

## MK-HF / H07Z1-R

### Installation wire-HF

### 450/750 V

### Application

Installation wire for fixed installations indoors. 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 Dca-s2,d2,a2.



### Design

<b>Standards</b>	EN 50525-3-31
<b>Reaction to fire</b>	Dca-s2,d2,a2; EN 13501-6, EN 50575:2014+A1:2016
<b>Conductor</b>	Circular stranded copper, EN/IEC 60228 class 2
<b>Insulation</b>	Polyolefine compound
<b>Core Identification</b>	GNYE Yellow-green, BU Blue BN Brown, BK Black GY Grey, OG Orange RD Red, WH White VT Violet, PK Pink

### 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	1,5 GY H07Z1-R	1,5 WH H07Z1-R	1,5 BN H07Z1-R	1,5 BK H07Z1-R	1,5 GN H07Z1-R	1,5 OG H07Z1-R	1,5 BU H07Z1-R	1,5 GNYE H07Z1-R	2,5 GY H07Z1-R	2,5 WH H07Z1-R
<b>Product code</b>	<b>1145660</b>	<b>1145661</b>	<b>1145662</b>	<b>1145663</b>	<b>1145665</b>	<b>1145666</b>	<b>1145667</b>	<b>1145668</b>	<b>1145670</b>	<b>1145671</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	2,5	2,5
Nominal thickness of insulation mm	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,8	0,8
Fire load MJ/m	0,124	0,124	0,124	0,124	0,124	0,124	0,124	0,124	0,176	0,176
Fire load kWh/m	0,035	0,035	0,035	0,035	0,035	0,035	0,035	0,035	0,049	0,049
Nominal cable diameter mm	2,990	2,990	2,990	2,990	2,990	2,990	2,990	2,990	3,610	3,610
Nominal cable weight kg/km	22,059	22,059	22,059	22,059	22,059	22,059	22,059	22,059	33,955	33,955
Nominal weight of copper kg/m	0,014	0,014	0,014	0,014	0,014	0,014	0,014	0,014	0,022	0,022
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1
Max. pulling force by pulling-stocking kN										
<b>Minimum bending radii</b>										
Minimum bending radius, handling mm	24	24	24	24	24	24	24	24	29	29
Minimum bending radius, final bending mm	9	9	9	9	9	9	9	9	11	11
<b>Minimum bending radii</b>										
During handling and installation, cable cm	2	2	2	2	2	2	2	2	3	3
In final installation, cable cm	1	1	1	1	1	1	1	1	1	1
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	12,1	12,1	12,1	12,1	12,1	12,1	12,1	12,1	7,41	7,41

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Technical information	2,5 BN H07Z1-R	2,5 BK H07Z1-R	2,5 GN H07Z1-R	2,5 RD H07Z1-R	2,5 BU H07Z1-R	2,5 GNYE H07Z1-R	4 BK H07Z1-R	4 BU H07Z1-R	4 GNYE H07Z1-R	6 BK H07Z1-R
<b>Product code</b>	<b>1145672</b>	<b>1145673</b>	<b>1145675</b>	<b>1145676</b>	<b>1145677</b>	<b>1145678</b>	<b>1145683</b>	<b>1145687</b>	<b>1145688</b>	<b>1145693</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	2,5	2,5	2,5	2,5	2,5	2,5	4	4	4	6
Nominal thickness of insulation mm	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8
Fire load MJ/m	0,176	0,176	0,176	0,176	0,176	0,176	0,221	0,221	0,221	0,268
Fire load kWh/m	0,049	0,049	0,049	0,049	0,049	0,049	0,061	0,061	0,061	0,075
Nominal cable diameter mm	3,610	3,610	3,610	3,610	3,610	3,610	4,180	4,180	4,180	4,750
Nominal cable weight kg/km	33,955	33,955	33,955	33,955	33,955	33,955	51,220	51,220	51,220	70,893
Nominal weight of copper kg/m	0,022	0,022	0,022	0,022	0,022	0,022	0,037	0,037	0,037	0,053
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	0,1	0,1	0,1	0,1	0,1	0,1	0,2	0,2	0,2	0,3
Max. pulling force by pulling-stocking kN										
<b>Minimum bending radii</b>										
Minimum bending radius, handling mm	29	29	29	29	29	29	33	33	33	38
Minimum bending radius, final bending mm	11	11	11	11	11	11	13	13	13	14
<b>Minimum bending radii</b>										
During handling and installation, cable cm	3	3	3	3	3	3	3	3	3	4
In final installation, cable cm	1	1	1	1	1	1	1	1	1	1
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	7,41	7,41	7,41	7,41	7,41	7,41	4,61	4,61	4,61	3,08

