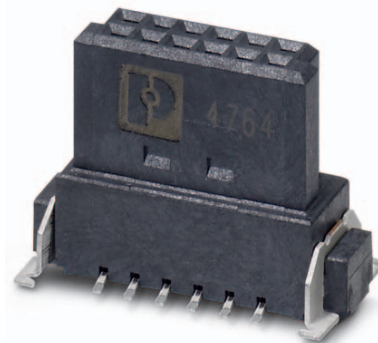


Data sheet

Order No.: 1714999

Type: FP 1,27/ 12-FV 9,05

SMD female connector, Reflow soldering



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

1 Main features



| | | | |
|----------------|--------------|------------------------|-----------------|
| • No. of pos. | 12 | • Nominal current | 1.4 A |
| • Test voltage | 500 V AC | • Mounting type | SMD soldering |
| • Color | black (9005) | • Connection direction | 90 ° |
| • Pitch | 1.27 mm | • Type of packaging | 24 mm wide tape |

2 Your advantages

- ✓ Gold-plated contacts ensure transfer quality remains stable over the long term
- ✓ Compact, high-position board-to-board or wire-to-board connectors for space-saving device designs
- ✓ Stacked, coplanar or orthogonal PCB connections enable maximum flexibility in the device
- ✓ Male and female connectors of different height can be combined – for individual PCB spacing of 8 mm ... 13.8 mm



Make sure you always use the latest documentation.

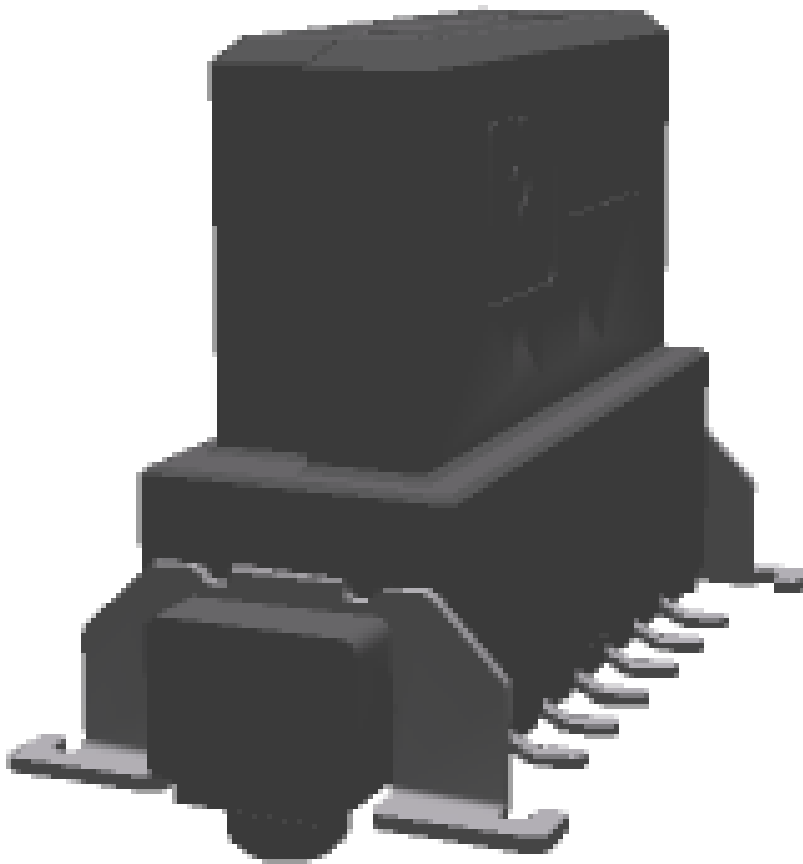
It can be downloaded at: phoenixcontact.net/product/1714999

