A2 · Selection tables

Usage criteria										Ca	able	des	sign	atio	n									
LAPP GROUP	ÖLFLEX® SERVO FD 781 CY	ÖLFLEX® SERVO FD 796 P	ÖLFLEX® SERVO FD 796 CP	ÖLFLEX® SERVO FD 7DSL	SERVO cable acc. to SIEMENS® standard 6FX 8PLUS- green or orange	SERVO cable acc. to INDRAMAT® standard INK	SERVO cable acc. to LENZE® standard	Special Encoder & Resolver cables	ÖLFLEX® CHAIN 808 P	ÖLFLEX® CLASSIC FD 810	ÖLFLEX® CLASSIC FD 810 CY	ÖLFLEX® CLASSIC FD 810 P	ÖLFLEX® CLASSIC FD 810 CP	OLFLEX® ROBUST FD.C.	ÖLFLEX® PETRO FD 865 CP	ÖLFLEX® FD 855 P	ÖLFLEX® FD 855 CP	OLFLEX® CHAIN 809 SC	OLFLEA CHAIN 809 SC CT	ÖLFLEX® FD 90 CY	ÖLFLEX® CHAIN 809	ÖLFLEX® CHAIN 809 CY	OLFLEX® FD 891	ÖLFLEX® FD 891 P
S Use																							,	
For industrial mach. acc. to EN 60204 Part 1/VDE 0113 For servo drives powered by frequency converters For servo drives, low capacitance For encoders, feedback systems, sensors For free-arm robots/torsional load For indoor application, flexing For outdoor application, flexing For fieldbus systems	<i>V</i>	ンソソソソ	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ソソソソソソ	ソソソソソソ	V V	/ /	V	<i>V</i>	V 1		V & V & V V		V & V V V V V V V V V V V V V V V V V V	0		V	V	V 1	/ V	
For video transmission: RGB signal transmission For North America with UL + CSA approval For use in oily environments, enhanced oil resistance For use in areas with drilling fluids acc. to NEK 606 For use in areas with bio-oils For torsion in wind turbine generators (see catalogue page)	V	V	V V	V V	V	<i>y</i>	V V	٧ ٧	V V	/		V	V 1	/ v	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	V	V 1	/ 6	/ / /	V	V	v	/	' ' '
Temperature range +105 °C]									
+90 °C +80 °C +70 °C +60 °C +5 °C -5 °C	•					•	•		•		•	•	•								•	•		
-10 °C -20 °C -30 °C -40 °C	A	•	•		•	•		•				A	•			•	•			A		A .		
-50 °C Minimum hending radius					A			A																
5 x D																V								
6.5 x D 7.5 x D 10 x D 12.5 x D	V	V	VV	V	V	V	V	V	0 0 0 0	, ,	V	V	V 1	/ v	V		V	/ 6	, ,	V	8	8	/ V	' V (
15 x D Installation																								
For chains with low radii For chains with minimal space For lower power/weight ratio in chain For 24-hour operation with high cycle numbers For high acceleration > 10 m/s² For very high acceleration up to 50 m/s² For travel speeds up to 5 m/s, travel lengths up to 10 m For travel speeds up to 10 m/s, travel lengths up to 10 m	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ノノノノノノノノノ	ンンンンンンンン	ンンンンンンン	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2222	7777 77	ソンソン ソン	V V V	7777	ソソソソソソソ	ソソソソソソソ	V 1 V 1 V 1 V 1 V 1 V 1 V 1 V 1 V 1 V 1	1 0	, V	ソソソソソソソ	V V I	/ 6		ンソンソンソンソン	V V	V	///////////////////////////////////////	/ V / V / V / V / V / V / V / V / V / V
For travel speeds up to 5 m/s, travel lengths up to 100 m		V	VV		V	V	V	V						/ V	V	V	V							
350 Vss 30/300 V AC 300/500 V AC					V	V	V	V V	VV	/ V	V	V	V 1	/ V	· V	V	V	,			V	V 1	v v	<i>' '</i>
600/1000 V AC 600 V acc. to UL/CSA	V		VV	V	~	~	V										(/ 1	V	V		-	VV	'V
Fine wire, VDE class 5, stranded copper conductor Extra-fine wire, VDE class 6, stranded copper conductor Ultra-fine wire, VDE class 6, stranded copper conductor PVC/special PVC core insulation Elastomer core insulation	V	V	VV	·		V	0		v v	/ /	V	v v	V .	/ v	V	V	v ¹	/ 6	V	V	v v	V	/	' V (
PE/cellular PE/cellular PE foam skin core insulation Polyethylene/polypropylene core insulation TPE core insulation Special TPE (P4/11) core insulation	V	V	VV	V	V	0	0	V						/ V	V	v	V							
Halogen-free core insulation Number printing VDE colour code DIN 47100 colour code/special colour code	V	V	VV	/	V	V	0	N	VV	/ /	V	V	V 1	/ v	V	V	V	/ 6	,	V	V	V	1	' V (
Pair screening PiCY/PiMF/STP Overall screening Special PVC sheath	V	V V	0	V	8	~	8	0	V	, ,	V V	V	V	V	V	V	V	/ 6	/ /	V		V	V	,
PUR sheath, abrasion-resistant, cut-resistant Rubber sheath Special TPE (P4/11) sheath, bio-oil-resistant Halogen-free sheath		V	VV		_	V	6	V	V V			V		/ v	,		V							

