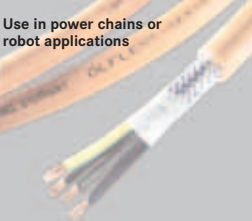
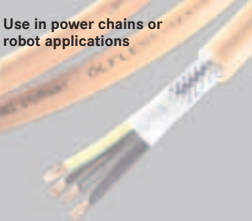
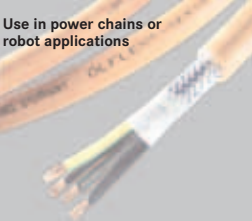
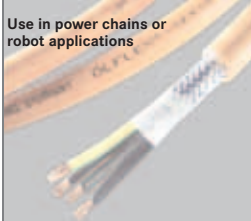


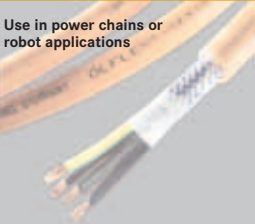
Application Criteria	Cable and Lead Designation									
Use in power chains or robot applications										
	ÖLFLEX® SERVO FD 750 P	ÖLFLEX® SERVO FD 755 P	ÖLFLEX® SERVO FD 755 CP	ÖLFLEX® SERVO FD 760 CP	ÖLFLEX® SERVO FD 770 CP	ÖLFLEX® SERVO FD 781 CY	ÖLFLEX® SERVO FD 781 P	ÖLFLEX® SERVO FD 781 CP	ÖLFLEX® SERVO FD 785 P	ÖLFLEX® SERVO FD 785 CP
	ÖLFLEX® SERVO FD 790 CP	ÖLFLEX® SERVO FD 795 P								
Application										
For industrial machinery to EN 60204 part 1/VDE 0113	●	●	●	●	●	●	●	●	●	●
For frequency-converter driven servo drives	●	●	●	●	●	●	●	●	●	●
For servo motor, low capacitance		●	●		●	●	●	●	●	●
For encoders, feedback systems, sensors				●	●					
For free arm robots/torsion load										
Restricted guidance over rollers, motor drums										
For indoor application	●	●	●	●	●	●	●	●	●	●
For outdoor application		●	●	●			●	●	●	●
For field bus systems										
For video transmission, RGB signal transmission										
For North America with UL + CSA approvals									●	●
For use in oily environments, enhanced oil resistance	●	●	●	●	●	●		●	●	●
For use in areas with bio oils										
Temperature range										
+105 °C										
+90 °C		□	□					□	□	
+80 °C		■	■	□	□	□	□	■	■	■
+70 °C	■			■	■	■	■			
+60 °C										
+5 °C										
-5 °C						■				
-10 °C	■								■	
-20 °C										
-30 °C	□						■	■		
-40 °C		■	■	■	■	■	■	■	■	■
-50 °C		□	□	□	□	□	□	□	□	□

Application Criteria	Cable and Lead Designation									
Use in power chains or robot applications										
	ÖLFLEX® SERVO FD 750 P	ÖLFLEX® SERVO FD 755 P	ÖLFLEX® SERVO FD 755 CP	ÖLFLEX® SERVO FD 760 CP	ÖLFLEX® SERVO FD 770 CP	ÖLFLEX® SERVO FD 781 CY	ÖLFLEX® SERVO FD 781 P	ÖLFLEX® SERVO FD 781 CP	ÖLFLEX® SERVO FD 785 P	ÖLFLEX® SERVO FD 785 CP
	ÖLFLEX® SERVO FD 790 CP	ÖLFLEX® SERVO FD 795 P								
Minimum bending radius factor for continuous flexing										
5 x D		●						●		●
6.5 x D										
7.5 x D			●			●	●			
10 x D										
12.5 x D	●			●	●					●
15 x D										
20 x D										
Laying										
For chains with small radii	○	●	●	●	●	●	●	●	●	●
For chains with restricted space	○	●	●	●	●	●	●	●	●	●
For low cable weight in the chain		●	●	●	●	●	●	●	●	●
For 24-hour operation at high numbers of cycles	●	●	●	●	●	●	●	●	●	●
For high acceleration values > 10 m/s²	●	●	●	●	●	●	●	●	●	●
For very high acceleration up to 50 m/s²										
For travel speeds up to 5 m/s, up to 10 m travel length	●	●	●	●	●	●	●	●	●	●
For travel speeds up to 10 m/s, up to 10 m travel length	●	●	●	●	●	●	●	●	●	●
For travel speeds up to 5 m/s, up to 100 m travel length	○	●	●	●	●	●		●	●	●
Nominal voltage										
350 Vss				●	●					
30/300 V AC										
300/500 V AC										
600/1000 V AC	●	●	●			●	●	●	●	●
600 V acc. to UL/CSA									●	●

