

Halogen-free cables

Usage criteria		Cable designation																										
	Page	60	61	62	63	64	66	67	69	78	79	82	83	88	90	94	113	140	141	109	142	108	111	112	143	135	136	159
		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									✓							✓										✓	✓	✓

	Cable protection hoses	Cable entries	Marking	Accessories
Halogen-free 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

Other halogen-free cables on request.

*Use of NSHXAF6 – all standard nominal voltage classes: no lagged cables, just "outer sheath" acc. to design standard VDE 0250-606.

[illegible]

	Cable protection hoses		Cable entries	Marking	Accessories
Halogen-free accessories:	SILVYN® RILL PA6	SILVYN® EMC AS-CU	SKINTOP® ST-HF-M	FLEXIMARK® single core marking	Embossed metal plates, insulated conductor end sleeves
	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
- ◆ Fixed installation (briefly)

Other halogen-free cables
on request.

* Nominal voltage U_0/U : for 05Z-K = 300/500 V_{ac}
for 07Z-K = 450/750 V_{ac}

Halogen-free cables

Usage criteria		Cable designation																											
	Page	329	417	434	425	464	466	467	467	468	417	418	420	430	435	436	452		444	445	454	451	336	345	348	361			
		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 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, H/7 H	ETHERLINE® Cat.6, P/7 P	ETHERLINE® PN Cat.6, FRNC FLEX	ETHERLINE® Cat.6, FD P	ETHERLINE® Cat.6, 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,...	✓	✓	✓																		✓	✓						
	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																												

	Cable protection hoses	Cable entries	Marking	Accessories
Halogen-free 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

Other halogen-free cables on request.

PLEASE NOTE: halogen-free fibre optics you can find at appendix A11.