Jsage criteria													Ca	able	des	igna	tior											
																										0	۲ ۳	; Q
	900 P	900 DP	-1-	NSHTÖU	PUR		y.	Splus SP plus	UNITRONIC® FD CP (TP) plus	BUS ASI FD (TPE) A	BUS ASI FD P FRNC	BUS IBS FD P	LD FD P	PB FD P A	SOR FD	GB	5 FD + BK	D Cat.5e	at.5 FD	5 FD	at.6 _A	ETHERLINE® TORSION Cat.6, Y		ETHERLINE® TORSION Cat.6, P		FD PE-PUR HITRONIC® POF DI IDI EY EN PNC PA-PI IP	HITRONIC® PCF DUPLEX FD PNC PVC-PUR	HITRONIC® PCF DUPLEX FD PNC PVC-PVC
	ÖLFLEX® ROBOT 900 P	ÖLFLEX® ROBOT 900 DP	ÖLFLEX® ROBOT F1	ÖLFLEX® CRANE NSHTÖU	ÖLFLEX® CRANE PUR	UNITRONIC® FD	UNITRONIC® FD CY	UNITRONIC® FD CP plus	ONIC® FD	UNITRONIC® BUS	UNITRONIC® BUS	UNITRONIC® BUS	UNITRONIC® BUS LD FD P	UNITRONIC® BUS PB FD P A	UNITRONIC® SENSOR FD	KOAXIAL-KABEL RGB	ETHERLINE® Cat.5 FD + BK	ETHERLINE® EC FD Cat.5e	ETHERLINE® PN Cat.5 FD	EIHERLINE® Cat.6 FD	ETHERLINE® FD Cat.6A	KLINE® TOR	ETHERLINE® TORSION Cat.	ETHERLINE® TORSION	NIC® POF S	-PUR NIC® POF D	NIC® POF DU	NIC® PCF DU
	ÖLFLE	ÖLFLE	JLFLE	ÖLFLE	ÖLFLE	NITE I	N N	NITR	NITR	JNITR	JNITR	JNITR	NITE I		UNITR	KOAXI	THER	THE	THE	Ä	THER	THE	THEK	Ŧ	HTRO	FD PE-PUR	1 SE	HTRO
Use							_					_				_	_		_		_							_
or industrial mach. acc. to EN 60204 Part 1/VDE 0113 or servo drives powered by frequency converters or servo drives, low capacitance	0		0	V	~	V 1	/ /	' V	~	~	V	V	V 1	V V	/ /	V	V	V	/	/	/	/	/ (/ 0	' v	' V	' '	~
or encoders, feedback systems, sensors or free-arm robots/torsional load or indoor application, flexing or outdoor application, flexing	ンソソソ	V	0/	V	V	V 1	/ V		V	V	V	V V	7	/ / /	1 1	V	V	V	/	//	V 1	V (V)	////	/ !	, , ,	V	7	ンノン
or outdoor application, flexing or fieldbus systems/Ethernet application or video transmission: RGB signal transmission or North America with UL + CSA approval	V	9	00				V	· ·	0	V	V	~	7	/ v	,	V	V	V	/		/	/	/	/ .	6	, ,	' ~	· ~
or use in oily environments, enhanced oil resistance for use in areas with bio-oils for torsion in wind turbine generators (see catalogue page)	V	V	V	V	~		V	V	V	V	V	V	V 1	V V	/ /								/		V	' V	′ ✓	~
Temperature range																												
105 °C +90 °C										•																		
+80 °C +75 °C (CMX)																		A					• 4					
+70°C +60°C	•	•				•					•	•	•	•		•	•						-				•	
+50°C +5°C																		•										
-5 ° C -10 ° C						•										•												
-20 °C				•										4	1		•								•		•	•
-30 ° C -40 ° C	•	•	•	\blacksquare		Α,					Ā	<u></u>		Δ				Ä		À	<u>.</u>							
-50 ° C Minimum bending radius																												
5 x D (for continuous flexin	g)			V		v .	V	/								V		0	9 (1			/					
6.5 x D 7.5 x D				V	/		,		, ,	V	V																	
8 x D									Ľ								Ø	V	/									
10 x D 2.5 x D			V										(V											-	V	V	V
15 x D	V	V	V									V	V 1	VV	_		V				/	/		/ v	/			
Installation or chains with low radii					1	/	/ /	/ 1/	- /	1	./	1	/ /	/ /	,	./		/		_	/		/			4		
or chains with minimal space	V	V	V		V	1	1 0	V	V	V	V	V	1	VV	/		V	/	/	/	/	ľ		6	1 0	' V	V	V
or lower power/weight ratio in chain or 24-hour operation with high cycle numbers	V	V	V	V	V	V 1	/ V	V	V	V	V	V	V 1	VV		V									V	V	/ /	\ \ \ \ \
or high acceleration > 10 m/s ² or very high acceleration up to 50 m/s ²	V	V	V	V	V	V 1	/ V	V	' V	V	V	V	1	VV	/	V												