Application Criteria	Cable and Lead Designation									
 Use in power chains or robot applications	ÖLFLEX® SERVO FD 750 P	ÖLFLEX® SERVO FD 755 P	ÖLFLEX® SERVO FD 755 CP	ÖLFLEX® SERVO FD 760 CP	ÖLFLEX® SERVO FD 770 CP	ÖLFLEX® SERVO FD 781 CY	ÖLFLEX® SERVO FD 781 P	ÖLFLEX® SERVO FD 781 CP	ÖLFLEX® SERVO FD 785 P	ÖLFLEX® SERVO FD 790 CP
Make-up										
Fine wire VDE class 5, copper stranded conductor										
Superfine wire VDE class 6, copper stranded conductor	●	●	●	●	●	●	●	●	●	●
Ultra fine wire VDE class 6, copper stranded conductor										
PVC/special PVC, core insulation	●								●	
Elastomer core insulation										
PE/cellular PE/cellular PE foam skin										
Polyethylene/Polypropylene						●	●	●		●
TPE core insulation	●	●	●	●	●			●	●	●
Special TPE (P4/11) core insulation										
Halogen free compound										
Number printing	●	●	●			●	●	●	●	●
VDE colour code										
DIN 47100 colour code/special colour code				●	●					
Pair screening PiCY/PiMF/STP	●	●	●	●	●				○	○
Total screening			●	●	●	●		●	●	●
Special PVC sheath						●				
PUR sheath, wear resistant, cutting resistant	●	●	●	●			●	●	●	●
Rubber sheath										
TPE (P4/11) sheath bio oil resistant										
Halogen free compound										

- = Principal application
- = Application not customary, but possible, or alternative design available in the range
- = Temperature range for flexible laying
- ▣ = Temperature range for static and flexible laying
- = Temperature range for static laying

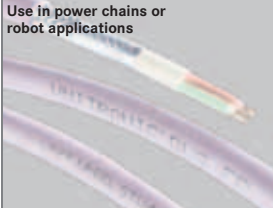
Application Criteria	Cable and Lead Designation									
 Use in power chains or robot applications	ÖLFLEX® SERVO FD 795 CP	SERVO-cable, acc. Indramat Standard INK	ÖLFLEX® FD CLASSIC 810	ÖLFLEX® FD CLASSIC 810 CY	ÖLFLEX® FD CLASSIC 810 P	ÖLFLEX® FD CLASSIC 810 CP	ÖLFLEX® FD 820 H	ÖLFLEX® FD 820 CH	ÖLFLEX® FD ROBUST	ÖLFLEX® FD ROBUST C
Application										
For industrial machinery to EN 60204, part 1/VDE 0113	●	●	●	●	●	●	●	●	●	●
For frequency-converter driven servo drives	●	●		●		●		●		●
For servo motor, low capacitance									●	●
For encoders, feedback systems, sensors		●								
For free arm robots/torsion load										
Restricted guidance over rollers, motor drums										
For indoor application	●	●	●	●	●	●	●	●	●	●
For outdoor application	●	●							●	●
For field bus systems										
For video transmission, RGB signal transmission										
For North America with UL + CSA approvals	●	●								
For use in oily environments, enhanced oil resistance	●	●				●	●		●	●
For use in areas with bio oils								●	●	
Temperature range										
+105 °C									▣	▣
+90 °C										
+80 °C	▣	□	□	□	□	□	▣	▣		
+70 °C		■	■	■	■	■				
+60 °C										
+5 °C				■	■					
-5 °C					■	■				
-10 °C										
-20 °C						■	■			
-30 °C		■								
-40 °C	■		□	□	□	□	□	□	■	■
-50 °C	□	□							□	□

