

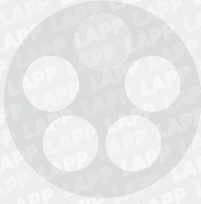





Usage criteria	Cable designation																											
	ÖLFLEX® CLASSIC 100 H	ÖLFLEX® CLASSIC 110 H	ÖLFLEX® CLASSIC 110 CH	ÖLFLEX® CLASSIC 130 H	ÖLFLEX® CLASSIC 135 CH	ÖLFLEX® CLASSIC 130 H BK 0,6/1 KV	ÖLFLEX® CLASSIC 135 CH BK 0,6/1 KV	ÖLFLEX® PETRO C HFFR	ÖLFLEX® 440 P	ÖLFLEX® 440 CP	ÖLFLEX® 540 P	ÖLFLEX® 540 CP	H07RN-F, enhanced version	H07ZZ-F	NSHXAFö 1,8/3 KV*	SERVO cable acc. to SIEMENS® standard 6FX 8Plus	ÖLFLEX® FD 855 P	ÖLFLEX® FD 855 CP	ÖLFLEX® SERVO FD 796 CP	ÖLFLEX® PETRO FD 865 CP	ÖLFLEX® SERVO FD 796 P	ÖLFLEX® SERVO FD 798 CP	ÖLFLEX® SERVO FD 7DSL	ÖLFLEX® CHAIN 896 P	ÖLFLEX® CHAIN 90 P	ÖLFLEX® CHAIN 90 CP	ÖLFLEX® SOLAR XLWP	
<b>Use</b>																												
<b>Machines and systems:</b>																												
External wiring of machinery	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal wiring of control cabinets						✓	✓								✓													
<b>Other circuits in buildings:</b>																												
Lighting circuits	✓												✓															
Power circuits	✓					✓	✓	✓					✓	✓	✓												✓	✓
Network cables																												
<b>Standards</b>																												
Low smoke density	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓													✓
Low toxicity of flue gas	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓													✓
Flame-retardant to IEC 60332-1-2	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓													✓
Highly flame-retardant to IEC 60332-3	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓													✓
Based on e. g. VDE, HAR, DIN or UL,...	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓				✓									✓
Certification, e. g. VDE, HAR, UL, TÜV or DNV,...		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Temperature range</b>																												
+180 °C																												
+145 °C																												
+120 °C																												▲
+110 °C																												
+90 °C									□	●	●	●	●	□	□	□												
+80 °C	▲	▲	▲	▲	▲	▲	▲									□	□	□	□	□	□	□	□	□	□	□	□	□
+70 °C	●	●	●	●	●	●	●																					
+50 °C																												
0 °C																												
-5 °C																												
-15 °C																												
-25 °C																												
-30 °C	●	●	●		●	●	●																					
-40 °C	▲	▲	▲	▲	▲	▲	▲	●	●	●	●	●	●	▲	▲	▲												□
-50 °C							▲																					
-60 °C																												
<b>Nominal voltage</b>																												
250 Vss																✓												
300/500 V		✓	✓	✓	✓				✓	✓	✓	✓					✓	✓		✓								
450/750 V	✓																											
600/1000 V	✓					✓	✓	✓								✓										✓	✓	✓
1.8/3 KV															✓													
<b>Design</b>																												
Solid wire VDE 0295 class 1																												
Multi-wire VDE 0295 class 2																												
Fine wire VDE 0295 class 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓													✓
Extra-fine wire VDE 0295 class 6																												
Number printing VDE 0293			✓	✓	✓	✓	✓			✓	✓						✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Colour code to VDE 0293-308; HD 308-S2	✓						✓	✓			✓	✓	✓	✓														
Colour code to DIN 47100																												
Special core ident. code																✓				✓	✓	✓	✓					
Single colours								✓							✓											✓	✓	✓

