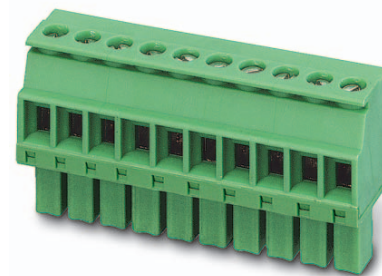


Order No.: 1826995

Type: MCVW 1,5/ 4-ST-3,81

Plug component, Screw connection with tension sleeve



The figure shows a 10-position version of the product

## 1 Main features



- |                           |                                      |                        |                     |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos.             | 4                                    | • Nominal current      | 8 A                 |
| • Conductor cross section | 1.5 mm <sup>2</sup>                  | • Nominal voltage      | 160 V               |
| • Color                   | green                                | • Connection direction | -90 °               |
| • Pitch                   | 3.81 mm                              | • Type of packaging    | packed in cardboard |
| • Connection method       | Screw connection with tension sleeve |                        |                     |

## 2 Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors



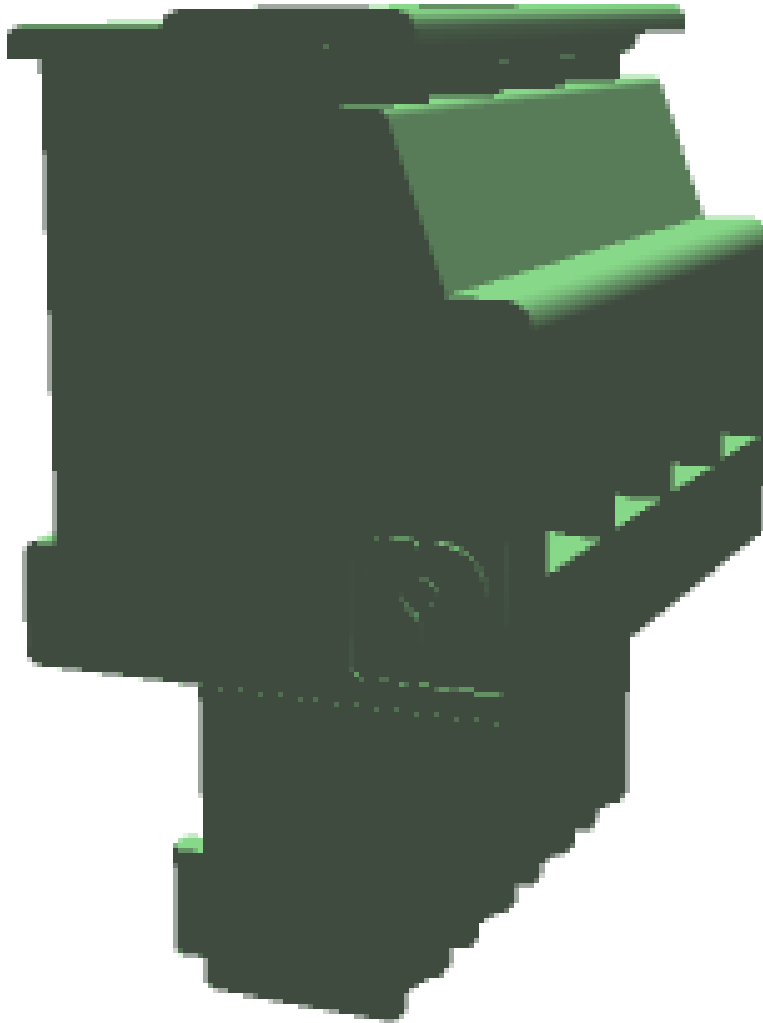
Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1826995](https://phoenixcontact.net/product/1826995)

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1826995 MCVW 1,5/ 4-ST-3,81

4 3D model in PDF can be activated (Acrobat Reader only)