Application Criteria	Cable and Lead Designation											
Use in power chains or robot applications		ÖLFLEX® SERVO FD 795 CP	SERVO-cable, acc. Indramat Standard INK	ÖLFLEX® FD CLASSIC 810	ÖLFLEX® FD CLASSIC 810 CY	ÖLFLEX® FD CLASSIC 810 P	ÖLFLEX® FD CLASSIC 810 CP	ÖLFLEX® FD 820 H	ÖLFLEX® FD 820 CH	ÖLFLEX® FD ROBUST	ÖLFLEX® FD ROBUST C	
		Minimum bending radius factor for continuous flexing										
		5 x D										
		6.5 x D										
		7.5 x D	●		●	●	●	●	●	●	●	●
		10 x D		●								
		12.5 x D										
		15 x D										
20 x D												
Laying												
For chains with small radii	●	●	●	●	●	●	●	●	●	●	●	
For chains with restricted space	●	●	●	●	●	●	●	●	●	●	●	
For low cable weight in the chain	●	●	●	●	●	●	●	●	●	●	●	
For 24-hour operation at high numbers of cycles	●	●	●	●	●	●	●	●	●	●	●	
For high acceleration values > 10 m/s²	●	●	●	●	●	●	●	●	●	●	●	
For very high acceleration up to 50 m/s²												
For travel speeds up to 5 m/s, up to 10 m travel length	●	●	●	●	●	●	●	●	●	●	●	
For travel speeds up to 10 m/s, up to 10 m travel length	●	●	●	●	●	●	●	●	●	●	●	
For travel speeds up to 5 m/s, up to 100 m travel length	●	●	○	○	○	○	○	○	○	○	●	
Nominal voltage												
350 Vss		●										
30/300 V AC												
300/500 V AC			●	●	●	●	●	●	●	●	●	
600/1000 V AC	●	●										
600 V acc. to UL/CSA	●	●										

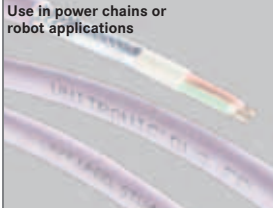
Application Criteria	Cable and Lead Designation										
Use in power chains or robot applications		ÖLFLEX® SERVO FD 795 CP	SERVO-cable, acc. Indramat Standard INK	ÖLFLEX® FD CLASSIC 810	ÖLFLEX® FD CLASSIC 810 CY	ÖLFLEX® FD CLASSIC 810 P	ÖLFLEX® FD CLASSIC 810 CP	ÖLFLEX® FD 820 H	ÖLFLEX® FD 820 CH	ÖLFLEX® FD ROBUST	ÖLFLEX® FD ROBUST C
Make-up											
Fine wire VDE class 5, copper stranded conductor											
Superfine wire VDE class 6, copper stranded conductor	●	●		●	●	●	●	●	●	●	●
Ultra fine wire VDE class 6, copper stranded conductor											
PVC/special PVC, core insulation				●	●	●	●				
Elastomer core insulation											
PE/cellular PE/cellular PE foam skin											
Polyethylene/Polypropylene	●	○									
TPE core insulation	●	○									
Special TPE (P4/11) core insulation										●	●
Halogen free compound								●	●		
Number printing	●	●	●	●	●	●	●	●	●	●	●
VDE colour code											
DIN 47100 colour code/special colour code		●									
Pair screening PICY/PIMF/STP	○	●									
Total screening	●	●						●			●
Special PVC sheath			●	●							
PUR sheath, wear resistant, cutting resistant	●	●				●	●				
Rubber sheath											
TPE (P4/11) sheath bio oil resistant										●	●
Halogen free compound								●	●		

- = Principal application
- = Application not customary, but possible, or alternative design available in the range
- = Temperature range for flexible laying
- ▣ = Temperature range for static and flexible laying
- = Temperature range for static laying

