

**Interface**

According to RN\_084-01

**Documents**

Assembly instruction MA\_HV0105  
 Process instruction (ultrasonic welding) RN\_087-01  
 Process data sheet (ultrasonic welding) RN\_087-14

**Material and plating**

**Connector parts**

| Connector parts            | Material  | Plating / Colour      |
|----------------------------|-----------|-----------------------|
| Outer contact              | Brass     | Ag, min. 0,5µm        |
| Contact spring (shielding) | Copper    | Ag, min. 0,5µm        |
| Center contact             | Copper    | Ag, min. 3µm          |
| Contact spring (power)     | Copper    | Ag, min. 3µm          |
| Crimp sleeve               | Brass     | Sn, min. 3µm          |
| Press in sleeve            | Brass     | Ni, min. 3µm          |
| Insulator                  | PA10 GF30 | red; black; waterblue |
| Housing                    | PA12 GF30 | orange                |
| Protective cover           | PA12 GF30 | orange                |
| Seal (Housing)             | Silicon   | red, oil exudating    |
| Seal (Cable)               | Silicon   | green, oil exudating  |
| Protective cap             | EPDM      | black                 |

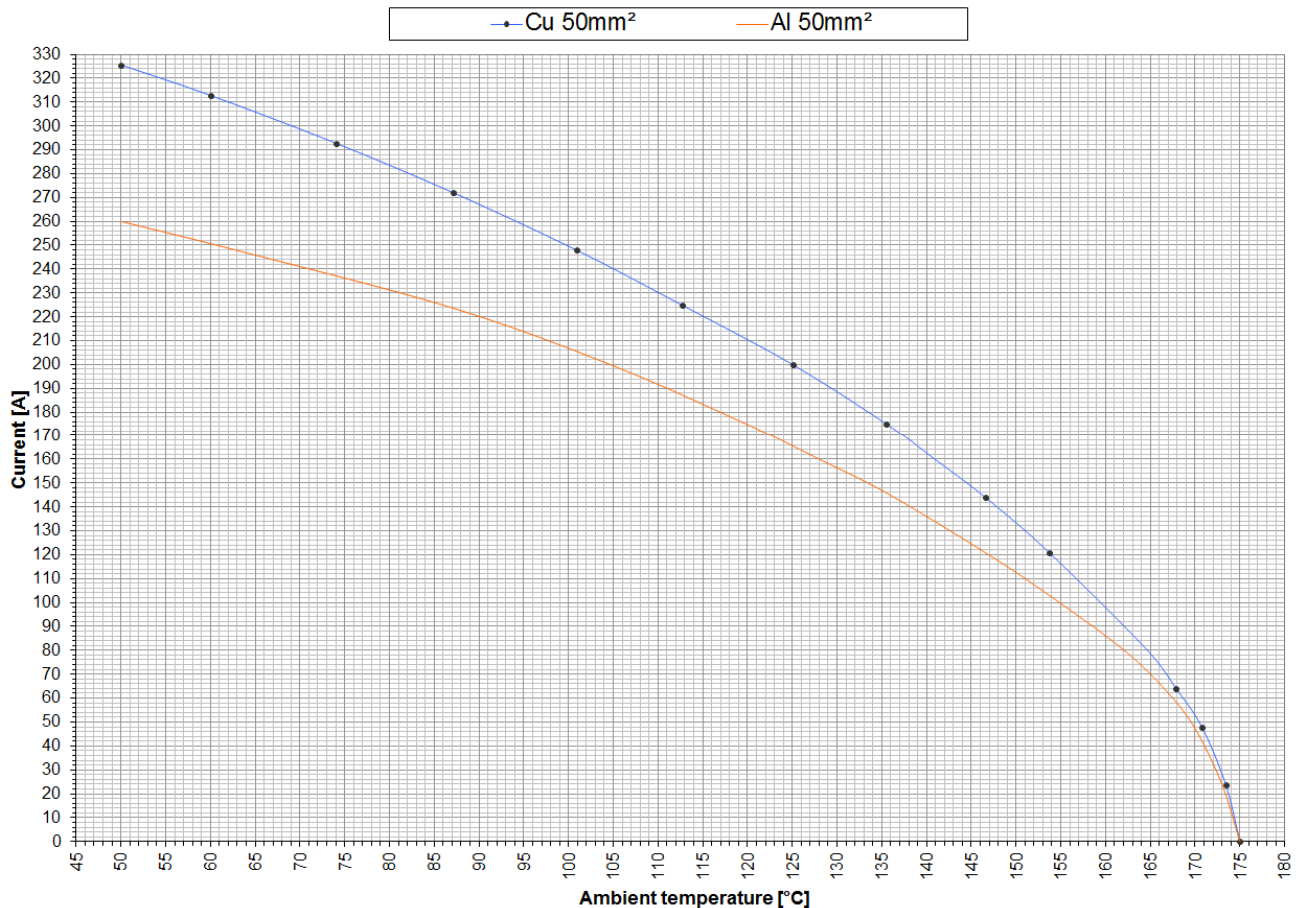
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**Electrical data**