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Technical information	6 BU H07Z1-R	6 GNYE H07Z1-R	10 BK H07Z1-R	10 BU H07Z1-R	10 GNYE H07Z1-R	16 BK H07Z1-R	16 BU H07Z1-R	16 GNYE H07Z1-R	25 BK H07Z1-R	25 BU H07Z1-R
<b>Product code</b>	<b>1145697</b>	<b>1145698</b>	<b>1145703</b>	<b>1145707</b>	<b>1145708</b>	<b>1145713</b>	<b>1145717</b>	<b>1145718</b>	<b>1145723</b>	<b>1145727</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	6	6	10	10	10	16	16	16	25	25
Nominal thickness of insulation mm	0,8	0,8	1,0	1,0	1,0	1,0	1,0	1,0	1,2	1,2
Fire load MJ/m	0,268	0,268	0,437	0,437	0,437	0,517	0,517	0,517	0,755	0,755
Fire load kWh/m	0,075	0,075	0,122	0,122	0,122	0,144	0,144	0,144	0,210	0,210
Nominal cable diameter mm	4,750	4,750	6,050	6,050	6,050	7,250	7,250	7,250	8,790	8,790
Nominal cable weight kg/km	70,893	70,893	115,160	115,160	115,160	181,440	181,440	181,440	277,309	277,309
Nominal weight of copper kg/m	0,053	0,053	0,086	0,086	0,086	0,147	0,147	0,147	0,227	0,227
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	0,3	0,3	0,5	0,5	0,5	0,8	0,8	0,8	1,2	1,2
Max. pulling force by pulling-stocking kN										
<b>Minimum bending radii</b>										
Minimum bending radius, handling mm	38	38	48	48	48	58	58	58	70	70
Minimum bending radius, final bending mm	14	14	18	18	18	22	22	22	26	26
<b>Minimum bending radii</b>										
During handling and installation, cable cm	4	4	5	5	5	6	6	6	7	7
In final installation, cable cm	1	1	2	2	2	2	2	2	3	3
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	3,08	3,08	1,83	1,83	1,83	1,15	1,15	1,15	0,727	0,727

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Technical information	25 GNYE H07Z1-R	35 BK H07Z1-R	35 BU H07Z1-R	35 GNYE H07Z1-R	50 BK H07Z1-R	50 BU H07Z1-R	50 GNYE H07Z1-R	70 BK H07Z1-R	70 BU H07Z1-R	70 GNYE H07Z1-R
<b>Product code</b>	<b>1145728</b>	<b>1145733</b>	<b>1145737</b>	<b>1145738</b>	<b>1145743</b>	<b>1145747</b>	<b>1145748</b>	<b>1145753</b>	<b>1145757</b>	<b>1145758</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	25	35	35	35	50	50	50	70	70	70
Nominal thickness of insulation mm	1,2	1,2	1,2	1,2	1,4	1,4	1,4	1,4	1,4	1,4
Fire load MJ/m	0,755	0,910	0,910	0,910	1,234	1,234	1,234	1,508	1,508	1,508
Fire load kWh/m	0,210	0,253	0,253	0,253	0,343	0,343	0,343	0,419	0,419	0,419
Nominal cable diameter mm	8,790	10,050	10,050	10,050	11,700	11,700	11,700	13,500	13,500	13,500
Nominal cable weight kg/km	277,309	371,636	371,636	371,636	504,286	504,286	504,286	707,546	707,546	707,546
Nominal weight of copper kg/m	0,227	0,311	0,311	0,311	0,422	0,422	0,422	0,607	0,607	0,607
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	1,2	1,7	1,7	1,7	2,5	2,5	2,5	3,5	3,5	3,5
Max. pulling force by pulling-stocking kN										
<b>Minimum bending radii</b>										
Minimum bending radius, handling mm	70	80	80	80	94	94	94	108	108	108
Minimum bending radius, final bending mm	26	30	30	30	35	35	35	41	41	41
<b>Minimum bending radii</b>										
During handling and installation, cable cm	7	8	8	8	9	9	9	11	11	11
In final installation, cable cm	3	3	3	3	4	4	4	4	4	4
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	0,727	0,524	0,524	0,524	0,387	0,387	0,387	0,268	0,268	0,268

