

0036425	DATA SHEET	
Valid from: 03.02.2022	ÖLFLEX® SERVO 2YSLCY-JB	

Application

ÖLFLEX® SERVO 2YSLCY-JB, ÖLFLEX® SERVO 2YSLCYK-JB and ÖLFLEX® SERVO 2YSLC-JB BK are double shielded low capacitance cables of flexible design, with PVC sheath and PE core insulation. They are suitable for frequency converters operated by three-phase current motors. All three versions are also suitable for use in dry, damp or wet areas. They are largely resistant to acids, alkalis and certain oils at room temperature.

They are suitable for occasional, non-automated movements. The maximum tensile load is 15 N/mm² of conductor cross-section during installation and operation. Compulsory guidance is not permitted.

The earthing concept for the optimised version (version type "b" (2YSLCYK-JB)) with the protective conductor splitted in thirds is composed of the defined cross-sections of the protective conductors and the screening braid.

This design avoids all cable-relevant parts from high frequency discharge currents, which may damage motor bearings especially at high frequencies and long cable lengths.

This design also improves EMC noise situation of the whole drive system. Additionally, due to the design the frequency converter system is burdened with lower capacitive reactive power compared to PVC insulated cables.

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

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:

Connection 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
Certification	EN 13501-6 and EN 50575 Classification of fire behaviour (article/dimension range see www.lappkabel.com/cpr)
Conductor	fine wire strands of bare copper, acc. to IEC 60228 resp. EN 60228, Class 5
Core insulation	PE compound acc. to EN 50290-2-23, table 1, column L/MD
Core identification	coloured in acc. to 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
Screen	double screening with aluminium-coated plastic foil (metal-side outwards) and braid of tinned copper wires, braid coverage min. 70% (nominal value)

Creator: LABU/PDC Released: ALTE/PDC	Document: DB0036425EN Version: 12	Page 1 of 4
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PD 0019/05_04.18EN

0036425	DATA SHEET	
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Outer sheath

Type "a", 2YSLCY:
PVC sheath TM2 acc. to EN 50363-4-1
colour: transparent

Type "b", 2YSLCYK-JB:
PVC sheath, acc. to EN 50363-4-1,
UV resistant, cold flexible, outdoor use
colour: black, similar RAL 9005

Type "c", 2YSLCY-BK:
PVC sheath TM2 acc. to EN 50363-4-1
UV resistant, outdoor use,
colour: black, similar RAL 9005

Electrical properties

Specific insulation resistance (20 °C)	> 20 G Ω x cm
Nominal voltage	U ₀ / U: 600 / 1000 V
Test voltage	core / core: 4000 V AC core / screen: 4000 V AC
Surface transfer impedance	$\leq$ 250 Ω / km (at 30 MHz)

Mechanical and thermal properties

Min. bending radius	occasional flexing: 15 x outer diameter fixed installation: 4 x outer diameter
Temperature range	Type "a", 2YSLCY: occasional flexing: -5 °C up to +70 °C max. conductor temperature fixed installation: -40 °C up to +70 °C max. conductor temperature Type "b", 2YSLCYK-JB: occasional flexing: -15 °C up to +70 °C max. conductor temperature fixed installation: -40 °C up to +70 °C max. conductor temperature Type "c", 2YSLCY-JB BK: occasional flexing: -5 °C up to +70 °C max. conductor temperature fixed installation: -40 °C up to +70 °C max. conductor temperature
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2
UV-resistance	Type „b“ and „c“ EN 50525-1 resp. VDE 0285-525-1, cables with black sheath are suitable for a permanent outdoor use, acc. to EN 4892-2-2006, method A (change of colour allowed)
Tests	acc. to IEC 60811 resp. EN 60811, VDE 0472, EN 50395, EN50396
General requirements	These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive)
	A part of these cables (see www.lappkabel.com/cpr) are classified in accordance with the EU-Regulation no. 305/2011 (CPR).
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

Creator: LABU/PDC Released: ALTE/PDC	Document: DB0036425EN Version: 12	Page 2 of 4
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0036425	DATA SHEET	
Valid from: 03.02.2022	ÖLFLEX® SERVO 2YSLCY-JB	

Creator: LABU/PDC Released: ALTE/PDC	Document: DB0036425EN Version: 12	Page 3 of 4
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We reserve all rights according to DIN ISO 16016.

PD 0019/05_04.18EN

0036425	DATA SHEET	
Valid from: 03.02.2022	ÖLFLEX® SERVO 2YSLCY-JB	

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	Inductance* per conductor	Capacitance* core/core	Capacitance* core/copper braid	Transfer Impedance		
													1 MHz in Ohm/km	10 MHz in Ohm/km	30 MHz in Ohm/km
2YSLCY-JB	0036425	4G1.5	29x0.25	GNYE, BN, BK, GY	Y, transparent	0.21	2.5	11.4	18	0.366	0.07	0.11	-	-	240
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-JB	0036448	3X70+3G10	532x0.4	3xGNGE,BN,BK,GY	YK, black	0.31	16	36.4	207	0.262	0.19	0.32	2	18	45
2YSLCYK-JB	0036449	3X95+3G16	722x0.4	3xGNGE,BN,BK,GY	YK, black	0.31	16	42.0	250	0.261	0.25	0.41	2	18	45
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCYK-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
2YSLCY-JB BK	1136450	4G1.5	29x0.25	GNYE, BN, BK, GY	Y, black	0.21	2.5	11.4	18	0.366	0.07	0.11	-	-	240
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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
2YSLCY-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

Creator: LABU/PDC Released: ALTE/PDC	Document: DB0036425EN Version: 12	Page 4 of 4
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PD 0019/05_04.18EN