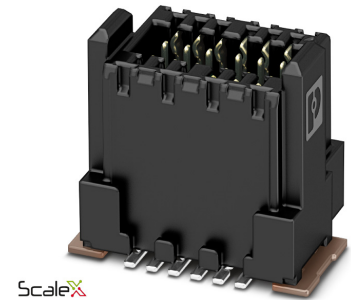


Item No.: 1061698

Type: FP 0,8/ 32-MV 2,65

SMD male connector, Reflow soldering



The figure shows a 12-pos. version with 12 contacts

## 1 Main features



- |                |                 |                        |                         |
|----------------|-----------------|------------------------|-------------------------|
| • No. of pos.  | 32              | • Nominal current      | 1.7 A (at 20°C 80-pos.) |
| • Test voltage | 500 V AC        | • Mounting type        | SMD soldering           |
| • Color        | black (RAL9005) | • Connection direction | 90 °                    |
| • Pitch        | 0.8 mm          | • Type of packaging    | 32 mm wide tape         |

## 2 Your advantages

- ✓ Gold-plated contacts ensure transfer quality remains stable over the long term
- ✓ Reliable mechanical and electrical connections, thanks to the double-sided ScaleX contact system
- ✓ Robustness: ScaleX technology for high tolerance compensation and protection of contacts
- ✓ Flexible device design: various numbers of positions, designs, and stack heights with high wipe lengths



Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1061698](https://phoenixcontact.net/product/1061698)

**3 Table of contents**

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1061698 FP 0,8/ 32-MV 2,65

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



**1061698 FP 0,8/ 32-MV 2,65****5 General Technical Data****5.1 item properties**

|  |                     |
|--|---------------------|
| Item no.   | 1061698             |
| Type   | FP 0,8/ 32-MV 2,65  |
| Connector system                                 | FINEPITCH FP 0,8    |
| Product type                                     | SMD male connector  |
| Type of contact                                  | Pin                 |
| Range of articles                                | FP 0,8/...-MV 2,65  |
| Pitch  | 0.8 mm              |
| Number of positions                              | 32                  |
| Number of rows                                   | 2                   |
| Number of potentials                             | 32                  |
| Type of locking                                  | without             |
| Mounting type                                    | SMD soldering       |
| Connection direction of the connector to the PCB | 90 °                |
| Pin layout                                       | Linear pad geometry |

**1061698 FP 0,8/ 32-MV 2,65****6 Mounting****6.1 Flange mounting**

|                 |         |
|-----------------|---------|
| Type of locking | without |
|-----------------|---------|

**7 Material properties****7.1 Material of metal parts**

|                         |   |
|-------------------------|---|
| Note                    | WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material        | Cu alloy  |
| Surface contact area    | Nickel (Ni) , Gold (Au)   |
| Soldering area surface  | Nickel (Ni) , Tin (Sn)  |
| Surface characteristics | Selective coating   |

**7.2 Material of plastic parts**

|  |                  |
|--|------------------|
| Insulating material data               | Housing          |
| Color                                  | black (RAL 9005) |
| Insulating material                    | LCP              |
| Insulating material group              | IIIb             |
| CTI according to IEC 60112             | 150              |
| Flammability rating according to UL 94 | V0               |

