

## C 091 A Characteristics

| General Characteristics                         | Standard                          | Characteristics  |   |   |   |   |   |   |   |   |   |
|---|-----------------------------------|--|---|---|---|---|---|---|---|---|---|
| Number of contacts                              |                                   | 2 <sup>1)</sup> + 3  | 4   | 5   | 5 Stereo  | 6   | 7   | 7   | 8   | 12  | 14  |
| View on termination side of male contact insert |                                   |   |  |  |  |  |  |  |              |  |  |
| Contact arrangement                             | DIN EN 61076-2-106                | 03-a<br>✓  | 04-a<br>✓   | 05-a<br>✓   | 05-b<br>✓   | 06-a<br>✓   | 07-a<br>✓   | 07-b<br>✓   | 08-a<br>✓   | 12-a<br>✓   | 14-a<br>✓   |
| Contact arrangement                             | IEC 60130-9 <sup>2)</sup>         | ✓  | ✓   |   | ✓   | ✓   |   | ✓   | ✓   |   |   |
| Electrical Characteristics                      |                                   |  |   |   |   |   |   |   |   |   |   |
| Rated voltage <sup>3)</sup>                     | IEC 60664-1                       | 300 V ≈<br>(100 V ≈)   | 300 V ≈<br>(63 V ≈)   | 100 V ≈<br>(32 V ≈)   | 300 V ≈<br>(63 V ≈)   | 100 V ≈<br>(32 V ≈)   | 100 V ≈<br>(32 V ≈)   | 150 V ≈<br>(32 V ≈)   |   |   |   |
| Rated voltage                                   | UL 1977                           | 250 V  |   |   |   |   |   |   | 60 V  |   |   |
| Rated impulse withstand voltage <sup>3)</sup>   | IEC 60664-1                       | 1500 V<br>(840 V)  |   | 1200 V<br>(500 V)   | 1500 V<br>(840 V)   |   | 1200 V<br>(500 V)   |   |   |   |   |
| Pollution degree <sup>3)</sup>                  | IEC 60664-1                       | 1 (2)  |   |   |   |   |   |   |   |   |   |
| Installation category                           | IEC 60664-1                       | I  |   |   |   |   |   |   |   |   |   |
| Insulation group                                | IEC 60664-1                       | II, 400 ≤ CTI < 600  |   |   |   |   |   |   |   |   |   |
| Current rating                                  | IEC 60512-5-2<br>UL 1977          | 5 A / + 40 °C / + 104 °F<br>please refer also to current derating curves page 59   |   |   |   |   |   |   |   | 3 A / + 40 °C /<br>+ 104 °F   |   |
| Insulation resistance                           | IEC 60512-3-1                     | > 10 <sup>10</sup> Ω <sup>4)</sup>   |   |   |   |   |   |   |   |   |   |
| Contact resistance                              | IEC 60512-2-1                     | < 5 m Ω  |   |   |   |   |   |   |   |   |   |
| Climatic Characteristics                        |                                   |  |   |   |   |   |   |   |   |   |   |
| Climatic category                               | IEC 60068-1                       | 40 / 100 / 56  |   |   |   |   |   |   |   |   |   |
| Temperature range                               | IEC 60068-1                       | - 40 °C ... + 100 °C / - 40 °F ... + 212 °F  |   |   |   |   |   |   |   |   |   |
| Mechanical Characteristics                      |                                   |  |   |   |   |   |   |   |   |   |   |
| IP-degree                                       | IEC 60529                         | IP 40  |   |   |   |   |   |   |   |   |   |
| Insertion and withdrawal forces                 | IEC 60512-13-2                    | 25 N<br>90.oz  | 30 N<br>110.oz  | 35 N<br>125.oz  | 50 N<br>180.oz  | 55 N<br>200.oz  | 60 N<br>220.oz  | 50 N<br>180.oz  |   |   |   |
| Mechanical operation                            | IEC 60512-9-1                     | Silver ≥ 500 mating cycles<br>Gold ≥ 1000 mating cycles  |   |   |   |   |   |   |   |   |   |
| Materials                                       |                                   |  |   |   |   |   |   |   |   |   |   |
| Housing material                                |                                   | coupling ring brass, strain relief, die cast, nickel plated  |   |   |   |   |   |   |   |   |   |
| Dielectric material                             |                                   | thermoplastic  |   |   |   |   |   |   |   |   |   |
| Contact plating                                 |                                   | silver plated / gold plated <sup>5)</sup>  |   |   |   |   |   |   |   |   |   |
| Further Characteristics                         |                                   |  |   |   |   |   |   |   |   |   |   |
| Termination technique                           |                                   | solder, crimp  |   |   |   |   |   |   |   |   |   |
| Wire gauge                                      |                                   | solder: ≤ 0,5 mm <sup>2</sup> / 20 AWG<br>crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm <sup>2</sup> / 28 - 18 AWG<br>crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm <sup>2</sup> / 28 - 20 AWG |   |   |   |   |   |   | solder: ≤ 0,25 mm <sup>2</sup> /<br>24 AWG<br>crimp: 0,09-0,25 mm <sup>2</sup><br>/ 28 - 24 AWG |   |   |
| Flammability                                    |                                   | UL 94 V0   |   |   |   |   |   |   |   |   |   |
| Locking system                                  | IEC 60130-9<br>DIN EN 61076-2-106 | metal screw coupling; tightening torque 0,7 Nm   |   |   |   |   |   |   |   |   |   |

**Caution:** Do not connect or disconnect under load. Metal housing parts shall be securely incorporated to protected ground.

<sup>1)</sup> 2 contact version: contact loading 1+3

<sup>2)</sup> Edition 2000-05

<sup>3)</sup> values in brackets are according to DIN EN 61076-2-106

<sup>4)</sup> under operating conditions >10<sup>8</sup> Ω

<sup>5)</sup> Remark for gold plated contacts: In order to avoid brittle inter-metallic connections, gold-plated terminals have to be tin-plated in the solder area.

IEC 60 664 ≙ DIN VDE 0110; IEC 60 512-x ≙ DIN EN 60 512-x; IEC 60 130-9 ≙ DIN EN 60 130-9; IEC 61076-2-106 ≙ DIN EN 61076-2-106