**1826995 MCVW 1,5/ 4-ST-3,81****5 item properties**

|                       |                                      |
|-----------------------|--------------------------------------|
| Order No.             | 1826995                              |
| Type                  | MCVW 1,5/ 4-ST-3,81                  |
| Type of contact       | Female connector                     |
| Range of articles     | MCVW 1,5/...-ST                      |
| Pitch                 | 3.81 mm                              |
| Number of positions   | 4                                    |
| Connection method     | Screw connection with tension sleeve |
| Drive form screw head | Slotted                              |
| Screw thread          | M2                                   |
| Tightening torque     | 0.22 Nm ... 0.25 Nm                  |
| Locking               | without                              |

**5.1 Connection capacity**

|  |  |
|--|--|
| Conductor cross section, solid   | 0.14 mm <sup>2</sup> to 1.5 mm <sup>2</sup>  |
| Conductor cross section, flexible  | 0.14 mm <sup>2</sup> to 1.5 mm <sup>2</sup>  |
| Conductor cross section AWG/kcmil  | 28 to 16                                     |
| 2 conductors with same cross section, solid  | 0.08 mm <sup>2</sup> to 0.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, stranded   | 0.08 mm <sup>2</sup> to 0.75 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule without plastic sleeve                  | 0.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup>  |
| Conductor cross section flexible, with ferrule with plastic sleeve                     | 0.25 mm <sup>2</sup> to 0.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, stranded, with ferrule without plastic sleeve    | 0.25 mm <sup>2</sup> to 0.34 mm <sup>2</sup> |
| 2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve | 0.5 mm <sup>2</sup> to 0.5 mm <sup>2</sup>   |
| Cylindrical gauge a x b / diameter   | 2.4 mm x 1.5 mm / 1.6 mm                     |
| Stripping length   | 7 mm   |

**5.2 Material data**

|   |   |         |
|---|---|---------|
| <b>Material of metal parts</b>                                    |   |         |
| Note  | WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201 |         |
| Contact material  | Cu alloy  |         |
| Terminal point surface  | Sn 4 µm ... 8 µm  |         |
| Surface contact area  | Sn 4 µm ... 8 µm  |         |
| Surface characteristics   | hot-dip tin-plated  |         |
| <b>Insulating material data</b>                                   |   |         |
| Insulating material   | Housing   | Housing |
| CTI according to IEC 60112  | PA  |         |
| Flammability rating according to UL 94                            | 600   |         |
| Flammability rating according to UL 94                            | V0  |         |
| Color   | green (6021)  |         |
| Glow wire flammability index GWFI according to EN 60695-2-12      | 850   |         |
| Glow wire ignition temperature GWIT according to EN 60695-2-13    | 775   |         |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C  |         |