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Technical information	95 BK H07Z1- R	95 BU H07Z1- R	95 GNYE H07Z1- R	120 BK H07Z1- R	120 BU H07Z1- R	120 GNYE H07Z1- R	150 GNYE H07Z1- R	185 GNYE H07Z1- R	240 GNYE H07Z1- R	300 GNYE H07Z1- R
<b>Product code</b>	<b>1145763</b>	<b>1145767</b>	<b>1145768</b>	<b>1145773</b>	<b>1145777</b>	<b>1145778</b>	<b>1145788</b>	<b>1145798</b>	<b>1145808</b>	<b>1145818</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	95	95	95	120	120	120	150	185	240	300
Nominal thickness of insulation mm	1,6	1,6	1,6	1,6	1,6	1,6	1,8	2,0	2,2	2,4
Fire load MJ/m	2,037	2,037	2,037	2,202	2,202	2,202	2,315	2,899	3,673	4,490
Fire load kWh/m	0,566	0,566	0,566	0,612	0,612	0,612	0,643	0,805	1,020	1,247
Nominal cable diameter mm	15,800	15,800	15,800	17,400	17,400	17,400	17,800	20,000	22,800	25,400
Nominal cable weight kg/km	986,794	986,794	986,794	1222,780	1222,780	1222,780	1435,891	1800,292	2366,036	2935,319
Nominal weight of copper kg/m	0,851	0,851	0,851	1,076	1,076	1,076	1,282	1,607	2,121	2,636
<b>Maximum forces during installation when pulling by</b>										
Max. pulling force by pulling-eye kN	4,7	4,7	4,7	6,0	6,0	6,0	7,5	9,2	12,0	15,0
Max. pulling force by pulling-stocking kN										
<b>Minimum bending radii</b>										
Minimum bending radius, handling mm	126	126	126	139	139	139	142	160	182	203
Minimum bending radius, final bending mm	47	47	47	52	52	52	53	60	68	76
<b>Minimum bending radii</b>										
During handling and installation, cable cm	13	13	13	14	14	14	14	16	18	20
In final installation, cable cm	5	5	5	5	5	5	5	6	7	8
<b>DC resistance</b>										
Max. DC resistance of conductor at 20 °C Ω/km	0,193	0,193	0,193	0,153	0,153	0,153	0,124	0,0991	0,0754	0,0601

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Technical information	400 GNYE H07Z1-R	500 GNYE H07Z1-R
<b>Product code</b>	<b>1145828</b>	<b>1145838</b>
Nominal cross-sectional area of conductor mm <sup>2</sup>	400	500
Nominal thickness of insulation mm	2,6	2,8
Fire load MJ/m	5,656	6,937
Fire load kWh/m	1,571	1,927
Nominal cable diameter mm	28,350	31,850
Nominal cable weight kg/km	3910,754	4940,455
Nominal weight of copper kg/m	3,534	4,478
<b>Maximum forces during installation when pulling by</b>		
Max. pulling force by pulling-eye kN	20,0	25,0
Max. pulling force by pulling-stocking kN		
<b>Minimum bending radii</b>		
Minimum bending radius, handling mm	227	255
Minimum bending radius, final bending mm	85	96
<b>Minimum bending radii</b>		
During handling and installation, cable cm	23	25
In final installation, cable cm	9	10
<b>DC resistance</b>		
Max. DC resistance of conductor at 20 °C Ω/km	0,0470	0,0366