|   |   |
|---|---|
| Insulation resistance                       | ≥ 200 MΩ / 1000 V_DC                                    |
| Voltage class                               | B<br>60 V_DC < U ≤ 1500 V_DC<br>25 V_AC < U ≤ 1000 V_AC |
| Contact resistance (Current)                | ≤ 0,4 mΩ  |
| Contact resistance (EMV)                    | ≤ 1 mΩ  |
| Design acc. to DIN EN 60664-1 (2008-1)      |   |
| Pollution degree                            | 2   |
| Type of isolation                           | Basic Isolation   |
| Max. Altitude                               | 5500m above sea level                                   |
| Working voltage                             | 1000 V_DC   |
| Test voltage                                | 3200 V_DC (at max. altitude 2000m above sea level)      |
| Rated surge voltage                         | 2500 V_DC   |
| Ampacity <b>According to DINEN60512-5-2</b> | see chart   |

**Copper & Aluminum cable 50 mm<sup>2</sup> (80% Derating chart, free in air)**



|                               |   |
|-------------------------------|---|
| EMI (shielding effectiveness) | 70 dB (10 kHz - 5 MHz)<br>65 dB (5 MHz - 500 MHz) |
| High voltage interlock (HVIL) | No  |

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**Mechanical data**

|                        |   |
|------------------------|---|
| Mating cycles          | ≥ 50  |
| Engagement force       | ≤ 100 N   |
| Coding efficiency      | ≥ 300 N   |
| Cable connection angle | 180°  |
| IP class (mated)       | IP6K9K / IPX8 / IPXXD   |
| IP class (unmated)     | IPXXB   |
| Vibration class        | LV214 (2010-04) PG17-II<br>(Random: DIN EN 60068-2-64)<br>(Sinus: DIN EN 60068-2-6)<br>(Shock: DIN EN 60068-2-27) |

**Environmental data**

|                   |                 |
|-------------------|-----------------|
| Temperature range | -40°C to +140°C |
|-------------------|-----------------|

**Tooling**

|               |               |
|---------------|---------------|
| Welding tool  | see RN_087-14 |
| Crimping tool | see MA_HV0105 |

**Suitable cables**

|                  |  |
|------------------|--|
| Cable type       | 50 mm <sup>2</sup> (LV 216-2)  |
| Validated cables | <b>Coroplast:</b><br>Part No.: 9-2611 / 50mm <sup>2</sup><br>Type: FHLR2GCB2G, 50mm <sup>2</sup> |
|                  | <b>Leoni:</b><br>Part No.: FHLR2GCB2G00010<br>Type: FHLR2GCB2G, 50mm <sup>2</sup>                |
|                  | <b>Huber &amp; Suhner:</b><br>Part No.: 84096257<br>Type: FHLR4GC13X, 50mm <sup>2</sup>          |
|                  | <b>Kromberg &amp; Schubert:</b><br>Part No.: 64996020<br>Type: FHLALR2GCB2G, 50mm <sup>2</sup>   |
|                  | <b>Gebauer &amp; Griller:</b><br>Part No.: 146774<br>Type: FHLALR2GCB2G, 50mm <sup>2</sup>       |

**Packing**

|          |  |
|----------|--|
| Standard | for packing details see data sheets of piece parts |
| Weight   | 194,5 g/pcs  |

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**Coding**

| Housing coding | Connector  | Plug coding | Plug  | Plug Colour | RAL       | Part-Number         |
|----------------|--|-------------|---|-------------|-----------|---------------------|
| B              |   | B           |    | black       | sim. 9004 | H4K135-W20050B1-BBA |
|                |  | A           |    | red         | sim. 3001 |                     |
| C              |  | B           |   | black       | sim. 9004 | H4K135-W20050B1-CBC |
|                |  | C           |  | waterblue   | sim. 5021 |                     |

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|            |          |            |          |      |                           |              |          |
|------------|----------|------------|----------|------|---------------------------|--------------|----------|
| Draft      | Date     | Approved   | Date     | Rev. | Engineering change number | Name         | Date     |
| A. Koleber | 08.06.17 | A. Koleber | 06.11.19 | a00  | 19-s204                   | T. Pscheiden | 06.11.19 |

|  |  |               |
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