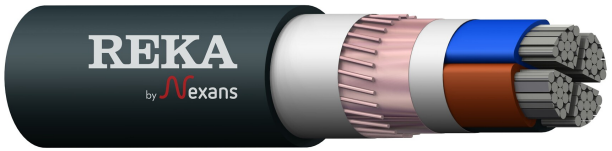
AEMCMK-HF / AXQJ-EMC / IFSI-EMC-AI

Aluminium power cable EMC



0,6/1 (1,2) kV

Application

Aluminium power cable for fixed installations indoors and outdoors. May be buried directly in soil. EMC shielded cable gives an excellent protection against electromagnetic disturbancies. The conductor insulation must be protected against UV-radiation. Installations must be in accordance with national regulations and rules of installations. The cable is halogen-free and flame-retardant according to CPR-class Dca-s2,d2,a2.

Design

Standards	SFS 5546, SEK TS 424 14 18-1, HD 604 5 I & D, IEC 60502-1
Reaction to fire	Dca-s2,d2,a2; EN 13501-6, EN 50575:2014+A1:2016
Conductor	16-25 mm² circular stranded aluminium, EN/IEC 60228 class 2 35-300 mm² sector shaped stranded aluminium, EN/IEC 60228 class 2
Insulation	Cross-linked polyethylene XLPE
Core Identification	Brown, black, grey Blue, brown, black, grey
Inner covering	Plastic tape
Metal screen	EMC-copper foil and copper wires
Oversheath	UV-protected polyolefin compound, Black
EMC-Shield	Copper foil with 100 % coverage

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	-15
Min. cable temperature during transport °C	-25

Technical information	3x16/10	3x25/10	3x25/16	3x35/16	3x50/16	3x70/21	3x95/29	3x95/35	3x120/41	3x150/41
Product code	**1149200**	**1320551**	**1149201**	**1149202**	**1149203**	**1149204**	**1149205**	**1320555**	**1149206**	**1149207**
Nominal cross-sectional area of conductor mm²	16	25	25	35	50	70	95	95	120	150
Nominal thickness of insulation mm	0,7	0,9	0,9	0,9	1,0	1,1	1,1	1,1	1,2	1,4
Nominal size of metal screen mm²	10	10	16	16	16	21	29	35	41	41
Nominal thickness of oversheath mm	1,8	1,8	1,8	1,8	1,8	2,0	2,1	2,1	2,3	2,3
Fire load MJ/m	5,435	7,356	7,406	6,158	7,255	9,301	11,271	11,271	14,642	18,004
Fire load kWh/m	1,510	2,043	2,057	1,710	2,015	2,584	3,131	3,131	4,067	5,001
Nominal cable diameter mm	20,660	23,670	24,050	22,080	23,540	27,030	31,450	31,450	35,830	39,190
Nominal cable weight kg/km	609,727	808,560	863,243	679,801	815,963	1115,470	1468,784	1524,192	1905,734	2224,261
Nominal weight of copper kg/m	0,113	0,118	0,169	0,139	0,139	0,187	0,249	0,305	0,360	0,360
Nominal weight of aluminium kg/m	0,129	0,199	0,199	0,273	0,375	0,544	0,751	0,751	0,949	1,165
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	0,7	1,1	1,1	1,6	2,3	3,2	4,3	4,3	5,4	6,8
Max. pulling force by pulling-stocking kN	0,7	1,1	1,1	1,6	2,3	3,2	4,3	4,3	5,4	6,8
Minimum bending radii										
During handling and installation, phase conductor cm	10	9	9	17	20	24	27	27	31	35
During handling and installation, cable cm	25	28	29	26	28	32	38	38	43	47
In final installation, phase conductor cm	7	6	6	12	14	17	19	19	22	24
In final installation, cable cm	17	20	20	19	20	23	26	26	30	33
Minimum bending radii										
During handling and installation, cable m	0,25	0,28	0,29	0,27	0,28	0,32	0,38	0,38	0,43	0,47
In final installation, cable m	0,17	0,20	0,20	0,18	0,20	0,23	0,26	0,26	0,30	0,33
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	1,91	1,20	1,20	0,868	0,641	0,443	0,320	0,320	0,253	0,206
Maximum DC resistance at 20 °C, metal screen Ω/km	1,83	1,83	1,15	1,15	1,15	0,868	0,641	0,524	0,443	0,443