**6 Dimensions**

**1826995 MCVW 1,5/ 4-ST-3,81**

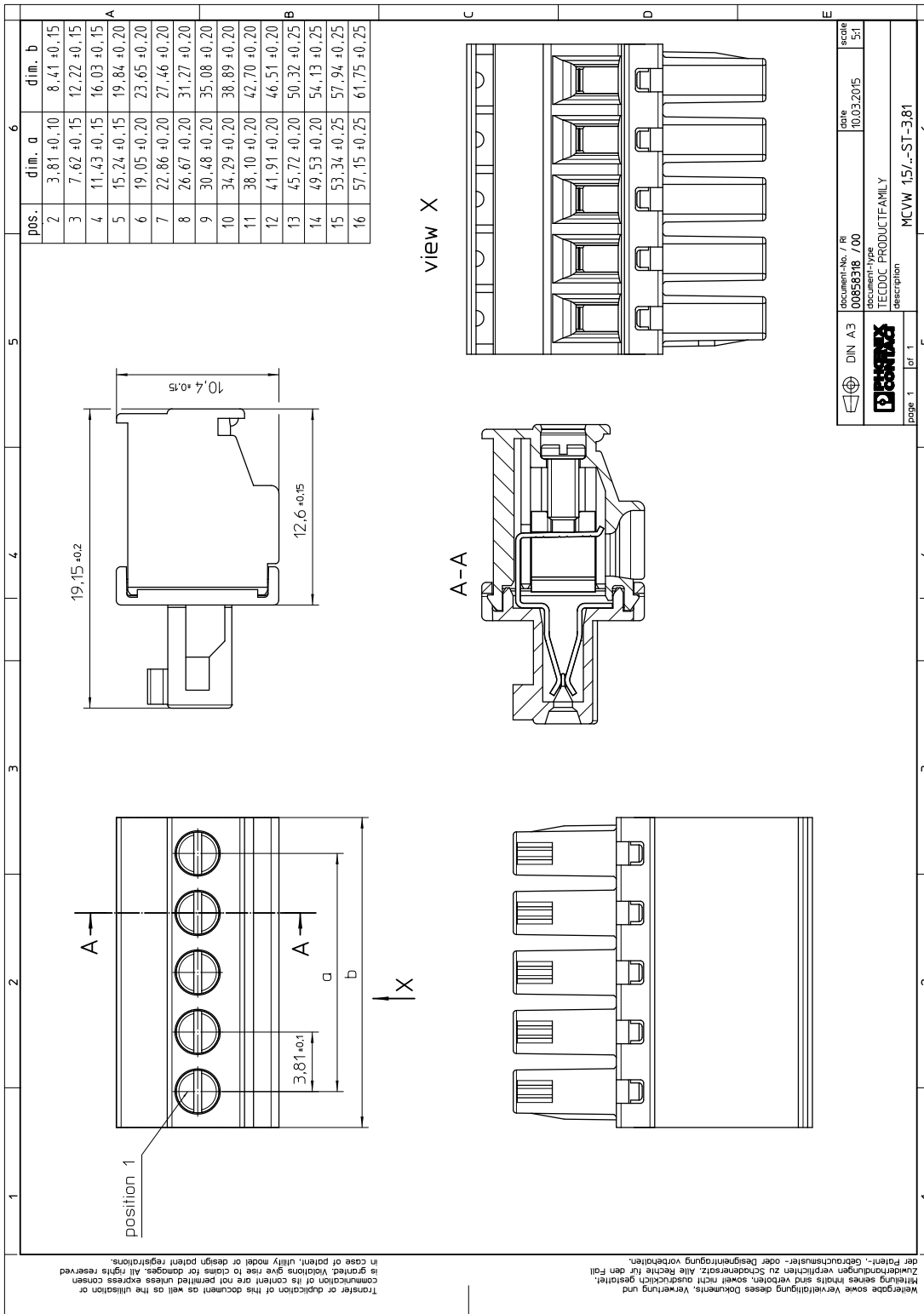
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**6.1 Dimensions for the product**

|              |          |
|--------------|----------|
| Length       | 10.4 mm  |
| Width        | 16.03 mm |
| Total height | 19.15 mm |
| Dimension a  | 11.43 mm |

1826995 MCVW 1,5/ 4-ST-3,81

7 Series drawing



**1826995 MCVW 1,5/ 4-ST-3,81****8 Packaging information**

|                    |                     |
|--------------------|---------------------|
| Type of packaging  | packed in cardboard |
| Pieces per package | 250                 |

**9 Application****9.1 Temperature limit values**

|   |  |
|---|--|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                         |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                         |
| Ambient temperature (operation)         | -40 °C (dependent on the derating curve) |

**1826995 MCVW 1,5/ 4-ST-3,81****10 Mechanical tests**

| Mechanical test group A             |                        |
|-------------------------------------|------------------------|
| Specification                       | IEC 61984:2008-10      |
| Visual test                         | Test passed            |
| Specification                       | IEC 60512-1-1:2002-02  |
| Dimensional test                    | Test passed            |
| Specification                       | IEC 60512-1-2:2002-02  |
| Resistance of marking               | Test passed            |
| Specification                       | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force      | Test passed            |
| Specification                       | IEC 60512-13-2:2006-02 |
| No. of cycles                       | 25                     |
| Insertion strength per pos. approx. | 8 N                    |
| Withdraw strength per pos. approx.  | 6 N                    |
| Polarization and coding             | Test passed            |
| Specification                       | IEC 60512-13-5:2006-02 |
| Test force                          | 20 N                   |
| Contact retention in insert         | Test passed            |
| Specification                       | IEC 60512-15-1:2008-05 |
| Test force per pos.                 | 22 N                   |

