

Halogen-free cables

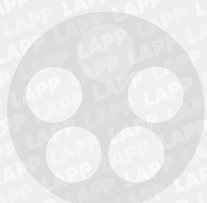





Usage criteria	Cable designation																											
	ÖLFLEX® CLASSIC 100 H	ÖLFLEX® CLASSIC 110 H	ÖLFLEX® CLASSIC 110 CH	ÖLFLEX® CLASSIC 130 H	ÖLFLEX® CLASSIC 135 CH	ÖLFLEX® CLASSIC 130 H BK 0,6/1 KV	ÖLFLEX® CLASSIC 135 CH BK 0,6/1 KV	ÖLFLEX® PETRO C HFFR	ÖLFLEX® 440 P	ÖLFLEX® 440 CP	ÖLFLEX® 540 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	
Use																												
Machines and systems:																												
External wiring of machinery	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal wiring of control cabinets						✓	✓									✓												
Other circuits in buildings:																												
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	SKINTOP® ST-HF-M	FLEXIMARK® single core marking	Embossed metal plates, insulated conductor end sleeves
	SILVYN® RILL PA12	SKINTOP® GMP-HF-M	Flexipart, marking sleeves, Flexiprint	Insulated cable lugs, TBTA insulating tape
	SILVYN® FPAS	SKINTOP® BLK-GL-M	FLEXIMARK® cable labelling	Shrink hoses CMP/PKG/HSB/PLG
	SILVYN® HCC	SKINTOP® GMP-GL-M	MINI system, shrink tube labelling	TEC end caps
	SILVYN® LCCH-2	SKINDICHT® KW-M	FLEXIMARK® component labelling	TEB branch joints
	SILVYN® AS	SKINDICHT® KU-M	LB LA labels	KW plastic coil
	SILVYN® EDU-AS	SKINDICHT® EKU-M	DYMO® label strips	Cable ties Basic Tie/TY-RAP®/TY-FAST®
	SILVYN® TC			
	SILVYN® EMC AS-CU			
	SILVYN® SSUE			
	SILVYN® UI 511			
	SILVYN® HFX			
	SILVYN® CHAIN			
	SILVYN® CHAIN STEEL			
	SILVYN® HIPROJACKET			

✓ 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	NZXH	NZXCH	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																																				
Machines and systems:																																				
External wiring of machinery	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Internal wiring of control cabinets																																				
Other circuits in buildings:																																				
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	SKINTOP® ST-HF-M	FLEXIMARK® single core marking	Embossed metal plates, insulated conductor end sleeves
	SILVYN® RILL PA12	SKINTOP® GMP-HF-M	Flexipart, marking sleeves, Flexiprint	Insulated cable lugs, TBTA insulating tape
	SILVYN® FPAS	SKINTOP® BLK-GL-M	FLEXIMARK® cable labelling	Shrink hoses CMP/PKG/HSB/PLG
	SILVYN® HCC	SKINTOP® GMP-GL-M	MINI system, shrink tube labelling	TEC end caps
	SILVYN® LCCH-2	SKINDICHT® KW-M	FLEXIMARK® component labelling	TEB branch joints
	SILVYN® AS	SKINDICHT® KU-M	LB LA labels	KW plastic coil
	SILVYN® EDU-AS	SKINDICHT® EKU-M	DYMO® label strips	Cable ties Basic Tie/TY-RAP®/TY-FAST®
	SILVYN® TC			

 Main application/design
 Possible application
 Flexible use
 Fixed and flexible use
 Fixed installation
 Fixed installation (briefly)
 Other halogen-free cables on request.
 *Nominal voltage U₀/U: for 05Z-K = 300/500 V_{ac} for 07Z-K = 450/750 V_{ac}

Halogen-free cables

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.6a LSZH	ETHERLINE® LAN 1000 Cat.7 LSZH	ETHERLINE® LAN 1200 Cat.7 LSZH	ETHERLINE® LAN 1600 Cat.7 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 _a H/7 H	ETHERLINE® Cat.6 _a P/7 P	ETHERLINE® PN Cat.6 _a FRNC FLEX	ETHERLINE® Cat.6 _a FD P	ETHERLINE® Cat.6 _a 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
		Use																											
Machines and systems:																													
External wiring of machinery		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal wiring of control cabinets																													
Other circuits in buildings:																													
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																													
+105 °C																													
+90 °C																													
+80 °C		▲	▲		□								□	□	□			□	▲	▲	▲	▲	▲	□		▲	▲	▲	▲
+70 °C		●		□															▲	▲	▲	▲					▲	▲	▲
+60 °C			●			▲	▲	▲	▲	▲	▲											●					●	●	●
+50 °C																													
0 °C																													
-5 °C			●										●	●	●														
-15 °C																													
-20 °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	SILVYN® RILL PA6	SILVYN® EMC AS-CU	SKINTOP® ST-HF-M	FLEXIMARK® single core marking	Accessories																							
	SILVYN® RILL PA12	SILVYN® SSUE	SKINTOP® GMP-HF-M	Flexipart, marking sleeves, Flexiprint	Insulated cable lugs, TBTA insulating tape																								
	SILVYN® FPAS	SILVYN® UI 511	SKINTOP® BLK-GL-M	FLEXIMARK® cable labelling	Shrink hoses CMP/PKG/HSB/PLG																								
	SILVYN® HCC	SILVYN® HFX	SKINTOP® GMP-GL-M	MINI system, shrink tube labelling	TEC end caps																								
	SILVYN® LCCH-2	SILVYN® CHAIN	SKINDICHT® KW-M	FLEXIMARK® component labelling	TEB branch joints																								
	SILVYN® AS	SILVYN® CHAIN STEEL	SKINDICHT® KU-M	LB LA labels	KW plastic coil																								
SILVYN® EDU-AS	SILVYN® HIPROJACKET	SKINDICHT® EKU-M	DYMO® label strips	Cable ties Basic Tie/TY-RAP®/TY-FAST®																									
SILVYN® TC																													

✓ Main application/design
 ✓ Possible application

● Flexible use
 □ Fixed and flexible use
 ▲ Fixed installation

Other halogen-free cables on request.
 PLEASE NOTE: halogen-free fibre optics you can find at appendix A11.