



|   |                                   |  |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
|---|-----------------------------------|--|-----------------|-------------------|-----------------|--------------------|-----------------|-------------------|----------------|-------------------------------|------|------|------|--|
| Number of contacts                            | Standard                          | 3  | 4               | 5                 | 5               | 6                  | 7               | 7                 | 8              | 12                            | 14   | 14   | 19   |  |
| Contact arrangement                           | IEC 61076-2-106                   | 03-a   | 04-a            | 05-a              | 05-b            | 06-a               | 07-a            | 07-b              | 08-a           | 12-a                          | 14-a | 14-b | 19-a |  |
| Contact arrangement                           | IEC 60130-9 <sup>1)</sup>         | yes  |                 | no                |                 | yes                |                 | no                |                | yes                           |      |      |      |  |
| Rated voltage <sup>2)</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)   | 60 V<br>(32 V) |                               |      |      |      |  |
| Rated voltage                                 | UL 1977                           | 250V   |                 |                   |                 |                    |                 |                   |                | 60V                           |      |      |      |  |
| Rated impulse withstand voltage <sup>2)</sup> | IEC 60664-1                       | 1500 V<br>(1500 V)                                   |                 | 1200 V<br>(800 V) |                 | 1500 V<br>(1500 V) |                 | 1200 V<br>(800 V) |                |                               |      |      |      |  |
| Pollution degree <sup>2)</sup>                | IEC 60664-1                       | 1 (3 <sup>3)</sup> )                                 |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Installation category                         | IEC 60664-1                       | I  |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Insulation group                              | IEC 60664-1                       | II, 400 ≤ CTI < 600                                  |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Current rating                                | IEC 60512-5-2<br>UL 1977          | 10A/+40°C  |                 |                   | 7A/+40°C        |                    |                 |                   |                | 3A/+40°C                      |      |      |      |  |
| Insulation resistance                         | IEC 60512-3-1                     | >10 <sup>10</sup> Ohm <sup>4)</sup>                  |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Contact resistance                            | IEC 60512-2-1                     | <5mOhm   |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Climatic category                             | IEC 60668-1                       | 40 / 100 / 56  |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Temperatur range                              | IEC 60668-1                       | -40°C...+100°C / -40°F...+212°F                      |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Salt spray resistance                         | DIN IEC 60068-2-11,<br>test Ka    | 720h   |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| IP degree                                     | IEC 60529                         | IP 69K / IP 67 / IP 65 (in mated condition)          |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| Insertion and withdrawal force                | IEC 60512-13-2                    | 25N  | 30N             | 35N               | 35N             | 50N                | 55N             | 55N               | 60N            | 50N                           | 50N  | 50N  | 60N  |  |
| mechanical operation                          | IEC 60512-9-1                     | Silver ≥500 mating cycles / Gold ≥1000 mating cycles |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| housing material                              |                                   | brass and / or zinc die cast, nickel plated          |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| dielectric material                           |                                   | thermoplastic  |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| sealing material                              |                                   | Chloroprene  |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| contacts                                      |                                   | silver or gold plated                                |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| termination technique                         |                                   | solder   |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| wire gauge                                    |                                   | ≤0,5mm <sup>2</sup> / 20 AWG                         |                 |                   |                 |                    |                 |                   |                | ≤0,35mm <sup>2</sup> / 22 AWG |      |      |      |  |
| flamability                                   |                                   | UL 94 V0   |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |
| locking system                                | IEC 60130-9<br>DIN EN 61076-2-106 | metal screw coupling; tightening torque 0,7 - 1,5 Nm |                 |                   |                 |                    |                 |                   |                |                               |      |      |      |  |

|  |              |                     |                     |
|--|--------------|---------------------|---------------------|
|  | 19<br>(19-a) | C091 31F019 101 2 U | C091 31F019 201 2 U |
|  | 14<br>(14-b) | C091 31F114 101 2 U | C091 31F114 201 2 U |
|  | 14<br>(14-a) | C091 31F014 101 2 U | C091 31F014 201 2 U |
|  | 12<br>(12-a) | C091 31F012 101 2 U | C091 31F012 201 2 U |
|  | 8<br>(08-a)  | C091 31F008 101 2 U | C091 31F008 201 2 U |
|  | 7<br>(07-b)  | C091 31F107 101 2 U | C091 31F107 201 2 U |
|  | 7<br>(07-a)  | C091 31F007 101 2 U | C091 31F007 201 2 U |
|  | 6<br>(06-a)  | C091 31F006 101 2 U | C091 31F006 201 2 U |
|  | 5<br>(05-b)  | C091 31F105 101 2 U | C091 31F105 201 2 U |
|  | 5<br>(05-a)  | C091 31F005 101 2 U | C091 31F005 201 2 U |
|  | 4<br>(04-a)  | C091 31F004 101 2 U | C091 31F004 201 2 U |
|  | 3<br>(03-a)  | C091 31F003 101 2 U | C091 31F003 201 2 U |

|  |   |                |                |
|--|---|----------------|----------------|
| Contact arrangement<br>View on mating side | Number of contacts<br>(Contact arrangement<br>acc. IEC 61076-2-106) | Part number-Ag | Part number-Au |
|--|---|----------------|----------------|

|  |  |   |    |  |
|--|--|---|----|--|
| Gewicht (errechnet) / Calc WT: 71,2 g          | Zul. Abw./Tolerances:                  | Maßstab / Scale: 1:1                                    | A3 |  |
| Prüfmaß / Testdimension                        | ISO 2768-c                             | CUSTOMER DRAWING  |    |  |
| Teileindex / Partindexnumber:                  |  | Female cable connector r/a<br>for cable diameter 6-8mm  |    |  |
| Bagatelle change:                              |  | Blatt / Sheet: 1  |    |  |
|  | Gez. 19.08.2020                        | 1 Bl.   |    |  |
|  | Drawn MCARLE                           | Ers. f. l. Replacement for: M-C091 31FXXX X01 2 U Rev01 |    |  |
|  | Status Released                        |   |    |  |
|  | Gepr. 02.03.2021                       |   |    |  |
|  | Checked MBERTSCH                       |   |    |  |
| 03 202100006 01.03.2021 MCARLE                 | <b>Amphenol Tuchel Industrial GmbH</b> |   |    |  |
| 02 202000083 26.10.2020 MCARLE                 |  |   |    |  |
| Index Änderung / Description Datum / Date Name |  |   |    |  |

<sup>1)</sup> Edition 2000-05  
<sup>2)</sup> values in brackets are according to DIN EN 61076-2-106  
<sup>3)</sup> designed acc. pollution degree 2; can be used under pollution degree 3 when the rules of IEC 60644-1 are fulfilled  
<sup>4)</sup> under operating conditions >10<sup>8</sup> Ohm  
 Do not connect or disconnect under load Metal housing parts shall be securely incorporated to protected ground  
 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.  
 All technical data have been measured in a laboratory environment and can be different during practical usage of the product. Any product information is for descriptive usage only and not legally binding, particularly the information does not constitute or provide any legal guaranties ("Beschaffenheitsgarantie" or "Haltbarkeitsgarantie")

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