**1061698 FP 0,8/ 32-MV 2,65****8 Dimensions****8.1 Dimensions for the product**

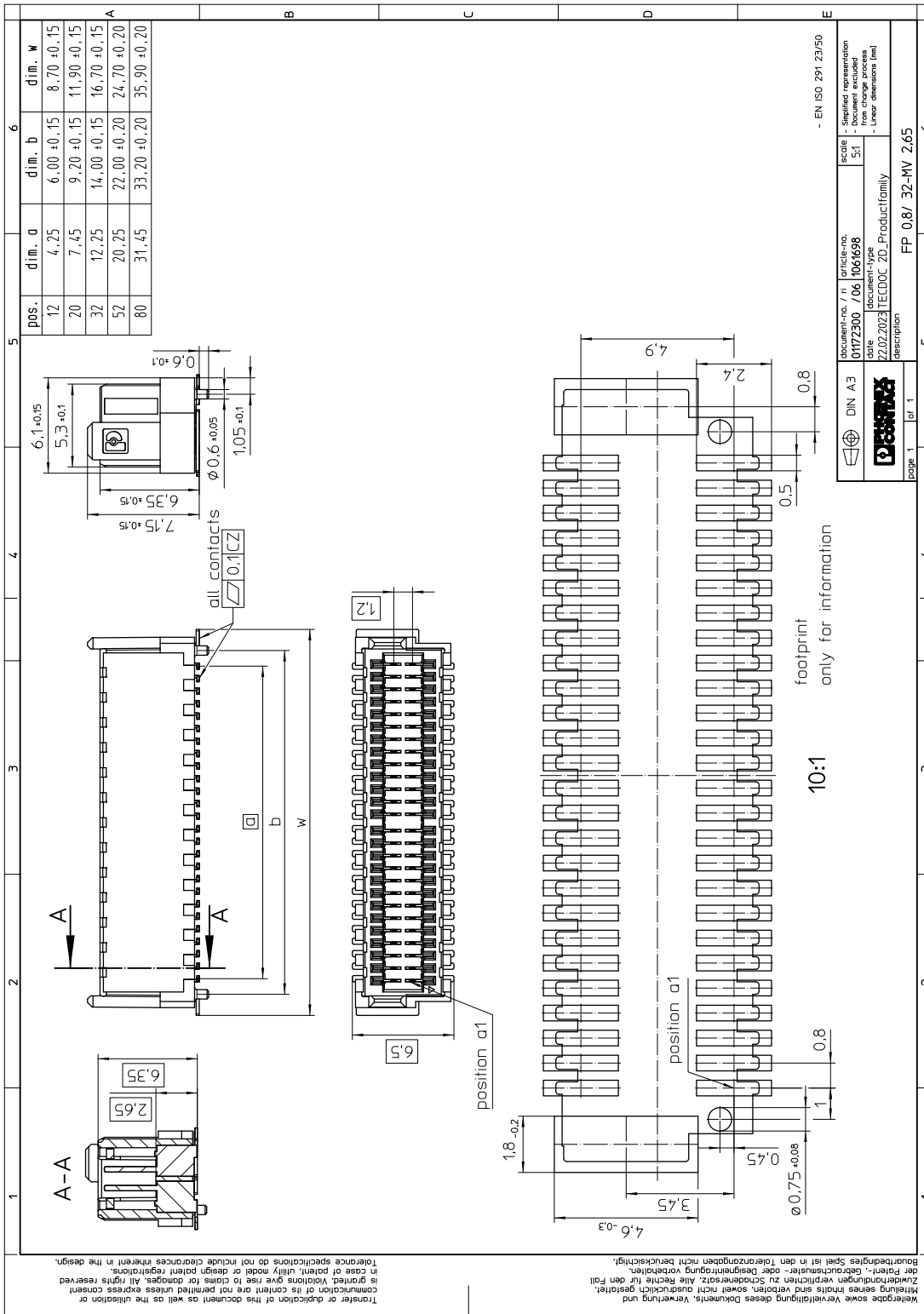
|                          |  |
|--------------------------|--|
| Length                   | 6.1 mm                                   |
| Width                    | 16.7 mm                                  |
| Total height             | 7.15 mm                                  |
| Installed height         | 6.55 mm                                  |
| Base height              | 2.65 mm                                  |
| Positioning pin geometry | ø 0.6, Length of positioning pin: 0.6 mm |
| Coplanarity              | ≤ 0.1 mm                                 |

**8.2 Dimensions for the application**

|  |  |
|--|--|
| Contact cover                              | 0.8 mm   |
| Wipe length                                | 1.5 mm   |
| Center offset                              | ± 0.7 mm in longitudinal and transverse direction                                      |
| Angular tolerance                          | ± 5 ° in longitudinal and transverse direction (when plugging in)                      |
| Angular tolerance                          | ± 5 ° in longitudinal and transverse direction (when plugged in)                       |
| Stacking height                            | 7.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 4,85)   |
| Stacking height                            | 10.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 7,85)  |
| Stacking height                            | 13.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 10,85) |
| Axial offset in X direction (longitudinal) | ± 0.3 mm (Tolerance compensation when plugged in)                                      |
| Axial offset in Y direction (transversal)  | ± 0.3 mm (Tolerance compensation when plugged in)                                      |

1061698 FP 0,8/ 32-MV 2,65

9 Series drawing



**1061698 FP 0,8/ 32-MV 2,65****10 Product notes****10.1 General information**

Notes on operation

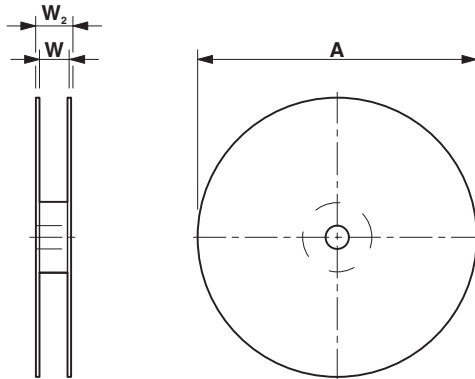
The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances within the scope of insulation requirements in accordance with IEC 60664-1.