**10.1 Termination and connection method**

|  |                     |
|--|---------------------|
| Specification                              | IEC 60999-1:1999-11 |
| Check for damage to conductor or loosening | Test passed         |

**10.2 Pull-out test**

| Termination and connection method: pull-out test                   |  |
|--|--|
| Specification  | IEC 60999-1:1999-11                      |
| Result   | Test passed                              |
| Conductor cross section/conductor type/tractive force actual value | 0.14 mm <sup>2</sup> / solid / > 10 N    |
| Conductor cross section/conductor type/tractive force actual value | 0.14 mm <sup>2</sup> / stranded / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 1.5 mm <sup>2</sup> / solid / > 40 N     |
| Conductor cross section/conductor type/tractive force actual value | 1.5 mm <sup>2</sup> / stranded / > 40 N  |



**1826995 MCVW 1,5/ 4-ST-3,81****11 Electrical tests****11.1 Electrical data**

|   |                           |
|---|---------------------------|
| Rated current / conductor cross section | 8 A / 1.5 mm <sup>2</sup> |
| Rated insulation voltage (III/2)        | 160 V                     |
| Rated surge voltage (III/2)             | 2.5 kV                    |
| Contact resistance                      | 3.7 mΩ                    |
| Degree of pollution                     | 2                         |

**11.2 Air and creepage distances**

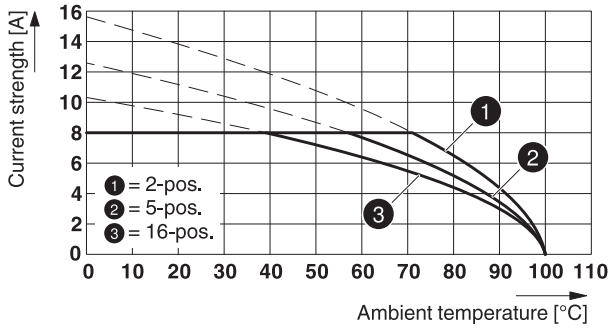
|   |                     |        |        |
|---|---------------------|--------|--------|
| Component   | Plug component      |        |        |
| Specification   | IEC 60664-1:2007-04 |        |        |
| Mains type  | unearthed mains     |        |        |
| Insulating material group   | I                   |        |        |
| Comparative tracking index (IEC 60112:2003-01)                    | CTI 600             |        |        |
| Rated insulation voltage  | 160 V               | 160 V  | 320 V  |
| Rated surge voltage   | 2.5 kV              | 2.5 kV | 2.5 kV |
| Degree of pollution   | 3                   | 2      | 2      |
| Overvoltage category  | III                 | III    | II     |
| Minimum clearance case A (inhomogeneous field)                    | 1.5 mm              | 1.5 mm | 1.5 mm |
| Minimum value of the creepage path requirement in acc. with table | 2 mm                | 1.5 mm | 1.6 mm |

1826995 MCVW 1,5/ 4-ST-3,81

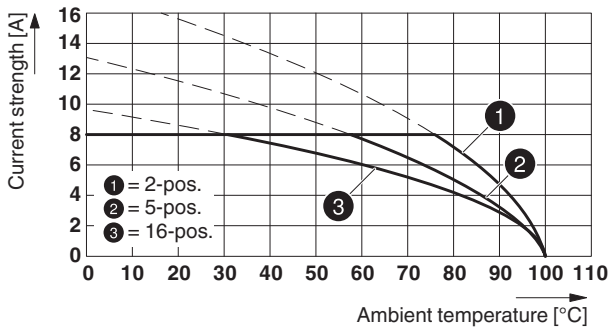
12 Current carrying capacity/derating curves

|                         |   |
|-------------------------|---|
| Specification           | IEC 61984:2008-10                             |
| Note                    | Representation based on IEC 60512-5-2:2002-02 |
| Reduction factor        | 0.8   |
| Number of positions     | See diagram                                   |
| Conductor cross section | 1.5 mm <sup>2</sup>                           |