Technical information	3x16/10	3x25/10	3x25/16	3x35/16	3x50/16	3x70/21	3x95/29	3x95/35	3x120/41	3x150/41
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	76	93	93	115	140	180	218	218	254	293
three loaded conductor, conductor 70 °C A	63	81	81	100	122	156	190	190	220	255
two loaded conductor, conductor 90 °C A	95	112	112	140	171	219	267	267	312	360
three loaded conductor, conductor 90 °C A	80	101	101	125	152	194	236	236	274	316
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	73	89	89	111	135	173	210	210	244	282
three loaded conductor, conductor 70 °C A	61	78	78	96	117	150	183	183	212	245
two loaded conductor, conductor 90 °C A	91	108	108	135	164	211	257	257	300	346
three loaded conductor, conductor 90 °C A	77	97	97	120	146	187	227	227	263	304
Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 65 °C A	78	100	100	125	150	185	220	220	255	280
Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 90 °C A	64	82	82	98	117	144	172	172	197	220
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	1,7	2,6	2,6	3,6	5,2	7,3	9,8	9,8	12,4	15,5
Phase (initial 90 °C, final 250 °C) kA	1,5	2,4	2,4	3,4	4,8	6,7	9,0	9,0	11,4	14,2
Metal screen (initial 80 °C, final 250 °C) kA	1,5	1,5	2,4	2,4	2,4	3,1	4,3	5,2	6,1	6,1

Technical information	3x150/50	3x185/57	3x240/70	3x240/72	3x300/88	4x16/10	4x25/10	4x25/16	4x35/16	4x50/16
Product code	**1320557**	**1149208**	**1320559**	**1149209**	**1149210**	**1149214**	**1320571**	**1149215**	**1149216**	**1149217**
Nominal cross-sectional area of conductor mm²	150	185	240	240	300	16	25	25	35	50
Nominal thickness of insulation mm	1,4	1,6	1,7	1,7	1,8	0,7	0,9	0,9	0,9	1,0
Nominal size of metal screen mm²	50	57	70	72	88	10	10	16	16	16
Nominal thickness of oversheath mm	2,3	2,5	2,7	2,7	3,0	1,8	1,8	1,8	1,8	1,9
Fire load MJ/m	18,004	22,907	26,540	26,540	32,076	6,513	8,897	8,947	7,462	9,535
Fire load kWh/m	5,001	6,363	7,372	7,372	8,910	1,809	2,471	2,485	2,073	2,649
Nominal cable diameter mm	39,190	44,360	47,970	47,970	55,790	22,320	25,660	26,040	23,990	27,820
Nominal cable weight kg/km	2288,904	2790,882	3524,201	3560,868	4412,620	705,213	944,533	999,217	812,539	1027,611
Nominal weight of copper kg/m	0,425	0,501	0,599	0,636	0,794	0,116	0,121	0,172	0,139	0,139
Nominal weight of aluminium kg/m	1,165	1,414	1,910	1,910	2,357	0,173	0,266	0,266	0,364	0,501
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	6,8	8,3	10,8	10,8	13,5	1,0	1,5	1,5	2,1	3,0
Max. pulling force by pulling-stocking kN	6,8	8,3	8,5	8,5	8,5	1,0	1,5	1,5	2,1	3,0
Minimum bending radii										
During handling and installation, phase conductor cm	35	38	43	43	50	10	9	9	16	19
During handling and installation, cable cm	47	53	58	58	67	27	31	31	29	33
In final installation, phase conductor cm	24	27	30	30	35	7	6	6	11	13
In final installation, cable cm	33	37	40	40	47	19	22	22	20	23
Minimum bending radii										
During handling and installation, cable m	0,47	0,53	0,58	0,58	0,67	0,27	0,31	0,31	0,29	0,33
In final installation, cable m	0,33	0,37	0,40	0,40	0,47	0,19	0,22	0,22	0,20	0,23
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	0,206	0,164	0,125	0,125	0,100	1,91	1,20	1,20	0,868	0,641
Maximum DC resistance at 20 °C, metal screen Ω/km	0,443	0,320	0,253	0,253	0,206	1,83	1,83	1,15	1,15	1,15

Technical information	3x150/50	3x185/57	3x240/70	3x240/72	3x300/88	4x16/10	4x25/10	4x25/16	4x35/16	4x50/16
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	293	335	395	395	457	76	93	93	115	140
three loaded conductor, conductor 70 °C A	255	291	343	343	396	63	81	81	100	122
two loaded conductor, conductor 90 °C A	360	413	489	489	565	95	112	112	140	171
three loaded conductor, conductor 90 °C A	316	361	425	425	490	80	101	101	125	152
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	282	322	380	380	439	73	89	89	111	135
three loaded conductor, conductor 70 °C A	245	280	330	330	381	61	78	78	96	117
two loaded conductor, conductor 90 °C A	346	397	470	470	543	91	108	108	135	164
three loaded conductor, conductor 90 °C A	304	347	409	409	471	77	97	97	120	146
Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 65 °C A	280	330	375	375	430	78	100	100	125	150
Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 90 °C A	220	250	290	290	326	64	82	82	98	117
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	15,5	19,2	24,9	24,9	31,1	1,7	2,6	2,6	3,6	5,2
Phase (initial 90 °C, final 250 °C) kA	14,2	17,5	22,6	22,6	28,2	1,5	2,4	2,4	3,4	4,8
Metal screen (initial 80 °C, final 250 °C) kA	7,4	8,5	10,4	10,7	13,0	1,5	1,5	2,4	2,4	2,4

