

HXCMK 12/20 (24) kV 1-core Eca

Medium voltage cable

12/20 (24) kV

Application

Medium-voltage cable for fixed installations indoors and outdoors. May be buried directly in soil. Installations must be in accordance with national regulations and rules of installations. The cable is flame-retardant according to CPR-class Eca.

Design

Standards	HD 620 10 F, SFS 5636
Reaction to fire	Eca; EN 13501-6, EN 50575:2014+A1:2016
Conductor	Circular stranded copper, EN/IEC 60228 class 2
Conductor screen	Semiconducting cross-linked polyethylene XLPE
Insulation	Cross-linked polyethylene XLPE
Insulation screen	Semiconducting cross-linked polyethylene XLPE
Inner covering	Semiconducting tape
Inner covering	Semiconducting tape
Metal screen	Layer of helically wound copper wires with a counter helix copper tape
Oversheath	UV-protected PVC compound, Black



DryRex



Temperature limits

Max. conductor temperature °C	90
Max. cond. temp. short circuit max. 5 s °C	250
Min. cable temperature during operation °C	-50
Min. cable temperature during handling °C	-20
Min. cable temperature during transport °C	-40

Technical information	1x35/16
Product code	1188221
Nominal cross-sectional area of conductor mm ²	35
Nominal diameter of conductor mm	6,9
Nominal thickness of conductor screen mm	0,5
Nominal thickness of insulation mm	5,5
Nominal diameter over the insulation without insulation screen mm	18,1
Nominal thickness of insulation screen mm	0,5
Nominal size of metal screen mm ²	16
Nominal thickness of oversheath mm	1,8
Fire load MJ/m	15,641
Fire load kWh/m	4,345
Nominal cable diameter mm	25,540
Nominal cable weight kg/km	901,513
Nominal weight of copper kg/m	0,446
Maximum forces during installation when pulling by	
Max. pulling force by pulling-eye kN	3,5
Max. pulling force by pulling-stocking kN	0,7
Minimum bending radii	
During handling and installation, cable cm	38
In final installation, cable cm	27
Minimum bending radii	
During handling and installation, cable m	0,38
In final installation, cable m	0,27
DC resistance	
Max. DC resistance of conductor at 20 °C Ω/km	0,524
Maximum DC resistance at 20 °C, metal screen Ω/km	1,2
AC resistance of phase conductor, screen circuit closed	
Conductor temperature 40 °C Ω/km	0,5653
Conductor temperature 65 °C Ω/km	0,6168
Conductor temperature 70 °C Ω/km	0,6271
Conductor temperature 90 °C Ω/km	0,6683

Technical information	1x35/16
Inductance per phase	
In flat formation, free space between cables equal to one cable diam	0,63
In trefoil formation, cables touching each other mH/km	0,45
Electrical values	
Calculated operation capacitance $\mu\text{F}/\text{km}$	0,15
Calculated charging current with main voltage A/km	0,5
Calculated earth fault current with main voltage A/km	1,6
Current ratings	
Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m	
Flat, conductor 65 °C, open screen A	195
Flat, conductor 65 °C, closed screen A	185
Flat, conductor 90 °C, open screen A	225
Flat, conductor 90 °C, closed screen A	220
Trefoil, conductor 65 °C, open screen A	175
Trefoil, conductor 65 °C, closed screen A	175
Trefoil, conductor 90 °C, open screen A	205
Trefoil, conductor 90 °C, closed screen A	205
Maximum thermal short circuit current during 1 s	
Phase (initial 90 °C, final 250 °C) kA	5,0
Metal screen (initial 80 °C, final 250 °C) kA	2,3