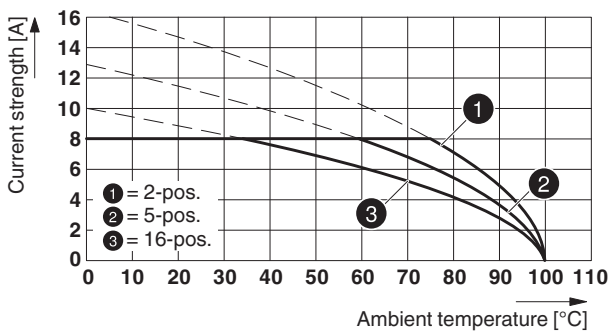
Type: MCVW 1,5/...-ST-3,81 with MC 1,5/...-G-3,81



Type: MCV(W/R) 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81



Type: MCV(W/R) 1,5/...-ST-3,81 with MCDV 1,5/...-G1-3,81



Type: MCV(W/R) 1,5/...-STF-3,81 with IMC 1,5/...-ST-3,81

88457\_1000\_en

**1826995 MCVW 1,5/ 4-ST-3,81****13 Environmental and durability tests****13.1 Vibration test**

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:2007-12  |
| Result                 | Test passed            |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Acceleration           | 5 g (60.1 - 150 Hz)    |
| Test duration per axis | 2.5 h                  |
| Test directions        | X-, Y- and Z-axis      |

**14 Classification for connectors**

|                                   |  |
|-----------------------------------|--|
| Specification                     | IEC 61984:2008-10                            |
| Main features                     | Connectors without switching capacity (COC)  |
| Construction form                 | Fixed connectors                             |
| Strain relief elements            | without strain relief                        |
| Connection method                 | Can be reconnected                           |
| Protection against electric shock | Not encapsulated - touch-proof when inserted |
| Protective conductor              | without PE                                   |
| Lock                              | no   |
| Connection method                 | Screw terminal points                        |

**15 Approvals**

|                            |       |       |  |  |
|----------------------------|-------|-------|--|--|
| <b>CSA</b>                 |       |       |  |  |
| Use group                  | B     | D     |  |  |
| mm <sup>2</sup> /AWG/kcmil | 28-16 | 28-16 |  |  |
| Voltage                    | 300 V | 300 V |  |  |
| Current                    | 8 A   | 8 A   |  |  |

|  |         |  |  |  |
|--|---------|--|--|--|
| <b>VDE Gutachten mit Fertigungsüberwachung</b> |         |  |  |  |
| mm <sup>2</sup> /AWG/kcmil                     | 0.2-1.5 |  |  |  |
| Voltage  | 160 V   |  |  |  |
| Current  | 8 A     |  |  |  |

|                            |         |  |  |  |
|----------------------------|---------|--|--|--|
| <b>IECEE CB Scheme</b>     |         |  |  |  |
| mm <sup>2</sup> /AWG/kcmil | 0.2-1.5 |  |  |  |
| Voltage                    | 160 V   |  |  |  |
| Current                    | 8 A     |  |  |  |

|                            |         |  |  |  |
|----------------------------|---------|--|--|--|
| <b>CCA</b>                 |         |  |  |  |
| mm <sup>2</sup> /AWG/kcmil | 0.2-1.5 |  |  |  |
| Voltage                    | 160 V   |  |  |  |
| Current                    | 8 A     |  |  |  |

