

MK-HF C / H07Z1-R

Installation wire-HF

450/750 V

Application

Installation wire for fixed installations indoors. Can also be used in medical facilities where higher fire class is required. For internal wiring of electrical devices. The conductor insulation must be protected against UV-radiation. The cable is halogen-free and flame-retardant according to CPR-class Cca-s1,d1,a1.



Design

Standards	EN 50525-3-31
Reaction to fire	Cca-s1,d1,a1; EN 13501-6, EN 50575:2014+A1:2016
Conductor	Circular stranded copper, EN/IEC 60228 class 2
Insulation	Polyolefine compound
Core Identification	GNYE Yellow-green, BU Blue BN Brown, BK Black GY Grey, OG Orange RD Red, WH White VT Violet, PK Pink

Temperature limits

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

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Technical information	4 BK H07Z1-R	4 BU H07Z1-R	4 GNYE H07Z1-R	6 BK H07Z1-R	6 BU H07Z1-R	6 GNYE H07Z1-R	10 BK H07Z1-R	10 BU H07Z1-R	10 GNYE H07Z1-R	16 BK H07Z1-R
Product code	1140833	1140837	1140838	1140843	1140847	1140848	1140853	1140857	1140858	1140863
Nominal cross-sectional area of conductor mm ²	4	4	4	6	6	6	10	10	10	16
Nominal thickness of insulation mm	0,8	0,8	0,8	0,8	0,8	0,8	1,0	1,0	1,0	1,0
Fire load MJ/m	0,233	0,233	0,233	0,283	0,283	0,283	0,455	0,455	0,455	0,537
Fire load kWh/m	0,065	0,065	0,065	0,079	0,079	0,079	0,126	0,126	0,126	0,149
Nominal cable diameter mm	4,180	4,180	4,180	4,750	4,750	4,750	6,050	6,050	6,050	7,250
Nominal cable weight kg/km	52,015	52,015	52,015	71,860	71,860	71,860	116,326	116,326	116,326	182,818
Nominal weight of copper kg/m	0,037	0,037	0,037	0,053	0,053	0,053	0,086	0,086	0,086	0,147
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	0,2	0,2	0,2	0,3	0,3	0,3	0,5	0,5	0,5	0,8
Max. pulling force by pulling-stocking kN										
Minimum bending radii										
Minimum bending radius, handling mm	33	33	33	38	38	38	48	48	48	58
Minimum bending radius, final bending mm	13	13	13	14	14	14	18	18	18	22
Minimum bending radii										
During handling and installation, cable cm	3	3	3	4	4	4	5	5	5	6
In final installation, cable cm	1	1	1	1	1	1	2	2	2	2
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	4,61	4,61	4,61	3,08	3,08	3,08	1,83	1,83	1,83	1,15

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Technical information	16 BU H07Z1-R	16 GNYE H07Z1-R	25 BK H07Z1-R	25 BU H07Z1-R	25 GNYE H07Z1-R	35 BK H07Z1-R	35 BU H07Z1-R	35 GNYE H07Z1-R	50 BK H07Z1-R	50 BU H07Z1-R
Product code	1140867	1140868	1140873	1140877	1140878	1140883	1140887	1140888	1140893	1140897
Nominal cross-sectional area of conductor mm ²	16	16	25	25	25	35	35	35	50	50
Nominal thickness of insulation mm	1,0	1,0	1,2	1,2	1,2	1,2	1,2	1,2	1,4	1,4
Fire load MJ/m	0,537	0,537	0,785	0,785	0,785	0,946	0,946	0,946	1,284	1,284
Fire load kWh/m	0,149	0,149	0,218	0,218	0,218	0,263	0,263	0,263	0,357	0,357
Nominal cable diameter mm	7,250	7,250	8,790	8,790	8,790	10,050	10,050	10,050	11,700	11,700
Nominal cable weight kg/km	182,818	182,818	279,322	279,322	279,322	374,061	374,061	374,061	507,578	507,578
Nominal weight of copper kg/m	0,147	0,147	0,227	0,227	0,227	0,311	0,311	0,311	0,422	0,422
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	0,8	0,8	1,2	1,2	1,2	1,7	1,7	1,7	2,5	2,5
Max. pulling force by pulling-stocking kN										
Minimum bending radii										
Minimum bending radius, handling mm	58	58	70	70	70	80	80	80	94	94
Minimum bending radius, final bending mm	22	22	26	26	26	30	30	30	35	35
Minimum bending radii										
During handling and installation, cable cm	6	6	7	7	7	8	8	8	9	9
In final installation, cable cm	2	2	3	3	3	3	3	3	4	4
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	1,15	1,15	0,727	0,727	0,727	0,524	0,524	0,524	0,387	0,387