Technical information	4x70/21	4x95/29	4x95/35	4x120/41	4x150/41	4x150/50	4x185/57	4x240/70	4x240/72	4x300/88
Product code	**1149218**	**1149219**	**1320575**	**1149220**	**1149221**	**1320577**	**1149222**	**1320579**	**1149223**	**1149224**
Nominal cross-sectional area of conductor mm²	70	95	95	120	150	150	185	240	240	300
Nominal thickness of insulation mm	1,1	1,1	1,1	1,2	1,4	1,4	1,6	1,7	1,7	1,8
Nominal size of metal screen mm²	21	29	35	41	41	50	57	70	72	88
Nominal thickness of oversheath mm	2,1	2,2	2,2	2,3	2,5	2,5	2,7	2,9	2,9	3,1
Fire load MJ/m	12,208	14,320	14,320	18,382	22,952	22,952	28,335	35,054	35,054	39,711
Fire load kWh/m	3,391	3,978	3,978	5,106	6,375	6,375	7,871	9,737	9,737	11,031
Nominal cable diameter mm	31,220	35,220	35,220	40,370	44,600	44,600	49,260	56,070	56,070	59,820
Nominal cable weight kg/km	1400,220	1825,132	1880,540	2342,403	2792,396	2857,038	3454,610	4459,436	4496,102	5427,619
Nominal weight of copper kg/m	0,187	0,249	0,305	0,360	0,360	0,425	0,501	0,599	0,636	0,794
Nominal weight of aluminium kg/m	0,725	1,001	1,001	1,265	1,554	1,554	1,886	2,547	2,547	3,143
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	4,2	5,7	5,7	7,2	9,0	9,0	11,1	14,4	14,4	18,0
Max. pulling force by pulling-stocking kN	4,2	5,7	5,7	7,2	8,5	8,5	8,5	8,5	8,5	8,5
Minimum bending radii										
During handling and installation, phase conductor cm	23	26	26	29	32	32	37	43	43	46
During handling and installation, cable cm	37	42	42	48	54	54	59	67	67	72
In final installation, phase conductor cm	16	18	18	20	23	23	26	30	30	32
In final installation, cable cm	26	30	30	34	37	37	41	47	47	50
Minimum bending radii										
During handling and installation, cable m	0,38	0,42	0,42	0,48	0,54	0,54	0,59	0,67	0,67	0,72
In final installation, cable m	0,26	0,30	0,30	0,34	0,38	0,38	0,41	0,47	0,47	0,50
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	0,443	0,320	0,320	0,253	0,206	0,206	0,164	0,125	0,125	0,100
Maximum DC resistance at 20 °C, metal screen Ω/km	0,868	0,641	0,524	0,443	0,443	0,443	0,320	0,253	0,253	0,206

Technical information	4x70/21	4x95/29	4x95/35	4x120/41	4x150/41	4x150/50	4x185/57	4x240/70	4x240/72	4x300/88
Current ratings										
Cables in air (25 °C)										
two loaded conductor, conductor 70 °C A	180	218	218	254	293	293	335	395	395	457
three loaded conductor, conductor 70 °C A	156	190	190	220	255	255	291	343	343	396
two loaded conductor, conductor 90 °C A	219	267	267	312	360	360	413	489	489	565
three loaded conductor, conductor 90 °C A	194	236	236	274	316	316	361	425	425	490
Cables in air (30 °C)										
two loaded conductor, conductor 70 °C A	173	210	210	244	282	282	322	380	380	439
three loaded conductor, conductor 70 °C A	150	183	183	212	245	245	280	330	330	381
two loaded conductor, conductor 90 °C A	211	257	257	300	346	346	397	470	470	543
three loaded conductor, conductor 90 °C A	187	227	227	263	304	304	347	409	409	471
Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 65 °C A	185	220	220	255	280	280	330	375	375	430
Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m										
Cables in the ground, conductor 90 °C A	144	172	172	197	220	220	250	290	290	326
Maximum thermal short circuit current during 1 s										
Phase (initial 65 °C, final 250 °C) kA	7,3	9,8	9,8	12,4	15,5	15,5	19,2	24,9	24,9	31,1
Phase (initial 90 °C, final 250 °C) kA	6,7	9,0	9,0	11,4	14,2	14,2	17,5	22,6	22,6	28,2
Metal screen (initial 80 °C, final 250 °C) kA	3,1	4,3	5,2	6,1	6,1	7,4	8,5	10,4	10,7	13,0