3 Table of contents

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1714999 FP 1,27/ 12-FV 9,05

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



1714999 FP 1,27/ 12-FV 9,05**5 General Technical Data****5.1 item properties**

| | |
|--|----------------------|
| Order No. | 1714999 |
| Type | FP 1,27/ 12-FV 9,05 |
| Plug-in system | Fine Pitch 1,27 mm |
| Product type | SMD female connector |
| Type of contact | Female connector |
| Range of articles | FP 1,27/...-FV 9,05 |
| Pitch | 1.27 mm |
| Range of positions | 12...80 |
| Number of positions | 12 |
| Number of levels | 2 |
| Number of potentials | 12 |
| Mounting type | SMD soldering |
| Connection direction of the connector to the PCB | 90 ° |
| Pin layout | Linear pad geometry |

5.2 Material data

| | |
|--|---|
| 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), Palladium nickel (PdNi) , Gold (Au) |
| Surface characteristics | Selective coating |
| Insulating material data | |
| Insulating material | LCP |
| Insulating material group | IIIa |
| CTI according to IEC 60112 | 175 |
| Flammability rating according to UL 94 | V0 |
| Color | black (9005) |

1714999 FP 1,27/ 12-FV 9,05**6 Dimensions****6.1 Dimensions for the product**

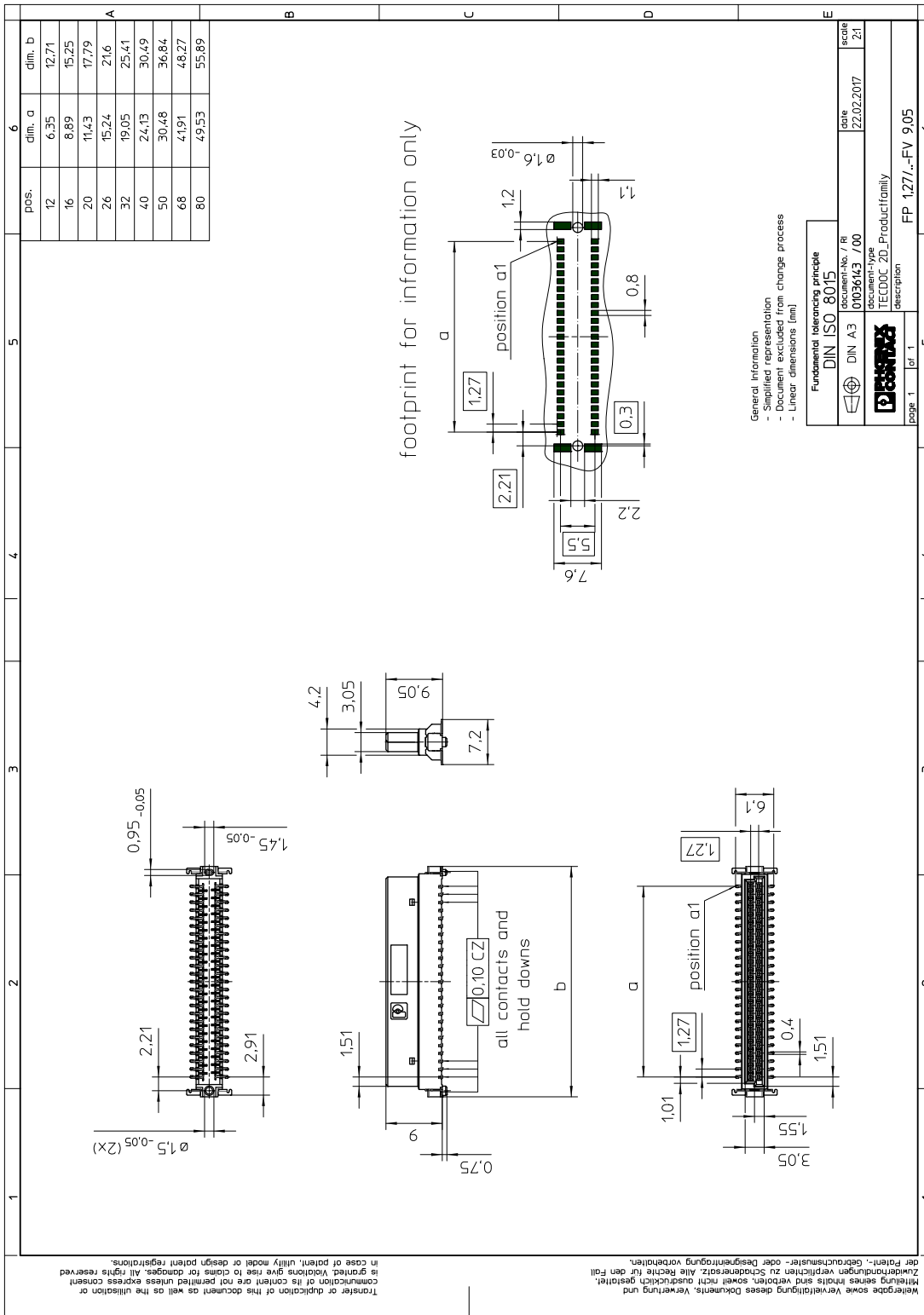
| | |
|--------------------------|--|
| Length | 7.2 mm |
| Width | 12.71 mm |
| Total height | 9.75 mm |
| Height | 9.05 mm |
| Base height | 9.05 mm |
| Positioning pin geometry | ø 1.5-0.05 mm, Length of positioning pin: 0.75 mm ø 1.5-0.05 mm, Length of positioning pin: 0.75 mm |
| Positioning pin geometry | ø 1.5-0.05 mm, Length of positioning pin: 0.75 mm ø 1.5-0.05 mm, Length of positioning pin: 0.75 mm |
| Coplanarity | ≤ 0.1 mm |