Details for soldering processes

The items are suitable for assembly on both sides and for overhead soldering.

**11 Packaging specifications**

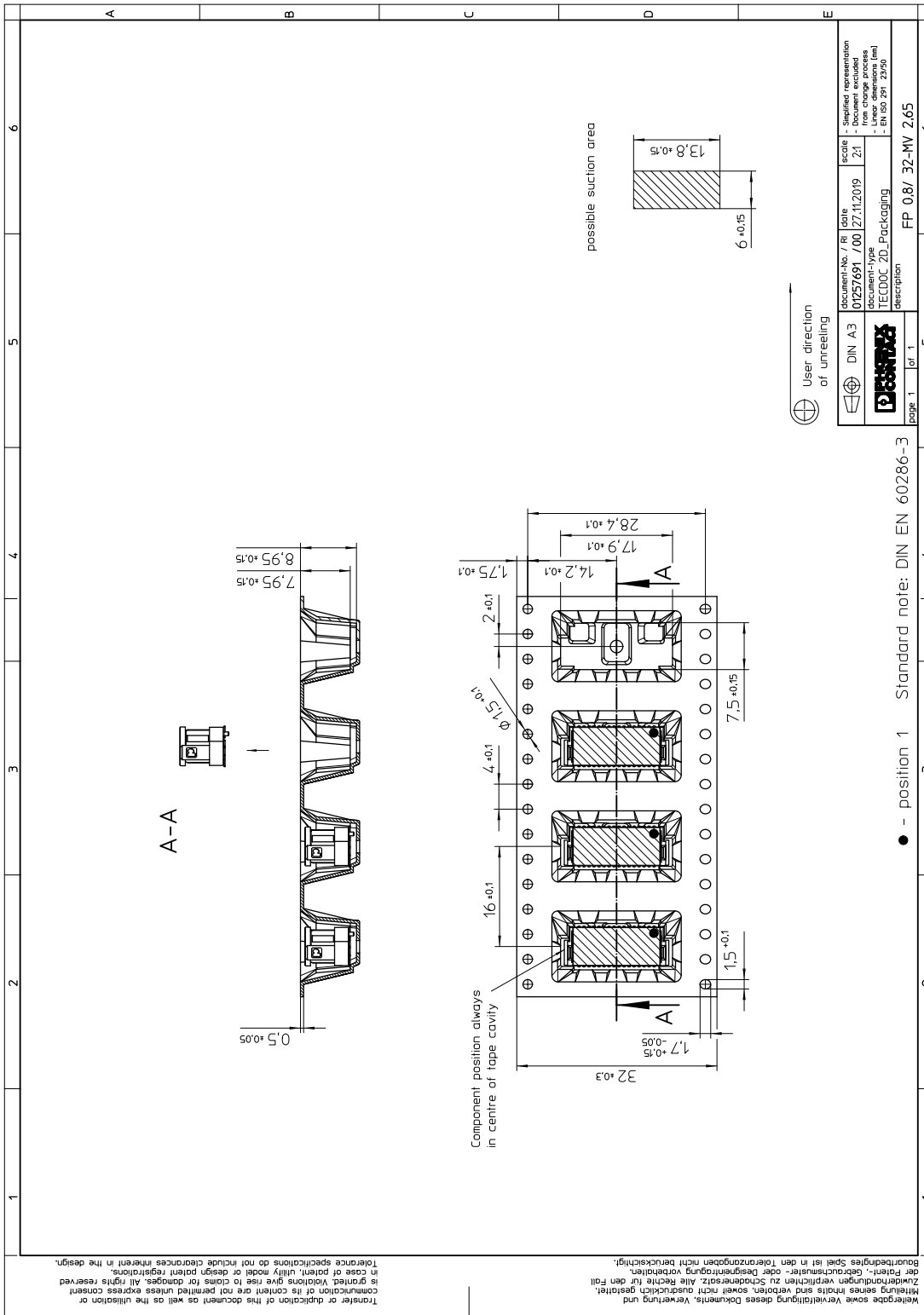
|                             |   |
|-----------------------------|---|
| Type of packaging           | 32 mm wide tape   |
| Note on packaging           | Tape-on-reel packaging in accordance with standard DIN EN 60286-3 and EIA-481 |
| Pieces per package          | 250   |
| Outer packaging type        | Transparent-Bag   |
| ESD level                   | (D) electrostatically conductive  |
| Specification               | DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07                                      |
| [W] tape width              | 32.4 mm   |
| [A] coil diameter           | 330 mm  |
| [W2] coil overall dimension | 40.4 mm   |
| Number of products per coil | 250   |





