

MCMK 5-core

1 kV power cable with PVC insulated copper conductors



Application

For fixed installation indoors, outdoors and underground as well as in building structures, e.g. directly in concrete. Not for installations subject to severe electrical interference (see MCMK).

Standards

SFS 4880, HD 603-3F S1, IEC 60502-1, IEC 60332-1

Certificate/approval

EEI, CE, FI, S

Rated voltage

$U_0/U = 0,6/1$ kV, $U_m = 1,2$ kV

Temperature range

Highest permissible conductor temperature:
 - in continuous operation 70 °C
 - in a short circuit (duration up to 5 s) 160 °C
 Lowest recommended temperature during laying . . . -15 °C

Construction

Conductor annealed copper
 1,5-6 mm² - solid
 10 and 16 mm² - stranded, round (RM)
 Insulation lead-free PVC
 Laying up three phase conductors and neutral
 conductor stranded together
 Filling filling compound
 PE conductor concentric layer of copper wires and
 an open helix of parallel copper wires
 Sheath black, lead-free PVC compound

Identification of cores

Colour marking . . . blue, brown, black, grey
 According to HD 308 S2:2002.

Marking

Manufacturer, product name, FI-mark, year and week of
 manufacture, meter marking

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Basic cable data			MCMK	MCMK	MCMK	MCMK
			4x1,5/1,5 1 kV	4x1,5/1,5 1 kV	4x2,5/2,5 1 kV	4x2,5/2,5 1 kV
			drum	reel	drum	reel
EAN code		64 100+	06 021 72-7	06 021 92-5	06 021 43-7	06 021 93-2
Construction data						
External cable diameter ⁽¹⁾		mm	13	13	14	14
Weight ⁽¹⁾	copper	kg/km	68	68	110	110
	cable	kg/km	210	210	270	270
Delivery data						
Standard delivery length		m	1000	100	1000	100
Drum			K8	reel	K9	reel
Total weight ⁽¹⁾	cable + drum	kg	235	21	320	27
Mechanical data ⁽²⁾						
Minimum permissible bending radius during laying		m	0,16	0,16	0,17	0,17
Minimum permissible bending radius at final installation ⁽³⁾		m	0,11	0,11	0,12	0,12
Maximum permissible pulling force, pulling by phase conductors		kN	0,3	0,3	0,5	0,5
Electrical data ⁽²⁾						
Maximum DC resistance of	conductor 20 °C	Ω/km	12,1	12,1	7,41	7,41
Maximum AC resistance of	conductor 70 °C	Ω/km	14,5	14,5	8,87	8,87
Maximum DC resistance of	PE conductor 20 °C	Ω/km	12,1	12,1	7,41	7,41
Inductance ⁽¹⁾		mH/km	0,34	0,34	0,32	0,32
Operating capacitance ⁽¹⁾		μF/km	0,25	0,25	0,30	0,30
Current ratings ⁽²⁾						
In ground	conductor 70 °C	A	26	26	35	35
In air	conductor 70 °C	A	14	14	20	20
Short circuit currents ⁽²⁾						
Max permissible short circuit current for 1 second	phase and neutral conductor ⁽⁴⁾	kA	0,18	0,18	0,30	0,30
	PE conductor ⁽⁵⁾	kA	0,24	0,24	0,42	0,42

Basic cable data			MCMK	MCMK	MCMK
			4x6/6 1 kV	4x10/10 RM 1 kV	4x16/16 RM 1 kV
			drum	drum	drum
EAN code		64 100+	06 021 45-1	06 021 46-8	06 021 47-5
Construction data					
External cable diameter ⁽¹⁾		mm	18,5	22	25
Weight ⁽¹⁾	copper	kg/km	265	447	712
	cable	kg/km	520	790	1150
Delivery data					
Standard delivery length		m	500	500	500
Drum			K8	K11	K11
Total weight ⁽¹⁾	cable + drum	kg	285	480	630
Mechanical data ⁽²⁾					
Minimum permissible bending radius during laying		m	0,22	0,25	0,29
Minimum permissible bending radius at final installation ⁽³⁾		m	0,15	0,17	0,20
Maximum permissible pulling force, pulling by phase conductors		kN	1,2	2,0	3,2
Electrical data ⁽²⁾					
Maximum DC resistance of	conductor 20 °C	Ω/km	3,08	1,83	1,15
Maximum AC resistance of	conductor 70 °C	Ω/km	3,69	2,19	1,38
Maximum DC resistance of	PE conductor 20 °C	Ω/km	3,08	1,83	1,15
Inductance ⁽¹⁾		mH/km	0,30	0,28	0,26
Operating capacitance ⁽¹⁾		μF/km	0,35	0,40	0,40
Current ratings ⁽²⁾					
In ground	conductor 70 °C	A	57	77	100
In air	conductor 70 °C	A	33	62	82
Short circuit currents ⁽²⁾					
Max permissible short circuit current for 1 second	phase and neutral conductor ⁽⁴⁾	kA	0,70	1,1	1,8
	PE conductor ⁽⁵⁾	kA	1,0	1,7	2,7

1) Approximate value.

2) See the basic assumptions at general information of products.

3) Final installation with careful single bending.

4) Initial temperature of conductor before short circuit 70 °C, final temperature of conductor after short circuit 160 °C.

5) Initial temperature of PE conductor before short circuit 60 °C, final temperature of PE conductor after short circuit 160 °C.