6.2 Dimensions for the application

| | |
|-------------------|--|
| Contact cover | 0.9 mm |
| Overlap length | 1.5 mm |
| Medium offset | ± 0.7 mm in longitudinal and transverse direction |
| Angular tolerance | ± 4 ° in longitudinal direction |
| Angular tolerance | ± 2 ° in transverse direction |
| Stacking height | 10.8 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 1,27/...-MV 1,75) |
| Stacking height | 12.3 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 1,27/...-MV 3,25) |

1714999 FP 1,27/ 12-FV 9,05

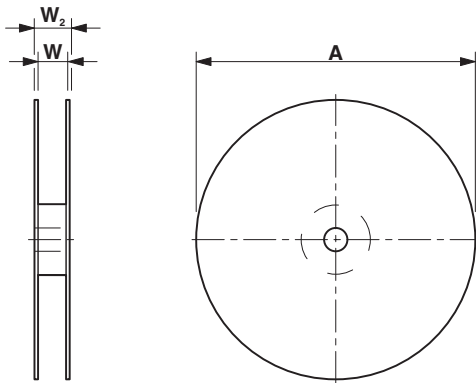
7 Series drawing



1714999 FP 1,27/ 12-FV 9,05

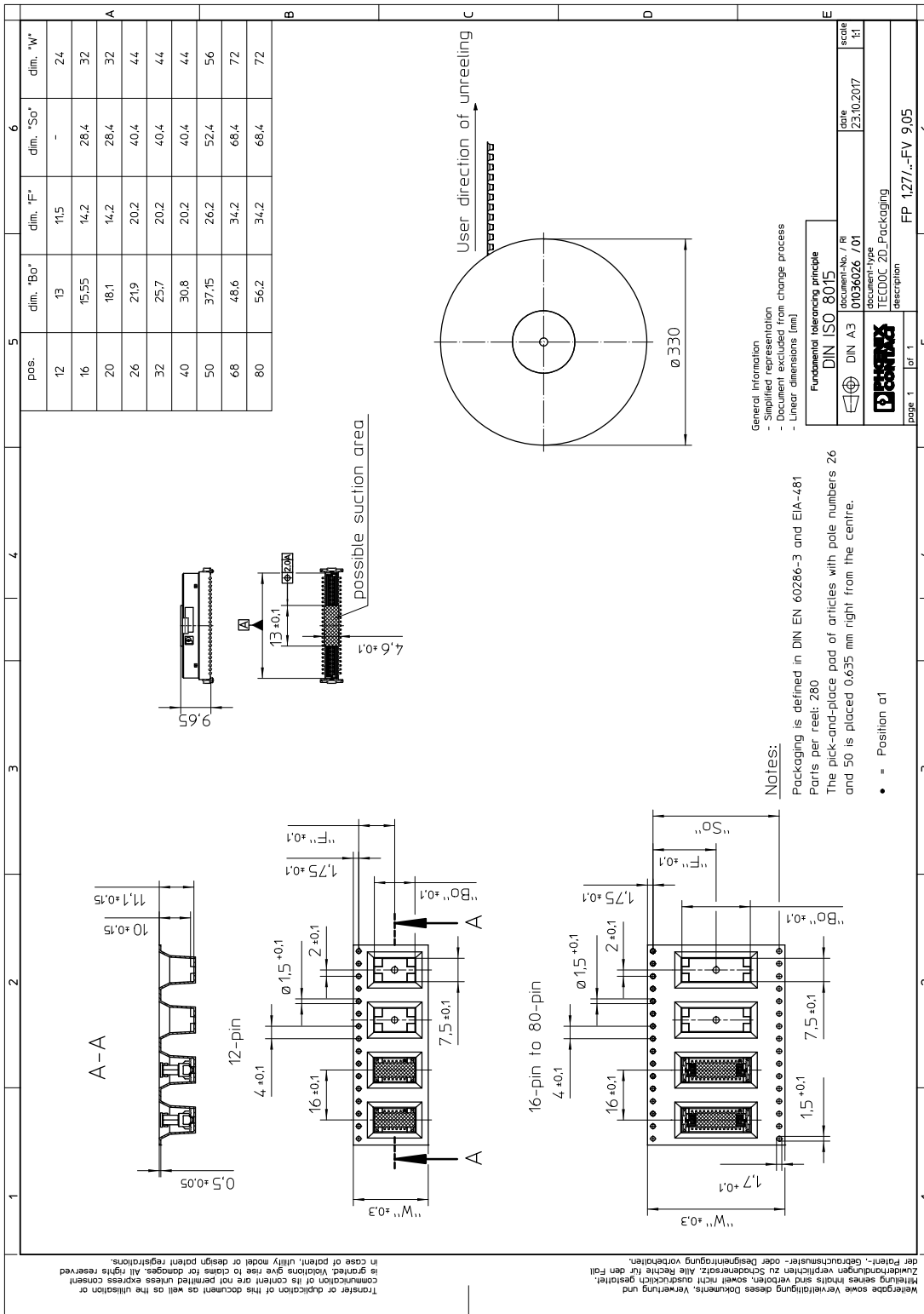
8 Packaging information

| | |
|-----------------------------|---|
| Type of packaging | 24 mm wide tape |
| Note on packaging | Tape-on-reel packaging in accordance with standard DIN EN 60286-3 and EIA-481 |
| Pieces per package | 280 |
| Outer packaging type | Transparent-Bag |
| [W] tape width | 24 mm |
| [A] coil diameter | 330 mm |
| [W2] coil overall dimension | 30.4 mm |
| Number of products per coil | 280 |



1714999 FP 1,27/ 12-FV 9,05

9 Blister drawing



10 Application

10.1 Temperature limit values

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

11 General tests

11.1 Specification

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

1714999 FP 1,27/ 12-FV 9,05**12 Mechanical tests****12.1 Insertion and withdrawal force per contact**

Insertion and withdrawal force per contact approx. 0.5 N

12.2 Service life

Specification IEC 60512-9-1:2010-03 (following)