1061698 FP 0,8/ 32-MV 2,65

12 Blister drawing



**1061698 FP 0,8/ 32-MV 2,65****13 Application****13.1 Temperature limit values**

|   |                   |
|---|-------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C  |
| Relative humidity (storage/transport)   | 30 % ... 70 %     |
| Ambient temperature (assembly)          | -5 °C ... 100 °C  |
| Ambient temperature (operation)         | -55 °C ... 125 °C |

**13.2 Processing notes**

|                                  |  |
|----------------------------------|--|
| Process                          | Reflow soldering                         |
| Specification                    | IPC/JEDEC J-STD-020E:2014-12 (following) |
| Moisture Sensitive Level         | MSL 1                                    |
| Classification temperature $T_c$ | max. 260 °C                              |

**13.3 PCB mounting/path geometries**

|              |              |
|--------------|--------------|
| Pad geometry | 0.5 x 2.4 mm |
|--------------|--------------|

**1061698 FP 0,8/ 32-MV 2,65**

---

**14 Application drawing**

## 15 General tests

### 15.1 Specification

|                   |                           |
|-------------------|---------------------------|
| Brief description | Board-to-board connectors |
|-------------------|---------------------------|

**1061698 FP 0,8/ 32-MV 2,65****16 Mechanical tests****16.1 Insertion and withdrawal force per contact**

|  |  |
|--|--|
| Insertion and withdrawal force per contact |  |
|  | ≤ 0.6 N  |
| Specification                              |  |
|  | IEC 60512-9-1:2010-03 (following)                    |
| No. of cycles                              |  |
|  | 500 Insertion/withdrawal cycles, Performance level 1 |

**1061698 FP 0,8/ 32-MV 2,65****17 Electrical tests**

|                       |   |
|-----------------------|---|
| Nominal current $I_N$ | 1.7 A IEC 60512-5-2:2002-02 (at 20°C 80-pos.) |
| Test voltage          | 500 V AC IEC 60512-4-1:2003                   |
| Note                  | max. 1.7 A at 20 °C (80-pos.)                 |

**17.1 Air and creepage distances**

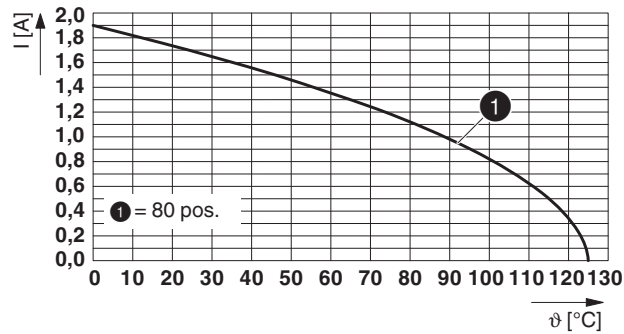
|   |         |
|---|---------|
| Minimum value for clearance and creepage distance | 0.25 mm |
|---|---------|

## 1061698 FP 0,8/ 32-MV 2,65

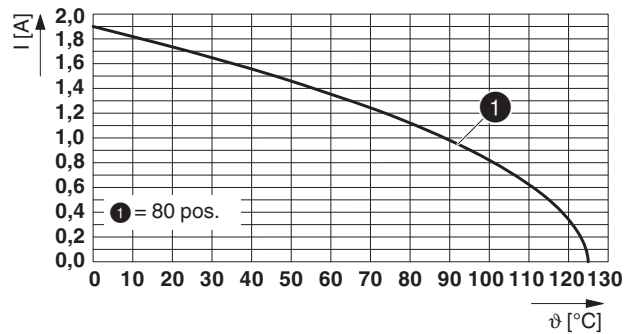
## 18 Current carrying capacity/derating curves

|                  |                               |
|------------------|-------------------------------|
| Specification    | IEC 60512-5-2:2002-02         |
| Note             | max. 1.7 A at 20 °C (80-pos.) |
| Reduction factor | 0.8                           |

Type: FP 0,8/...-MV 2,65 with FP 0,8/...-FV 4,85



Type: FP 0,8/...-MV 2,65 with FP 0,8/...-FV 7,85



## 18.1 Insulation resistance

|                       |  |
|-----------------------|--|
| Insulation resistance | $\geq 5 \text{ G}\Omega$ , (IEC 60512-3-1:2002-02) |
|-----------------------|--|

## 18.2 forward resistance

|                    |   |
|--------------------|---|
| Contact resistance | $\leq 20 \text{ m}\Omega$ , (IEC 60512-2-1:2002-02) |
|--------------------|---|

