. conductor temperature -40 °C up to +70 °C max. conductor temperature
	Type "b", 2YSLCYK: gelegentlich bewegt fest verlegt	-15 °C bis +70 °C max. conductor temperature -40 °C bis +70 °C max. conductor temperature
	Type "c", 2YSLCY-JB BK: occasional flexing: fixed installation	- 5 °C up to +70 °C max. conductor temperature -40 °C up to +70 °C max. conductor temperature
Flammability		flame retardant acc. to IEC 60332-1-2 resp. VDE 0482-332-1-2
UV-resistance	Type „b“ and „c“	acc. to EN 4892-2-2006, method A (change of colour allowed) EN 50525-1 resp. VDE 0285-525-1, cables with black sheath are suitable for a permanent outdoor use
Tests		acc. to IEC 60811 resp. VDE 0473, VDE 0472, EN 50395, EN50396
EC Directives		This cable is conform to the EC-Directives 2006/95/EC (Low Voltage Directive) and 2011/65/EG (RoHS, Restriction of the use of certain hazardous substances).

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U.I. Lapp GmbH Schulze-Delitzsch Straße 25 D 70565 Stuttgart	Date	19.05.2014
Table of Technical datas ÖLFLEX® SERVO 2YSLCY-JB		
U0/U 0,6/1kV		