A2: Highly Flexible FD® Cables – for use in power chains or robot applications

Application Criteria	Cable and Lead Designation									
Use in power chains or robot applications										
	ÖLFLEX® FD 855 P	ÖLFLEX® FD 855 CP	ÖLFLEX® FD 90	ÖLFLEX® FD 90 CY	UNITRONIC® FD	UNITRONIC® FD CY	UNITRONIC® FD P plus	UNITRONIC® FD CP (TP) plus	UNITRONIC® FD CP (TP) plus	UNITRONIC® BUS PB FD P
Application										
For industrial machinery to EN 60204, part 1/VDE 0113	●	●	●	●	●	●	●	●	●	●
For frequency-converter driven servo drives		○		●						
For servo motor, low capacitance	●	●								
For encoders, feedback systems, sensors	○	○			○		○	●	●	●
For free arm robots/torsion load					○					
Restricted guidance over rollers, motor drums										
For indoor application	●	●	●	●	●	●	●	●	●	●
For outdoor application	●	●						●	●	●
For field bus systems								○	○	●
For video transmission, RGB signal transmission										
For North America with UL + CSA approvals			●	●			●	●	●	●
For use in oily environments, enhanced oil resistance	●	●	●	●			●	●	●	●
For use in areas with bio oils										
Temperature range										
+105 °C										
+90 °C			■							
+80 °C	■	■							■	■
+70 °C					■	■	■	■	■	■
+60 °C										
+5 °C										
-5 °C			■	■	■	■				
-10 °C										
-20 °C										
-30 °C										■
-40 °C	■	■	■	■			■	■	■	■
-50 °C	■	■								■

A2: Highly Flexible FD® Cables – for use in power chains or robot applications

Application Criteria	Cable and Lead Designation									
Use in power chains or robot applications										
	ÖLFLEX® FD 855 P	ÖLFLEX® FD 855 CP	ÖLFLEX® FD 90	ÖLFLEX® FD 90 CY	UNITRONIC® FD	UNITRONIC® FD CY	UNITRONIC® FD P plus	UNITRONIC® FD CP (TP) plus	UNITRONIC® FD CP (TP) plus	UNITRONIC® BUS PB FD P
Minimum bending radius factor for continuous flexing										
5 x D	●					●				
6.5 x D										
7.5 x D		●	●	●		●		●	●	●
10 x D										●
12.5 x D										
15 x D										●
20 x D										
Laying										
For chains with small radii	●	●	●	●	●	●	●	●	●	●
For chains with restricted space	●	●	●	●	●	●	●	●	●	●
For low cable weight in the chain	●	●	●	●	●	●	●	●	●	●
For 24-hour operation at high numbers of cycles	●	●	●	●	●	●	●	●	●	●
For high acceleration values > 10 m/s²										●
For very high acceleration up to 50 m/s²										
For travel speeds up to 5 m/s, up to 10 m travel length	●	●	●	●	●	●	●	●	●	●
For travel speeds up to 10 m/s, up to 10 m travel length	●	●	●	●	●	●	●	●	●	●
For travel speeds up to 5 m/s, up to 100 m travel length	●	○	○	●	●	●	●	●	●	●
Nominal voltage										
350 Vss						●	●	●	●	●
30/300 V AC										●
300/500 V AC	●	●								
600/1000 V AC			●	●						
600 V acc. to UL/CSA			●	●						

Selection Tables

A2: Highly Flexible FD® Cables – for use in power chains or robot applications

Application Criteria	Cable and Lead Designation									
Use in power chains or robot applications 	ÖLFLEX® FD 855 P	ÖLFLEX® FD 855 CP	ÖLFLEX® FD 90	ÖLFLEX® FD 90 CY	UNITRONIC® FD	UNITRONIC® FD CY	UNITRONIC® FD P plus	UNITRONIC® FD CP plus	UNITRONIC® FD CP (TP) plus	UNITRONIC® FD CP (TP) plus
Make-up										
Fine wire VDE class 5, copper stranded conductor										
Superfine wire VDE class 6, copper stranded conductor	●	●	●	●	●	●	●	●	●	●
Ultra fine wire VDE class 6, copper stranded conductor										
PVC/special PVC, core insulation			●		●	●				
Elastomer core insulation										
PE/cellular PE/cellular PE foam skin										●
Polyethylene/Polypropylene										
TPE core insulation	●	●								
Special TPE (P4/11) core insulation										
Halogen free compound							●	●	●	●
Number printing	●	●								
VDE colour code										
DIN 47100 colour code/special colour code				●	●	●	●	●	●	●
Pair screening PiCY/PiMF/STP										
Total screening		●				●		●	●	●
Special PVC sheath			●	●	●	●				
PUR sheath, wear resistant, cutting resistant	●	●					●	●	●	●
Rubber sheath										
TPE (P4/11) sheath bio oil resistant										
Halogen free compound										

● = Principal application

○ = Application not customary, but possible, or alternative design available in the range

■ = Temperature range for flexible laying

▣ = Temperature range for static and flexible laying

□ = Temperature range for static laying