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Technical information	50 GNYE H07Z1-R	70 BK H07Z1-R	70 BU H07Z1-R	70 GNYE H07Z1-R	95 BK H07Z1-R	95 BU H07Z1-R	95 GNYE H07Z1-R	120 BK H07Z1-R	120 BU H07Z1-R	120 GNYE H07Z1-R
Product code	1140898	1140903	1140907	1140908	1140913	1140917	1140918	1140923	1140927	1140928
Nominal cross-sectional area of conductor mm ²	50	70	70	70	95	95	95	120	120	120
Nominal thickness of insulation mm	1,4	1,4	1,4	1,4	1,6	1,6	1,6	1,6	1,6	1,6
Fire load MJ/m	1,284	1,569	1,569	1,569	2,118	2,118	2,118	2,290	2,290	2,290
Fire load kWh/m	0,357	0,436	0,436	0,436	0,588	0,588	0,588	0,636	0,636	0,636
Nominal cable diameter mm	11,700	13,500	13,500	13,500	15,800	15,800	15,800	17,400	17,400	17,400
Nominal cable weight kg/km	507,578	711,567	711,567	711,567	992,226	992,226	992,226	1228,651	1228,651	1228,651
Nominal weight of copper kg/m	0,422	0,607	0,607	0,607	0,851	0,851	0,851	1,076	1,076	1,076
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	2,5	3,5	3,5	3,5	4,7	4,7	4,7	6,0	6,0	6,0
Max. pulling force by pulling-stocking kN										
Minimum bending radii										
Minimum bending radius, handling mm	94	108	108	108	126	126	126	139	139	139
Minimum bending radius, final bending mm	35	41	41	41	47	47	47	52	52	52
Minimum bending radii										
During handling and installation, cable cm	9	11	11	11	13	13	13	14	14	14
In final installation, cable cm	4	4	4	4	5	5	5	5	5	5
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	0,387	0,268	0,268	0,268	0,193	0,193	0,193	0,153	0,153	0,153

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Technical information	150 BK H07Z1-R	150 BU H07Z1-R	150 GNYE H07Z1-R	185 BK H07Z1-R	185 BU H07Z1-R	185 GNYE H07Z1-R	240 BK H07Z1-R	240 BU H07Z1-R	240 GNYE H07Z1-R	300 BK H07Z1-R
Product code	1140933	1140937	1140938	1140943	1140947	1140948	1140953	1140957	1140958	1140963
Nominal cross-sectional area of conductor mm ²	150	150	150	185	185	185	240	240	240	300
Nominal thickness of insulation mm	1,8	1,8	1,8	2,0	2,0	2,0	2,2	2,2	2,2	2,4
Fire load MJ/m	2,408	2,408	2,408	3,015	3,015	3,015	3,819	3,819	3,819	4,669
Fire load kWh/m	0,669	0,669	0,669	0,838	0,838	0,838	1,061	1,061	1,061	1,297
Nominal cable diameter mm	17,800	17,800	17,800	20,000	20,000	20,000	22,800	22,800	22,800	25,400
Nominal cable weight kg/km	1442,065	1442,065	1442,065	1808,023	1808,023	1808,023	2375,829	2375,829	2375,829	2947,292
Nominal weight of copper kg/m	1,282	1,282	1,282	1,607	1,607	1,607	2,121	2,121	2,121	2,636
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	7,5	7,5	7,5	9,2	9,2	9,2	12,0	12,0	12,0	15,0
Max. pulling force by pulling-stocking kN										
Minimum bending radii										
Minimum bending radius, handling mm	142	142	142	160	160	160	182	182	182	203
Minimum bending radius, final bending mm	53	53	53	60	60	60	68	68	68	76
Minimum bending radii										
During handling and installation, cable cm	14	14	14	16	16	16	18	18	18	20
In final installation, cable cm	5	5	5	6	6	6	7	7	7	8
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	0,124	0,124	0,124	0,0991	0,0991	0,0991	0,0754	0,0754	0,0754	0,0601