Cables type short name	U. I. Lapp Part Number	Number of cores and mm² per conductor	Conductor design: approx. number of wires x nominal diameter	Coreidentcode HD 308 S2 resp. VDE 0293-308	Speciality: PVC-jacket , YK = low temp rating & outdoor use	Copper braid: wire diameter (max)	Copper braid: nominal cross section (min)	Outer diameter (nominal)	Ampacity per Conductor at env. temp of 30°C in A	Inductance* per conductor	Capacitance* core/core	Capacitance* core/copper braid	Transfer Impedance		
													in mm	in mm²	in mm
ZYSLCY-JB	0036425	4G1.5	29x0.25	GNYE, BN, BK, GY	Y, transparent	0.21	3	11.4	18	0.366	0.07	0.11	-	-	240
ZYSLCY-JB	0036426	4G2.5	50x0.25	GNYE, BN, BK, GY	Y, transparent	0.21	4	12.4	26	0.340	0.08	0.13	18	175	210
ZYSLCY-JB	0036427	4G4	54x0.3	GNYE, BN, BK, GY	Y, transparent	0.21	4	15.6	34	0.339	0.09	0.15	11	95	210
ZYSLCY-JB	0036428	4G6	82x0.3	GNYE, BN, BK, GY	Y, transparent	0.21	6	17.0	44	0.321	0.09	0.15	6	50	150
ZYSLCY-JB	0036429	4G10	78x0.4	GNYE, BN, BK, GY	Y, transparent	0.26	6	19.6	61	0.301	0.12	0.20	7	60	180
ZYSLCY-JB	0036430	4G16	126x0.4	GNYE, BN, BK, GY	Y, transparent	0.26	6	22.1	82	0.285	0.14	0.23	9	80	190
ZYSLCY-JB	0036431	4G25	196x0.4	GNYE, BN, BK, GY	Y, transparent	0.26	16	26.3	108	0.280	0.14	0.24	4	32	95
ZYSLCY-JB	0036432	4G35	276x0.4	GNYE, BN, BK, GY	Y, transparent	0.31	16	29.5	135	0.271	0.15	0.26	3	26	85
ZYSLCY-JB	0036433	4G50	396x0.4	GNYE, BN, BK, GY	Y, transparent	0.31	16	35.8	168	0.270	0.19	0.32	2	13	40
ZYSLCY-JB	0036434	4G70	532x0.4	GNYE, BN, BK, GY	Y, transparent	0.31	16	40.3	207	0.262	0.19	0.32	2	18	45
ZYSLCY-JB	0036435	4G95	722x0.4	GNYE, BN, BK, GY	Y, transparent	0.31	25	46.5	250	0.261	0.25	0.41	2	18	45
ZYSLCY-JB	0036436	4G120	931x0.4	GNYE, BN, BK, GY	Y, transparent	0.31	25	53.2	292	0.256	0.11	0.18	2	18	45
ZYSLCY-JB	0036437	4G150	1160x0.4	GNYE, BN, BK, GY	Y, transparent	0.41	35	57.3	335	0.256	0.11	0.18	2	18	45
ZYSLCY-JB	0036438	4G185	1420x0.4	GNYE, BN, BK, GY	Y, transparent	0.41	35	62.3	382	0.255	0.11	0.18	2	18	45
ZYSLCY-JB	0036452	4G240	1924x0.4	GNYE, BN, BK, GY	Y, transparent	0.41	35	72.3	453	0.254	0.11	0.18	2	18	45
ZYSLCYK-JB	0036439	3X1.5+3G0.25	29x0.25	3xGNGE, BN, BK, GY	YK, black	0.21	2,5	11.4	18	0.366	0.07	0.11	-	-	240
ZYSLCYK-JB	0036440	3X2.5+3G0.5	50x0.25	3xGNGE, BN, BK, GY	YK, black	0.21	4	12.4	26	0.340	0.08	0.13	18	175	210
ZYSLCYK-JB	0036441	3X4+3G0.75	54x0.3	3xGNGE, BN, BK, GY	YK, black	0.21	6	14.4	34	0.339	0.09	0.15	11	95	210
ZYSLCYK-JB	0036442	3X6+3G1.0	82x0.3	3xGNGE, BN, BK, GY	YK, black	0.21	6	15.7	44	0.321	0.09	0.15	6	50	150
ZYSLCYK-JB	0036443	3X10+3G1.5	78x0.4	3xGNGE, BN, BK, GY	YK, black	0.26	6	18.0	61	0.301	0.12	0.20	7	60	180
ZYSLCYK-JB	0036444	3X16+3G2.5	126x0.4	3xGNGE, BN, BK, GY	YK, black	0.26	10	20.2	82	0.285	0.14	0.23	9	80	190
ZYSLCYK-JB	0036445	3X25+3G4	196x0.4	3xGNGE, BN, BK, GY	YK, black	0.26	10	23.8	108	0.280	0.14	0.24	4	32	95
ZYSLCYK-JB	0036446	3X35+3G6	276x0.4	3xGNGE, BN, BK, GY	YK, black	0.31	16	26.9	135	0.271	0.15	0.26	3	26	85
ZYSLCYK-JB	0036447	3X50+3G10	396x0.4	3xGNGE, BN, BK, GY	YK, black	0.31	16	32.6	168	0.270	0.19	0.32	2	13	40
ZYSLCYK-JB	0036448	3X70+3G10	532x0.4	3xGNGE, BN, BK, GY	YK, black	0.31	20	36.4	207	0.262	0.19	0.32	2	18	45
ZYSLCYK-JB	0036449	3X95+3G16	722x0.4	3xGNGE, BN, BK, GY	YK, black	0.31	20	42.0	250	0.261	0.25	0.41	2	18	45
ZYSLCYK-JB	0036450	3X120+3G16	931x0.4	3xGNGE, BN, BK, GY	YK, black	0.31	25	47.8	292	0.256	0.11	0.18	2	18	45
ZYSLCYK-JB	0036451	3X150+3G25	1160x0.4	3xGNGE, BN, BK, GY	YK, black	0.41	25	51.6	335	0.256	0.11	0.18	2	18	45
ZYSLCYK-JB	0036479	3X185+3G35	1420x0.4	3xGNGE, BN, BK, GY	YK, black	0.41	35	56.5	382	0.255	0.11	0.18	2	18	45
ZYSLCYK-JB	0036453	3X240+3G50	1924x0.4	3xGNGE, BN, BK, GY	YK, black	0.41	35	65.1	453	0.254	0.11	0.18	2	18	45
ZYSLCY-JB BK	1136450	4G1.5	29x0.25	GNYE, BN, BK, GY	Y, black	0.21	3	11.4	18	0.366	0.07	0.11	-	-	240
ZYSLCY-JB BK	1136451	4G2.5	50x0.25	GNYE, BN, BK, GY	Y, black	0.21	4	12.4	26	0.340	0.08	0.13	18	175	210
ZYSLCY-JB BK	1136452	4G4	54x0.3	GNYE, BN, BK, GY	Y, black	0.21	4	15.6	34	0.339	0.09	0.15	11	95	210
ZYSLCY-JB BK	1136453	4G6	82x0.3	GNYE, BN, BK, GY	Y, black	0.21	6	17.0	44	0.321	0.09	0.15	6	50	150
ZYSLCY-JB BK	1136454	4G10	78x0.4	GNYE, BN, BK, GY	Y, black	0.26	6	19.6	61	0.301	0.12	0.20	7	60	180
ZYSLCY-JB BK	1136455	4G16	126x0.4	GNYE, BN, BK, GY	Y, black	0.26	6	22.1	82	0.285	0.14	0.23	9	80	190
ZYSLCY-JB BK	1136456	4G25	196x0.4	GNYE, BN, BK, GY	Y, black	0.26	16	26.3	108	0.280	0.14	0.24	4	32	95
ZYSLCY-JB BK	1136457	4G35	276x0.4	GNYE, BN, BK, GY	Y, black	0.31	16	29.5	135	0.271	0.15	0.26	3	26	85
ZYSLCY-JB BK	1136458	4G50	396x0.4	GNYE, BN, BK, GY	Y, black	0.31	16	35.8	168	0.270	0.19	0.32	2	13	40
ZYSLCY-JB BK	1136459	4G70	532x0.4	GNYE, BN, BK, GY	Y, black	0.31	16	40.3	207	0.262	0.19	0.32	2	18	45
ZYSLCY-JB BK	1136460	4G95	722x0.4	GNYE, BN, BK, GY	Y, black	0.31	25	46.5	250	0.261	0.25	0.41	2	18	45
ZYSLCY-JB BK	1136461	4G120	931x0.4	GNYE, BN, BK, GY	Y, black	0.31	25	53.2	292	0.256	0.11	0.18	2	18	45
ZYSLCY-JB BK	1136462	4G150	1160x0.4	GNYE, BN, BK, GY	Y, black	0.41	35	57.3	335	0.256	0.11	0.18	2	18	45
ZYSLCY-JB BK	1136463	4G185	1420x0.4	GNYE, BN, BK, GY	Y, black	0.41	35	62.3	382	0.255	0.11	0.18	2	18	45
ZYSLCY-JB BK		4G240	1924x0.4	GNYE, BN, BK, GY	Y, black	0.41	35	72.3	453	0.254	0.11	0.18	2	18	45

*Recommended values at 800 Hz