Halogen-free accessories:	Cable protection hoses	Cable entries	Marking	Accessories	
	SILVYN® RILL PA6 SILVYN® RILL PA12 SILVYN® FPAS SILVYN® HCC SILVYN® LCCH-2 SILVYN® AS SILVYN® EDU-AS SILVYN® TC	SILVYN® EMC AS-CU SILVYN® SSUE SILVYN® UI 511 SILVYN® HFX SILVYN® CHAIN SILVYN® CHAIN STEEL SILVYN® HIPROJACKET	SKINTOP® ST-HF-M SKINTOP® GMP-HF-M SKINTOP® BLK-GL-M SKINTOP® GMP-GL-M SKINDICHT® KW-M SKINDICHT® KU-M SKINDICHT® EKU-M	FLEXIMARK® single core marking Flexipart, marking sleeves, Flexiprint FLEXIMARK® cable labelling MINI system, shrink tube labelling FLEXIMARK® component labelling LB LA labels DYMO® label strips	Embossed metal plates, insulated conductor end sleeves Insulated cable lugs, TBTA insulating tape Shrink hoses CMP/PKG/HSB/PLG TEC end caps TEB branch joints KW plastic coil Cable ties Basic Tie/TY-RAP®/TY-FAST®

✓ Main application/design  
 ✓ Possible application  
 ● Flexible use  
 □ Fixed and flexible use  
 ▲ Fixed installation

Other halogen-free cables on request.

\*Use of NSHXAFö - all standard nominal voltage classes: no lagged cables, just "outer sheath" acc. to design standard VDE 0250-606.

Usage criteria	Cable designation																															
	ÖLFLEX® CRANE PUR	ÖLFLEX® HEAT 125 MC	ÖLFLEX® HEAT 125 C MC	ÖLFLEX® HEAT 180 SHF	ÖLFLEX® HEAT 180 HOSSS-F EWKF	ÖLFLEX® HEAT 180 MS	ÖLFLEX® HEAT 180 C MS	ÖLFLEX® HEAT 180 EWKF	ÖLFLEX® HEAT 180 EWKF C	ÖLFLEX® HEAT 180 GLS	ÖLFLEX® HEAT 125 SC	ÖLFLEX® HEAT 180 SIF	ÖLFLEX® HEAT 180 SIF A	ÖLFLEX® TORSION FRNC	ÖLFLEX® TORSION D FRNC	ÖLFLEX® CHARGE	H05Z-K, H07Z-K 90 ° C*	(N)HXMH	N2XH	N2XCH	ÖLFLEX® SPIRAL 540 P	UNITRONIC® BUS PB H FC	UNITRONIC® LIHH	UNITRONIC® LIHCH	UNITRONIC® LIHCH (TP)	UNITRONIC® FD P plus	UNITRONIC® FD CP plus	UNITRONIC® FD CP (TP) plus	UNITRONIC® BUS EIB	UNITRONIC® BUS IBS P COMBI	UNITRONIC® BUS IBS FD P	UNITRONIC® BUS LD FD P
 Use																																
<b>Machines and systems:</b>																																
External wiring of machinery	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal wiring of control cabinets	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Other circuits in buildings:</b>																																
Lighting circuits	✓													✓	✓	✓	✓	✓			✓											
Power circuits	✓						✓							✓	✓	✓	✓	✓	✓	✓												
Network cables																																
 Standards																																
Low smoke density		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Low toxicity of flue gas		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flame-retardant to IEC 60332-1-2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Highly flame-retardant to IEC 60332-3		✓	✓																													
Based on e. g. VDE, HAR, DIN or UL,...	✓			✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
Certification, e. g. VDE, HAR, UL, TÜV or DNV,...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Temperature range																																
+180 °C																																
+145 °C	◆	◆																														
+120 °C	●	●																														
+110 °C																																
+90 °C																																
+80 °C	□																															
+70 °C																																
+50 °C																																
0 °C																																
-5 °C																																
-15 °C																																
-25 °C																																
-30 °C																																
-40 °C	●	●	●																													
-50 °C	▲	▲	▲	□	□	□	□	□	□	□	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
-60 °C																																
 Nominal voltage																																
250 Vss																						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
300/500 V		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
450/750 V		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
600/1000 V	✓	✓	✓																													
1.8/3 KV																																
 Design																																
Solid wire VDE 0295 class 1																						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Multi-wire VDE 0295 class 2																						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fine wire VDE 0295 class 5		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Extra-fine wire VDE 0295 class 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Number printing VDE 0293	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Colour code to VDE 0293-308; HD 308-S2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Colour code to DIN 47100																																
Special core ident. code																																
Single colours																																