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Technical information	300 BU H07Z1-R	300 GNYE H07Z1-R	400 BK H07Z1-R	400 BU H07Z1-R	400 GNYE H07Z1-R	500 BK H07Z1-R	500 BU H07Z1-R	500 GNYE H07Z1-R	630 BK H07Z1-R	630 BU H07Z1-R
Product code	1140967	1140968	1140973	1140977	1140978	1140983	1140987	1140988	1140993	1140997
Nominal cross-sectional area of conductor mm ²	300	300	400	400	400	500	500	500	630	630
Nominal thickness of insulation mm	2,4	2,4	2,6	2,6	2,6	2,8	2,8	2,8	2,8	2,8
Fire load MJ/m	4,669	4,669	5,882	5,882	5,882	7,214	7,214	7,214	8,048	8,048
Fire load kWh/m	1,297	1,297	1,634	1,634	1,634	2,004	2,004	2,004	2,236	2,236
Nominal cable diameter mm	25,400	25,400	28,350	28,350	28,350	31,850	31,850	31,850	35,600	35,600
Nominal cable weight kg/km	2947,292	2947,292	3925,836	3925,836	3925,836	4958,953	4958,953	4958,953	6252,590	6252,590
Nominal weight of copper kg/m	2,636	2,636	3,534	3,534	3,534	4,478	4,478	4,478	5,716	5,716
Maximum forces during installation when pulling by										
Max. pulling force by pulling-eye kN	15,0	15,0	20,0	20,0	20,0	25,0	25,0	25,0	31,5	31,5
Max. pulling force by pulling-stocking kN										
Minimum bending radii										
Minimum bending radius, handling mm	203	203	227	227	227	255	255	255	285	285
Minimum bending radius, final bending mm	76	76	85	85	85	96	96	96	107	107
Minimum bending radii										
During handling and installation, cable cm	20	20	23	23	23	25	25	25	28	28
In final installation, cable cm	8	8	9	9	9	10	10	10	11	11
DC resistance										
Max. DC resistance of conductor at 20 °C Ω/km	0,0601	0,0601	0,0470	0,0470	0,0470	0,0366	0,0366	0,0366	0,0283	0,0283

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Technical information	630 GNYE H07Z1-R
Product code	1140998
Nominal cross-sectional area of conductor mm ²	630
Fire load MJ/m	8,048
Fire load kWh/m	2,236
Nominal cable diameter mm	35,600
Nominal cable weight kg/km	6252,590
Nominal weight of copper kg/m	5,716
Maximum forces during installation when pulling by	
Max. pulling force by pulling-eye kN	31,5
Max. pulling force by pulling-stocking kN	
Minimum bending radii	
Minimum bending radius, handling mm	285
Minimum bending radius, final bending mm	107
Minimum bending radii	
During handling and installation, cable cm	28
In final installation, cable cm	11
DC resistance	
Max. DC resistance of conductor at 20 °C Ω/km	0,0283