Service life 500 Insertion/withdrawal cycles, Performance level 1

1714999 FP 1,27/ 12-FV 9,05**13 Electrical tests****13.1 Electrical data**

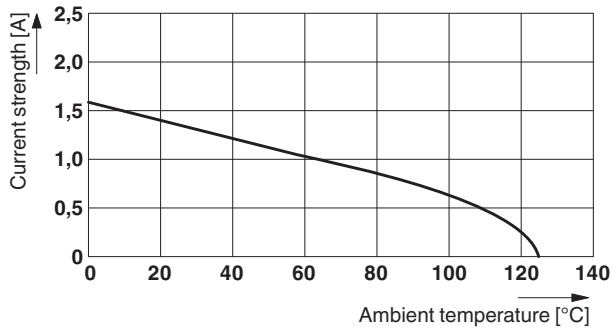
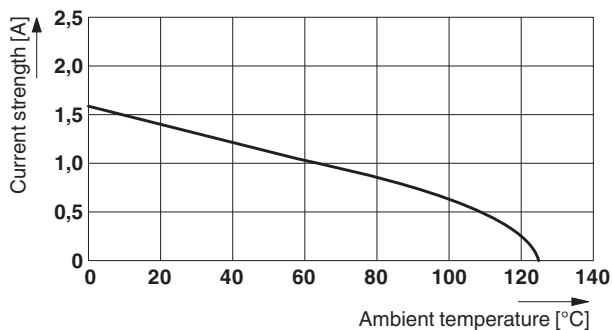
| | |
|--------------------------|---------------------------------------|
| Nominal current at 20 °C | 1.4 A IEC 60512-5-2:2002-02 (50-pos.) |
| Test voltage | 500 V AC IEC 60512-4-1:2003 |

13.2 Air and creepage distances

| | |
|---|--------|
| Minimum value for clearance and creepage distance | 0.4 mm |
|---|--------|

1714999 FP 1,27/ 12-FV 9,05**14 Current carrying capacity/derating curves**

| | |
|---------------------|---|
| Specification | IEC 60512-5-2:2002-02 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| Reduction factor | 0.8 |
| Number of positions | See diagram |

Type: FP 1,27/...-FV 9,05 with FP 1,27/...-MV 1,75**Type: FP 1,27/...-FV 9,05 with FP 1,27/...-MV 3,25****14.1 Insulation resistance**

| | |
|-----------------------|----------------------------------|
| Insulation resistance | ≥ 10 GΩ, (IEC 60512-3-1:2002-02) |
|-----------------------|----------------------------------|

14.2 forward resistance

| | |
|--------------------|---------------------------------|
| Contact resistance | ≤25 mΩ, (IEC 60512-2-1:2002-02) |
|--------------------|---------------------------------|

14.3 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 - 60.1 Hz) |
| Acceleration | 20g (60.1 - 2000 Hz) |


1714999 FP 1,27/ 12-FV 9,05

Test duration per axis 2.5 h

Test directions X-, Y- and Z-axis

Note

15 Approvals

cULus Recognized  US

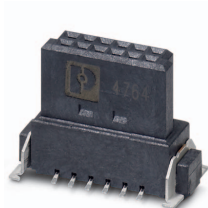


1714999 FP 1,27/ 12-FV 9,05**16 Commercial Data**

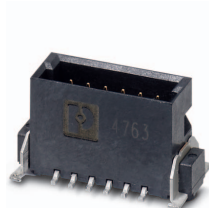
| | |
|--------------------|--|
| Order No. | 1714999 |
| Type | FP 1,27/ 12-FV 9,05 |
| Pieces per package | 280 |
| Net weight | 2 g |
| GTIN | 4055626402802 |
| | Information that applies locally, see link on page 1 |
| Country of origin | Information that applies locally, see link on page 1 |

1714999 FP 1,27/ 12-FV 9,05

17 Combination tests



FP 1,27/...-FV 9,05

FP 1,27/...-MV
1,75FP 1,27/...-MV
3,25

| | | | | |
|---|-----------------------|-----------------------|--|--|
| Mechanical tests | | | | |
| Insertion/withdrawal force per position | approx. 0.5 N / 0.5 N | approx. 0.5 N / 0.5 N | | |
| Durability tests | | | | |
| Contact resistance R_1 | 25 m Ω | 25 m Ω | | |
| Insertion/withdrawal cycles | 500 | 500 | | |
| Contact resistance R_2 | 25 m Ω | 25 m Ω | | |
| Test voltage | 500 V AC | 500 V AC | | |
| Thermal tests | | | | |
| Tested number of positions | 50 | 50 | | |
| Test current | 1.4 A | 1.4 A | | |