Halogen-free accessories:	Cable protection hoses	Cable entries	Marking	Accessories	
	SILVYN® RILL PA6 SILVYN® RILL PA12 SILVYN® FPAS SILVYN® HCC SILVYN® LCCH-2 SILVYN® AS SILVYN® EDU-AS SILVYN® TC	SILVYN® EMC AS-CU SILVYN® SSUE SILVYN® UI 511 SILVYN® HFX SILVYN® CHAIN SILVYN® CHAIN STEEL SILVYN® HIPROJACKET	SKINTOP® ST-HF-M SKINTOP® GMP-HF-M SKINTOP® BLK-GL-M SKINTOP® GMP-GL-M SKINDICHT® KW-M SKINDICHT® KU-M SKINDICHT® EKU-M	FLEXIMARK® single core marking Flexipart, marking sleeves, Flexiprint FLEXIMARK® cable labelling MINI system, shrink tube labelling FLEXIMARK® component labelling LB LA labels DYMO® label strips	Embossed metal plates, insulated conductor end sleeves Insulated cable lugs, TBTA insulating tape Shrink hoses CMP/PKG/HSB/PLG TEC end caps TEB branch joints KW plastic coil Cable ties Basic Tie/TY-RAP®/TY-FAST®

✓ Main application/design  
 ✓ Possible application

● Flexible use  
 □ Fixed and flexible use

▲ Fixed installation  
 ◆ Fixed installation (briefly)

Other halogen-free cables on request.

\*Nominal voltage  $U_0/U$ : for 05Z-K = 300/500 V<sub>ac</sub>  
 for 07Z-K = 450/750 V<sub>ac</sub>