**1061698 FP 0,8/ 32-MV 2,65****19 Environmental and durability tests****19.1 Vibration test**

|                        |  |
|------------------------|--|
| Specification          | IEC 60068-2-6:2007-12                    |
| Result                 | Test passed                              |
| Frequency              | 10 - 2000 - 10 Hz                        |
| Sweep speed            | 1 octave/min                             |
| Amplitude              | 1.5 mm (10 Hz ... 60.1 Hz)               |
| Acceleration           | 200 m/s <sup>2</sup> (58 Hz ... 2000 Hz) |
| Test duration per axis | 2.5 h                                    |
| Test directions        | X-, Y- and Z-axis                        |
| Note                   |  |

**19.2 Shock testing**

|                                |                                   |
|--------------------------------|-----------------------------------|
| Specification                  | IEC 60068-2-27:2008-02            |
| Result                         | Test passed                       |
| Pulse shape                    | Semi-sinusoidal                   |
| Peak acceleration              | 490 m/s <sup>2</sup>              |
| Shock duration                 | 11 ms                             |
| Number of shocks per direction | 3                                 |
| Test directions                | X-, Y- and Z-axis (pos. and neg.) |



1061698 FP 0,8/ 32-MV 2,65

20 Data transmission

20.1 Data transmission rate

|           |              |
|-----------|--------------|
| Data rate | nom. 16 Gbps |
|-----------|--------------|

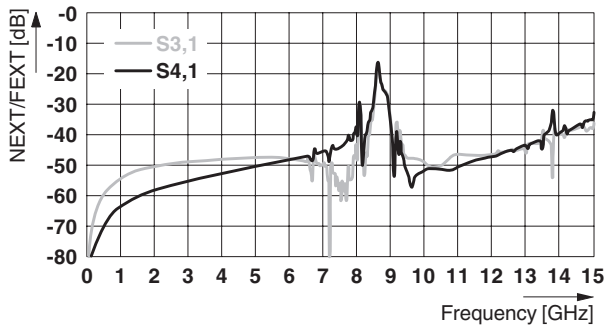
20.2 PIN assignment

|                |                     |
|----------------|---------------------|
| Pin assignment | G, S, S, G, S, S, G |
|----------------|---------------------|

Type: FP 0,8/...-FV 7,85 with FP 0,8/...-MV 2,65  
Differential pair - 12 mm height





Type: FP 0,8/...-FV 7,85 with FP 0,8/...-MV 2,65  
Differential pair - 12 mm height



1061698 FP 0,8/ 32-MV 2,65

## 21 Approvals / Certificates

| cULus Recognized  | Voltage [V] | Current [A] | Cross section [AWG] | Cross section [mm <sup>2</sup> ] |
|--|-------------|-------------|---------------------|----------------------------------|
| -  | -           | -           | -                   | -                                |
| EAC               |             |             |                     |                                  |

**1061698 FP 0,8/ 32-MV 2,65****22 Commercial Data**

|                    |  |
|--------------------|--|
| Item no.           | 1061698  |
| Type               | FP 0,8/ 32-MV 2,65                                   |
| Pieces per package | 250  |
| Net weight         | 3.366 g  |
| GTIN               | 4055626715872  |
|                    | Information that applies locally, see link on page 1 |

## 1061698 FP 0,8/ 32-MV 2,65

## 23 Combination tests



## FP 0,8/...-MV 2,65

## FP 0,8/...-FV 4,85

## FP 0,8/...-FV 7,85

| FP 0,8/...-MV 2,65                           | FP 0,8/...-FV 4,85 | FP 0,8/...-FV 7,85 |  |  |
|--|--------------------|--------------------|--|--|
| Mechanical tests                             |                    |                    |  |  |
| Durability tests                             |                    |                    |  |  |
| Contact resistance R <sub>1</sub>            | 20 mΩ              | 20 mΩ              |  |  |
| Insertion/withdrawal cycles                  | 500                | 500                |  |  |
| Contact resistance R <sub>2</sub>            | 20 mΩ              | 20 mΩ              |  |  |
| Insulation resistance<br>Requirements > 5 MΩ | ≥ 5 GΩ             | ≥ 5 GΩ             |  |  |
| Thermal tests                                |                    |                    |  |  |
| Tested number of positions                   | 80                 | 80                 |  |  |
| Test current                                 | 1.7 A              | 1.7 A              |  |  |
| Data transmission                            |                    |                    |  |  |
| Data transmission rate                       | 40 Gbps            | 36 Gbps            |  |  |