# 1826995 MCVW 1,5/ 4-ST-3,81

cULus Recognized 

| Use group                  | B     | D     |  |  |
|----------------------------|-------|-------|--|--|
| mm <sup>2</sup> /AWG/kcmil | 30-14 | 30-14 |  |  |
| Voltage                    | 300 V | 300 V |  |  |
| Current                    | 8 A   | 8 A   |  |  |

EAC 

**1826995 MCVW 1,5/ 4-ST-3,81****16 Commercial Data**

|                    |  |
|--------------------|--|
| Order No.          | 1826995  |
| Type               | MCVW 1,5/ 4-ST-3,81                                  |
| Pieces per package | 250  |
| Net weight         | 3.19 g   |
| GTIN               | 4017918050054  |
|                    | Information that applies locally, see link on page 1 |
| Country of origin  | Information that applies locally, see link on page 1 |

**17 corresponding headers**

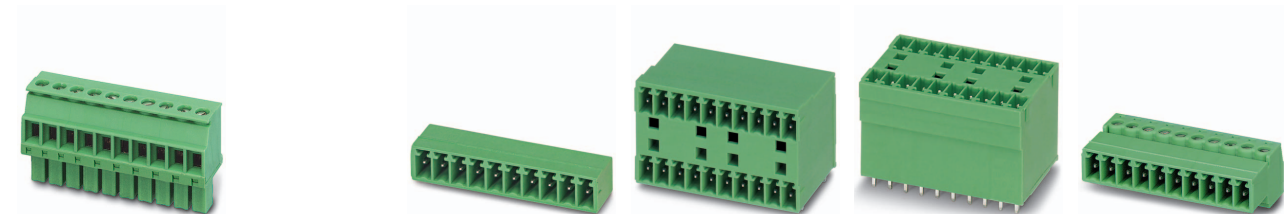
| Order No. | Type                         |
|-----------|------------------------------|
| 1707023   | MCV 1,5/ 4-G-3,81 P14 THR    |
| 1707447   | MCV 1,5/ 4-G-3,81 P26 THR    |
| 1712872   | MCV 1,5/ 4-G-3,81 P26 THRR32 |
| 1782598   | MC 1,5/ 4-G-3,81 P20 THRR32  |
| 1803293   | MC 1,5/ 4-G-3,81             |
| 1803442   | MCV 1,5/ 4-G-3,81            |
| 1827295   | SMC 1,5/ 4-G-3,81            |
| 1829976   | MCD 1,5/ 4-G-3,81            |
| 1830428   | MCDV 1,5/ 4-G-3,81           |
| 1837120   | MCVDU 1,5/ 4-G-3,81          |
| 1843091   | MCD 1,5/ 4-G1-3,81           |
| 1847741   | MCDV 1,5/ 4-G1-3,81          |
| 1860663   | EMCV 1,5/ 4-G-3,81           |
| 1861662   | MCO 1,5/ 4-GR-3,81           |
| 1861743   | MCO 1,5/ 4-GL-3,81           |
| 1897827   | EMC 1,5/ 4-G-3,81            |
| 1908787   | MC 1,5/ 4-G-3,81 THT         |
| 1943771   | MC 1,5/ 4-G-3,81 THT-R56     |

**18 Accessories**

| Description   | Order No. | Type                     |
|---|-----------|--------------------------|
|   | 0804109   | SK 3,81/2,8:FORTL.ZAHLEN |
| Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip      | 1205037   | SZS 0,4X2,5 VDE          |
|   | 0803883   | SK U/2,8 WH:UNBEDRUCKT   |
|   | 0805056   | SK 3,81/2,8:SO           |
| Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm | 1051993   | B-STIFT                  |
| Insertion bridge for plugs featuring a screw connection with a 3.81 mm pitch                                | 1733495   | EBPL 2-3,81              |
| Insertion bridge for plugs featuring a screw connection with a 3.81 mm pitch                                | 1733505   | EBPL 3-3,81              |
| Insertion bridge for plugs featuring a screw connection with a 3.81 mm pitch                                | 1733518   | EBPL 4-3,81              |

