

## MMJ

## Installation cable

## 450/750 V

## Application

Installation cable for fixed installations indoors and outdoors. Not to be laid in soil nor directly in cast concrete. Can be embedded to the groove filled with plaster. The conductor insulation must be protected against UV-radiation. Installations must be in accordance with national regulations and rules of installations. The cable is flame-retardant according to CPR-class Eca.



## Design

<b>Standards</b>	SFS 2091, SS 424 02 19-3, NEK 535
<b>Reaction to fire</b>	Eca; EN 13501-6, EN 50575:2014+A1:2016
<b>Conductor</b>	Circular stranded copper, EN/IEC 60228 class 2
<b>Insulation</b>	PVC-compound
<b>Core Identification</b>	Blue, brown Blue, brown, black, grey Blue, brown, black, grey, black Brown, black, grey Yellow-green, blue, brown Yellow-green, blue, brown, black Yellow-green, blue, brown, black, grey
<b>Cable lay up</b>	Insulated cores SZ-twisted together
<b>Inner covering</b>	Extruded filling compound
<b>Oversheath</b>	UV-protected PVC-compound, White

## Temperature limits

<b>Max. conductor temperature °C</b>	70
<b>Max. cond. temp. short circuit max. 5 s °C</b>	160
<b>Min. cable temperature during operation °C</b>	-40
<b>Min. cable temperature during handling °C</b>	-15
<b>Min. cable temperature during transport °C</b>	-40

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Technical information	3x4 S	3x6 S	3x10 S	3x16 S	5x4 S	5x6 S	5x10 S	5x16 S	5x25 S
<b>Product code</b>	<b>1102116</b>	<b>1102121</b>	<b>1102126</b>	<b>1102131</b>	<b>1102118</b>	<b>1102123</b>	<b>1102128</b>	<b>1102133</b>	<b>1102138</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	4	6	10	16	4	6	10	16	25
Nominal diameter of conductor mm	2,5	3,1	4,0	5,0	2,5	3,1	4,0	5,0	6,4
Nominal thickness of insulation mm	0,8	0,8	1,0	1,0	0,8	0,8	1,0	1,0	1,2
Nominal thickness of oversheath mm	1,5	1,5	1,5	1,6	1,5	1,5	1,7	1,7	1,8
Fire load MJ/m	3,157	3,708	5,262	6,376	4,262	5,001	7,702	8,683	16,485
Fire load kWh/m	0,877	1,030	1,462	1,771	1,184	1,389	2,139	2,412	4,579
Nominal cable diameter mm	12,600	13,830	16,630	19,040	14,880	16,430	20,440	23,110	29,360
Nominal cable weight kg/km	262,847	339,311	515,107	717,762	392,441	513,905	817,187	1111,184	1913,632
Metall weight Cu kg/m	0,110	0,161	0,262	0,413	0,183	0,269	0,440	0,689	1,132
<b>Maximum forces during installation when pulling by</b>									
Max. pulling force by pulling-eye kN	0,6	0,9	1,5	2,4	1,0	1,5	2,5	4,0	6,2
<b>Minimum bending radii</b>									
Minimum bending radius, handling mm	126	138	166	190	149	164	204	231	294
Minimum bending radius, final bending mm	38	41	50	57	45	49	61	69	88
<b>Minimum bending radii</b>									
During handling and installation, cable cm	13	14	17	19	15	16	20	23	29
In final installation, cable cm	4	4	5	6	4	5	6	7	9
<b>DC resistance</b>									
Max. DC resistance of conductor at 20 °C Ω/km	4,61	3,08	1,83	1,15	4,61	3,08	1,83	1,15	0,727
<b>Electrical values</b>									
Minimum insulation resistance MΩ × km		0,0065	0,0065	0,005		0,0065	0,0065	0,005	0,005
<b>Current ratings</b>									
<b>Cables in air (25 °C)</b>									
two loaded conductor, conductor 70 °C A	42	53	73	98	42	53	73	98	124
three loaded conductor, conductor 70 °C A					35	45	62	83	105
<b>Cables in air (30 °C)</b>									
two loaded conductor, conductor 70 °C A	40	51	70	94	40	51	70	94	119
three loaded conductor, conductor 70 °C A					34	43	60	80	101