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## ML-HF / H07Z1-U

### 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 solid copper, EN/IEC 60228 class 1                             |
| <b>Insulation</b>          | Halogen free polyolefine compound                                       |
| <b>Core Identification</b> | Yellowgreen<br>Blue<br>Brown<br>Black<br>Grey<br>Orange<br>Red<br>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                                     | 1,5 GY H07Z1-U<br>TYPE 2 | 1,5 WH H07Z1-U<br>TYPE 2 | 1,5 BN H07Z1-U<br>TYPE 2 | 1,5 BK H07Z1-U<br>TYPE 2 | 1,5 OG H07Z1-U<br>TYPE 2 | 1,5 BU H07Z1-U<br>TYPE 2 | 1,5 GNYE H07Z1-U<br>TYPE 2 | 1,5 VT H07Z1-U<br>TYPE 2 | 2,5 GY H07Z1-U<br>TYPE 2 | 2,5 WH H07Z1-U<br>TYPE 2 |
|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| <b>Product code</b>                                       | <b>1145840</b>           | <b>1145841</b>           | <b>1145842</b>           | <b>1145843</b>           | <b>1145846</b>           | <b>1145847</b>           | <b>1145848</b>             | <b>1145849</b>           | <b>1145570</b>           | <b>1145571</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                                            | 0,101                    | 0,101                    | 0,101                    | 0,101                    | 0,101                    | 0,101                    | 0,101                      | 0,101                    | 0,142                    | 0,142                    |
| Fire load kWh/m                                           | 0,028                    | 0,028                    | 0,028                    | 0,028                    | 0,028                    | 0,028                    | 0,028                      | 0,028                    | 0,039                    | 0,039                    |
| Nominal cable diameter mm                                 | 2,760                    | 2,760                    | 2,760                    | 2,760                    | 2,760                    | 2,760                    | 2,760                      | 2,760                    | 3,340                    | 3,340                    |
| Nominal cable weight kg/km                                | 19,692                   | 19,692                   | 19,692                   | 19,692                   | 19,692                   | 19,692                   | 19,692                     | 19,692                   | 30,707                   | 30,707                   |
| Metall weight Cu kg/m                                     | 0,013                    | 0,013                    | 0,013                    | 0,013                    | 0,013                    | 0,013                    | 0,013                      | 0,013                    | 0,021                    | 0,021                    |
| <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                       | 22                       | 22                       | 22                       | 22                       | 22                       | 22                       | 22                         | 22                       | 27                       | 27                       |
| Minimum bending radius, final bending mm                  | 8                        | 8                        | 8                        | 8                        | 8                        | 8                        | 8                          | 8                        | 10                       | 10                       |
| <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-U<br>TYPE 2 | 2,5 BK H07Z1-U<br>TYPE 2 | 2,5 BU H07Z1-U<br>TYPE 2 | 2,5 GNYE H07Z1-<br>U TYPE 2 | 1,5 GY H07Z1-U<br>TYPE 2 W | 1,5 WH H07Z1-U<br>TYPE 2 W | 1,5 BN H07Z1-U<br>TYPE 2 W | 1,5 BU H07Z1-U<br>TYPE 2 W | 1,5 RD H07Z1-U<br>TYPE 2 W | 1,5 BK H07Z1-U<br>TYPE 2 W |
|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Product code</b>                                       | <b>1145572</b>           | <b>1145573</b>           | <b>1145577</b>           | <b>1145578</b>              | <b>1703846</b>             | <b>1703925</b>             | <b>1703844</b>             | <b>1703843</b>             | <b>1703924</b>             | <b>1703845</b>             |
| Nominal cross-sectional area of conductor mm <sup>2</sup> | 2,5                      | 2,5                      | 2,5                      | 2,5                         | 1,5                        | 1,5                        | 1,5                        | 1,5                        | 1,5                        | 1,5                        |
| Nominal thickness of insulation mm                        | 0,8                      | 0,8                      | 0,8                      | 0,8                         | 0,7                        | 0,7                        | 0,7                        | 0,7                        | 0,7                        | 0,7                        |
| Fire load MJ/m                                            | 0,142                    | 0,142                    | 0,142                    | 0,142                       | 0,101                      | 0,101                      | 0,101                      | 0,101                      | 0,101                      | 0,101                      |
| Fire load kWh/m                                           | 0,039                    | 0,039                    | 0,039                    | 0,039                       | 0,028                      | 0,028                      | 0,028                      | 0,028                      | 0,028                      | 0,028                      |
| Nominal cable diameter mm                                 | 3,340                    | 3,340                    | 3,340                    | 3,340                       | 2,760                      | 2,760                      | 2,760                      | 2,760                      | 2,760                      | 2,760                      |
| Nominal cable weight kg/km                                | 30,707                   | 30,707                   | 30,707                   | 30,707                      | 19,692                     | 19,692                     | 19,692                     | 19,692                     | 19,692                     | 19,692                     |
| Metall weight Cu kg/m                                     | 0,021                    | 0,021                    | 0,021                    | 0,021                       | 0,013                      | 0,013                      | 0,013                      | 0,013                      | 0,013                      | 0,013                      |
| <b>Maximum forces during installation when pulling by</b> |                          |                          |                          |                             |                            |                            |                            |                            |                            |                            |
| Max. pulling force by pulling-eye kN                      | 0,1                      | 0,1                      | 0,1                      | 0,1                         | 0,0                        | 0,0                        | 0,0                        | 0,0                        | 0,0                        | 0,0                        |
| Max. pulling force by pulling-stocking kN                 |                          |                          |                          |                             |                            |                            |                            |                            |                            |                            |
| <b>Minimum bending radii</b>                              |                          |                          |                          |                             |                            |                            |                            |                            |                            |                            |