## 1826995 MCVW 1,5/ 4-ST-3,81

## 19 Combination tests



|  | <b>MCVW 1,5/..-ST</b> | <b>MC 1,5/..-G</b>  | <b>MCD 1,5/..-G1</b>  | <b>MCDV 1,5/..-G1</b>   | <b>IMC 1,5/..-ST</b>  |
|--|-----------------------|---|---|---|---|
| Specification  |                       | IEC 61984   | IEC 61984   | IEC 61984   | IEC 61984   |
| <b>Mechanical tests (A)</b>  |                       |   |   |   |   |
| Insertion/withdrawal force per position                              |                       | approx. 8 N / 6 N   | approx. 8 N / 6 N   | approx. 8 N / 6 N   | approx. 7 N / 3 N   |
| Polarization when inserted<br>Requirement >20 N                      |                       | Test passed   | Test passed   | Test passed   | Test passed   |
| Contact holder in insert<br>Requirements >20 N                       |                       | Test passed   | Test passed   | Test passed   | Test passed   |
| <b>Durability tests (B)</b>  |                       |   |   |   |   |
| Contact resistance R <sub>1</sub>                                    |                       | 3.7 mΩ  |   | 4 mΩ  | 4 mΩ  |
| Insertion/withdrawal cycles  |                       | 25  | 25  | 25  | 25  |
| Contact resistance R <sub>2</sub>                                    |                       | 3.9 mΩ  |   | 4.3 mΩ  | 4.1 mΩ  |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 μs) |                       | 4.8 kV  | 2.95 kV   | 2.95 kV   | 2.95 kV   |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz)   |                       | 2.21 kV   | 1.39 kV   | 1.39 kV   | 1.39 kV   |
| Insulation resistance<br>Requirements > 5 MΩ                         |                       | > 0.2 TΩ  | > 0.4 TΩ  | > 0.4 TΩ  | > 0.2 TΩ  |
| <b>Thermal tests (C)</b>   |                       |   |   |   |   |
| Tested number of positions   |                       | 16  | 16  | 16  | 16  |
| Tested conductor cross section                                       |                       | 1.5 mm <sup>2</sup>   | 1.5 mm <sup>2</sup>   | 1.5 mm <sup>2</sup>   | 1.5 mm <sup>2</sup>   |
| Test current   |                       | 8 A   | 8 A   | 8 A   |   |
| Upper limiting temperature<br>Requirements < 100°C                   |                       | Test passed   | Test passed   | Test passed   | Test passed   |
| <b>Climatic tests (D)</b>  |                       |   |   |   |   |
| Test sequence 1: low temperature storage                             |                       | -40 °C/2 h  | -40 °C/2 h  | -40 °C/2 h  | -40 °C/2 h  |
| Test sequence 2: heat storage  |                       | 100 °C/168 h  | 100 °C/168 h  | 100 °C/168 h  | 100 °C/168 h  |
| Test sequence 3: noxious gas storage<br>(ISO 6988)                   |                       | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /<br>40 °C/1 cycle | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /<br>40 °C/1 cycle | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /<br>40 °C/1 cycle | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /<br>40 °C/1 cycle |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 μs) |                       | 4.8 kV  | 2.95 kV   | 2.95 kV   | 2.95 kV   |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz)   |                       | 2.21 kV   | 1.39 kV   | 1.39 kV   | 1.39 kV   |
| <b>Environmental and endurance tests (E)</b>                         |                       |   |   |   |   |
| Specification  |                       | IEC 61984:2008-10   | IEC 61984:2008-10   | IEC 61984:2008-10   | IEC 61984:2008-10   |
| Degree of protection   |                       | Finger safety with IP20<br>test finger  | Finger safety with IP20<br>test finger  | Finger safety with IP20<br>test finger  | Finger safety with IP20<br>test finger  |