## 할로겐 프리 케이블

Usage criteria		Cable designation																											
		UNITRONIC® BUS ASI FD P FRNC	ETHERLINE® H Cat.5e	ETHERLINE® Cat.5 FRNC HYBRID	ETHERLINE® FD P Cat.6	ETHERLINE® LAN 200 Cat.5e LSZH	ETHERLINE® LAN 350 Cat.6 LSZH	ETHERLINE® LAN 500 Cat.6 <sub>A</sub> LSZH	ETHERLINE® LAN 1000 Cat.7 <sub>A</sub> LSZH	ETHERLINE® LAN 1200 Cat.7 <sub>A</sub> LSZH	ETHERLINE® LAN 1600 Cat.7 <sub>A</sub> LSZH	ETHERLINE® P Cat.5e	ETHERLINE® H/P FLEX Cat.5e	ETHERLINE® Cat.5e FD	ETHERLINE® PN FLEX FRNC	ETHERLINE® PN Cat.5 FD	ETHERLINE® TORSION Cat.5	ETHERLINE® FIRE Cat.5e PH120	ETHERLINE® Cat.6 <sub>A</sub> H/7 H	ETHERLINE® Cat.6 <sub>A</sub> P/7 P	ETHERLINE® PN Cat.6 <sub>A</sub> FRNC FLEX	ETHERLINE® Cat.6 <sub>A</sub> FD P	ETHERLINE® Cat.6 <sub>A</sub> TORSION P	ETHERLINE® ROBUST	ETHERLINE® HEAT 6722	UNITRONIC® BUS PB FRNC FC	UNITRONIC® BUS PB FD FRNC FC	UNITRONIC® BUS PB TORSION	UNITRONIC® DeviceNet FRNC
		<b>Use</b>		<p><b>Machines and systems:</b></p> <p>External wiring of machinery ✓</p> <p>Internal wiring of control cabinets ✓</p> <p><b>Other circuits in buildings:</b></p> <p>Lighting circuits ✓</p> <p>Power circuits ✓</p> <p>Network cables ✓</p> <p><b>Standards</b></p> <p>Low smoke density ✓</p> <p>Low toxicity of flue gas ✓</p> <p>Flame-retardant to IEC 60332-1-2 ✓</p> <p>Highly flame-retardant to IEC 60332-3 ✓</p> <p>Based on e. g. VDE, HAR, DIN or UL,... ✓</p> <p>Certification, e. g. VDE, HAR, UL, TÜV or DNV,... ✓</p> <p><b>Temperature range</b></p> <p>+180 °C ✓</p> <p>+145 °C ✓</p> <p>+120 °C ✓</p> <p>+110 °C ✓</p> <p>+105 °C ✓</p> <p>+90 °C ✓</p> <p>+80 °C ✓</p> <p>+70 °C ✓</p> <p>+60 °C ✓</p> <p>+50 °C ✓</p> <p>0 °C ✓</p> <p>-5 °C ✓</p> <p>-15 °C ✓</p> <p>-20 °C ✓</p> <p>-25 °C ✓</p> <p>-30 °C ✓</p> <p>-40 °C ✓</p> <p>-50 °C ✓</p> <p>-60 °C ✓</p> <p><b>Nominal voltage</b></p> <p>250 Vss ✓</p> <p>300/500 V ✓</p> <p>450/750 V ✓</p> <p>600/1000 V ✓</p> <p>1.8/3 KV ✓</p> <p><b>Design</b></p> <p>Solid wire VDE 0295 class 1 ✓</p> <p>Multi-wire VDE 0295 class 2 ✓</p> <p>Fine wire VDE 0295 class 5 ✓</p> <p>Extra-fine wire VDE 0295 class 6 ✓</p> <p>Number printing VDE 0293 ✓</p> <p>Colour code to VDE 0293-308; HD 308-S2 ✓</p> <p>Colour code to DIN 47100 ✓</p> <p>Special core ident. code ✓</p> <p>Single colours ✓</p>																									
<p><b>Halogen-free accessories:</b></p> <p>SILVYN® RILL PA6</p> <p>SILVYN® RILL PA12</p> <p>SILVYN® FPAS</p> <p>SILVYN® HCC</p> <p>SILVYN® LCCH-2</p> <p>SILVYN® AS</p> <p>SILVYN® EDU-AS</p> <p>SILVYN® TC</p>	<p>SILVYN® EMC AS-CU</p> <p>SILVYN® SSUE</p> <p>SILVYN® UI 511</p> <p>SILVYN® HFX</p> <p>SILVYN® CHAIN</p> <p>SILVYN® CHAIN STEEL</p> <p>SILVYN® HIPROJACKET</p>	<p>SKINTOP® ST-HF-M</p> <p>SKINTOP® GMP-HF-M</p> <p>SKINTOP® BLK-GL-M</p> <p>SKINTOP® GMP-GL-M</p> <p>SKINDICHT® KW-M</p> <p>SKINDICHT® KU-M</p> <p>SKINDICHT® EKU-M</p>	<p>FLEXIMARK® single core marking</p> <p>Flexipart, marking sleeves, Flexiprint</p> <p>FLEXIMARK® cable labelling</p> <p>MINI system, shrink tube labelling</p> <p>FLEXIMARK® component labelling</p> <p>LB LA labels</p> <p>DYMO® label strips</p>	<p>Accessories</p> <p>Embossed metal plates, insulated conductor end sleeves</p> <p>Insulated cable lugs, TBTA insulating tape</p> <p>Shrink hoses CMP/PKG/HSB/PLG</p> <p>TEC end caps</p> <p>TEB branch joints</p> <p>KW plastic coil</p> <p>Cable ties Basic Tie/TY-RAP®/TY-FAST®</p>																									
					<p>✓ Main application/design</p> <p>✓ Possible application</p> <p>● Flexible use</p> <p>□ Fixed and flexible use</p> <p>▲ Fixed installation</p>	<p>Other halogen-free cables on request.</p> <p>PLEASE NOTE: halogen-free fibre optics you can find at appendix A11.</p>																							