



NSHXAFö 1.8/3 kV

DB3022673EN

valid from: 2010-08-20

MAKE-UP TYPE

NSHXAFö 1,8/3 kV

CERTIFICATION

NSHXAFö 1,8/3 kV ◀VDE▶ (arrowheads can also be blank) according to VDE 0250-606

APPLICATION (VDE 0298-3)

- Railway vehicles
- Omnibuses
- Switching stations (short-circuit-proof up to 1000 V)
- Power distributors (short-circuit-proof up to 1000 V)
- No direct laying in the ground
- Lead-through through fire separation (e.g. sand cups) is permissible and doesn't represent laying in ground normatively
- Removal of tensile load, thrust, torsion and bend is necessary in case of connection to non-stationary equipment
- No appropriateness for protection class II
- In ducts, tubes, pipes, conduits
- In closed installation channels
- Machine or tool wiring
- Connection of movable parts
- Bundled
- Potentially for the protection of life & material assets in case of fire due to halogen-free materials, at the applications mentioned
- Maximum laying tensile strength

At stationary installation	50 N per mm ² of nominal conductor cross section
At movable equipment	15 N per mm ² of nominal conductor cross section

PERMISSIBLE VOLTAGES

Rated, core-to-ground (PE) (U ₀)	1.8 kV AC/2.7 kV DC
Rated, core (not PE)-to-core (not PE) (U)	3.0 kV AC/4.5 kV DC
Operated, core-to-ground (PE) (U ₀)	2.1 kV AC/2.7 kV DC
Operated, core (not PE)-to-core (not PE) (U)	3.6 kV AC/5.4 kV DC

MAKE-UP (DIN VDE 0250-606)

Conductor	Copper
Conductor class	Fine-wired/Class 5 according to IEC 60228/EN 60228/VDE 0295
Conductor quantity	Single-conductor/1 x ...
Cross sections in mm ²	1.5 to 300
Insulation	Extruded rubber compound 3GI3 acc. to DIN VDE 0250-606.4.3 & DIN VDE 0207-20 Wall thickness in line with DIN VDE 0250-606, table 4, column 4
Outer coating	Halogen-free polymer compound HM3 acc. DIN VDE 0250-606.4.5 & DIN VDE 0207-24 Wall thickness in compliance with DIN VDE 0250-606, table 4, column 5
Outer cable diameter	DIN VDE 0250-606, table 4, column 6
Standard colour of the outer coating	Black (other colours on request)

ELECTRICAL PROPERTIES AT +20 °C

Rated voltage U ₀ /U	1.8/3 kV AC
Test voltage	6000 V AC

MECHANICAL, CHEMICAL AND THERMAL PROPERTIES

Category temperature in each situation	At the conductor, during operation	+90 °C
	At the surface, fix laying	-40 °C to +90 °C
	At the surface, during laying	-25 °C to +70 °C
Minimum bending radii	Installed fixedly	6 x OD*
	Moved freely	10 x OD*
	At insertion	10 x OD*
	Drum operation (enforced guidance)	12 x OD*
	Cable roller assemblies (enf. guidance)	10 x OD*
	Roll direction change	15 x OD*
Halogen-free	DIN VDE 0250-606 -2.2 and -4.7	
Fire load values	DIN VDE 0250-606, table 4, column 7	
European low voltage directive	Not compliant with the low voltage directive (CE) due to the rated voltage above 1 kV	

*OD = Outer cable diameter