or travel speeds up to 5 m/s, travel lengths up to 10 m or travel speeds up to 10 m/s, travel lengths up to 10 m or travel speeds up to 10 m/s, travel lengths up to 10 m or travel speeds up to 5 m/s, travel lengths up to 100 m	V	~	V	ソソソ	ノンソ	V 1	100	100	ンシン	レンン	ンソン	ノンソ	7	/ v			0	V	/	/	V			ı	/ V	, v	1 1	, V
Nominal voltage																												
50 Vss 0/300 V AC	V	V																										
00/500 V AC	V	V	V		,								ľ															
00/1000 V AC 00 V acc. to UL/CSA			V	V	V																							
DOO V acc. to UL/CSA (internal wiring) Design							V	' V	' V								V					(/ (/ 6	/			
ne wire, VDE class 5, stranded copper conductor tra-fine wire, VDE class 6, stranded copper conductor tra-fine wire, VDE class 6, stranded copper conductor	V	~	V	<i>V</i>	~	V 1		· ·	· ~	V	V	v	V 1	V V	/	-	V	V		/	/							
VC/special PVC core insulation astomer core insulation E/cellular PE/cellular PE foam skin core insulation Slyethylene/polypropylene core insulation											,		(/ v		V	v	V	/	/	/	/ (V 1	/ 6	, ,	' v		
,, , p , p , p	V	V	V		V				ľ	V	Ĺ	V	V															
			V		V		V	V	V								V	V	/	/	/	/ (V 1	/ 1	/ v	'		
pecial TPE (P4/11) core insulation alogen-free core insulation				V	1																							
pecial TPE (P4/11) core insulation lalogen-free core insulation lumber printing	V	V		ν									- 4		/	V												
pecial TPE (P4/11) core insulation lalogen-free core insulation lumber printing IDE colour code OIN 47100 colour code/special colour code	V	V	V	V	Ĭ	1	/ V	V	V			V	VI	VV														
PE core insulation pecial TPE (P4/11) core insulation lalogen-free core insulation lumber printing DE colour code IN 47100 colour code/special colour code air screening PiCY/PiMF/STP overall screening	V	V V	✓	V		V 1	/ v	V	V			V	V 1	<i>V V</i>		Ĺ	V	/	/									
pecial TPE (P4/11) core insulation lalogen-free core insulation lumber printing DE colour code IN 47100 colour code/special colour code air screening PiCY/PiMF/STP	<i>V</i>	V V V	✓✓✓	V	<i>'</i>	V 1	/ / /	V	, v		V	\(\times \)	V 1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		v	v v	v	V	/	V /	V (V 1	V 0	, v	, v	, _V	, ,

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✓ Main application/design ·
✓ Possible application ·

● Flexible use ·

☐ Fixed and flexible use ·

▲ Fixed installation

 \checkmark Main application/design \cdot \checkmark Possible application \cdot \bullet Flexible use \cdot \square Fixed and flexible use \cdot \blacktriangle Fixed installation

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relevant European directives and compliated with how they are used. A knowledge are particular risks if installed impauthorised electrician! Otherwise, ance with the provisions contained there- of and adherence to the respective interna-

items:

The conformity of our products to the The safety of our products is closely associ- VDE 0100; 0298) are mandatory. There Processing is only to be done by an roperly. This applies to all our products/ there is the risk of an electric shock or a fire ignited by electric current!

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