| Minimum bending radius, handling mm                       | 27                       | 27                       | 27                       | 27                          | 22                         |                            | 22                         | 22                         |                            | 22                         |
| Minimum bending radius, final bending mm                  | 10                       | 10                       | 10                       | 10                          | 8                          |                            | 8                          | 8                          |                            | 8                          |
| <b>Minimum bending radii</b>                              |                          |                          |                          |                             |                            |                            |                            |                            |                            |                            |
| During handling and installation, cable cm                | 3                        | 3                        | 3                        | 3                           | 2                          |                            | 2                          | 2                          |                            | 2                          |
| In final installation, cable cm                           | 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                        | 12,1                       | 12,1                       | 12,1                       | 12,1                       | 12,1                       | 12,1                       |

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| Technical information                                     | 1,5 GNYE H07Z1-U<br>TYPE 2 W | 2,5 GY H07Z1-U<br>TYPE 2 W | 2,5 BN H07Z1-U<br>TYPE 2 W | 2,5 BK H07Z1-U<br>TYPE 2 W | 2,5 BU H07Z1-U<br>TYPE 2 W | 2,5 GNYE H07Z1-U<br>TYPE 2 W | 1,5 GNYE/BU/<br>BN | 1,5 DKG Y H07Z1-U<br>TYPE 2 | 1,5 GNYE/BU/BN/<br>BK/GY |
|-----------------------------------------------------------|------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|--------------------|-----------------------------|--------------------------|
| <b>Product code</b>                                       | <b>1703842</b>               | <b>1703851</b>             | <b>1703849</b>             | <b>1703850</b>             | <b>1703848</b>             | <b>1703847</b>               | <b>1703831</b>     | <b>1703662</b>              | <b>1703833</b>           |
| Nominal cross-sectional area of conductor mm <sup>2</sup> | 1,5                          | 2,5                        | 2,5                        | 2,5                        | 2,5                        | 2,5                          | 1,5                | 1,5                         | 1,5                      |
| Nominal thickness of insulation mm                        | 0,7                          | 0,8                        | 0,8                        | 0,8                        | 0,8                        | 0,8                          | 0,7                | 0,7                         | 0,7                      |
| Fire load MJ/m                                            | 0,101                        | 0,142                      | 0,142                      | 0,142                      | 0,142                      | 0,142                        | 0,303              | 0,101                       | 0,505                    |
| Fire load kWh/m                                           | 0,028                        | 0,039                      | 0,039                      | 0,039                      | 0,039                      | 0,039                        | 0,084              | 0,028                       | 0,140                    |
| Nominal cable diameter mm                                 | 2,760                        | 3,340                      | 3,340                      | 3,340                      | 3,340                      | 3,340                        | 5,930              | 2,760                       | 7,450                    |
| Nominal cable weight kg/km                                | 19,692                       | 30,707                     | 30,707                     | 30,707                     | 30,707                     | 30,707                       | 59,292             | 19,692                      | 98,885                   |
| Metall weight Cu kg/m                                     | 0,013                        | 0,021                      | 0,021                      | 0,021                      | 0,021                      | 0,021                        | 0,039              | 0,013                       | 0,065                    |
| <b>Maximum forces during installation when pulling by</b> |                              |                            |                            |                            |                            |                              |                    |                             |                          |
| Max. pulling force by pulling-eye kN                      | 0,0                          | 0,1                        | 0,1                        | 0,1                        | 0,1                        | 0,1                          | 0,0                | 0,0                         | 0,0                      |
| Max. pulling force by pulling-stocking kN                 |                              |                            |                            |                            |                            |                              |                    |                             |                          |
| <b>Minimum bending radii</b>                              |                              |                            |                            |                            |                            |                              |                    |                             |                          |
| Minimum bending radius, handling mm                       | 22                           | 27                         | 27                         | 27                         | 27                         | 27                           | 47                 | 22                          | 60                       |
| Minimum bending radius, final bending mm                  | 8                            | 10                         | 10                         | 10                         | 10                         | 10                           | 18                 | 8                           | 22                       |
| <b>Minimum bending radii</b>                              |                              |                            |                            |                            |                            |                              |                    |                             |                          |
| During handling and installation, cable cm                | 2                            | 3                          | 3                          | 3                          | 3                          | 3                            | 5                  | 2                           | 6                        |
| In final installation, cable cm                           | 1                            | 1                          | 1                          | 1                          | 1                          | 1                            | 2                  | 1                           | 2                        |
| <b>DC resistance</b>                                      |                              |                            |                            |                            |                            |                              |                    |                             |                          |
| Max. DC resistance of conductor at 20 °C Ω/km             | 12,1                         | 7,41                       | 7,41                       | 7,41                       | 7,41                       | 7,41                         | 12,1               | 12,1                        | 12,1                     |