

# Data sheet

Order No.: 1053614

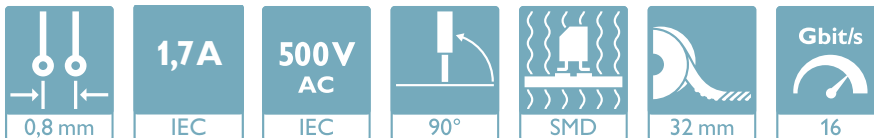
Type: FP 0,8/ 20-FV-SH 7,85

Shielded SMD female connector, Reflow soldering



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

## 1 Main features



• No. of pos.	20	• Nominal current	1.7 A
• Test voltage	500 V AC	• Mounting type	SMD soldering
• Color	black (9005)	• 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/1053614](https://phoenixcontact.net/product/1053614)

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



**1053614 FP 0,8/ 20-FV-SH 7,85****5 General Technical Data****5.1 item properties**

Order No.	1053614
Type	FP 0,8/ 20-FV-SH 7,85
Plug-in system	Fine Pitch 0,8 mm
Product type	Shielded SMD female connector
Type of contact	Female connector
Range of articles	FP 0,8/...-FV-SH 7,85
Pitch	0.8 mm
Range of positions	12...80
Number of positions	20
Number of levels	2
Number of potentials	20
Mounting type	SMD soldering
Connection direction of the connector to the PCB	90 °

**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
Surface contact area	Nickel (Ni), , Gold (Au)
Soldering area surface	Nickel (Ni) , Tin (Sn)
Surface characteristics	Selective coating
<b>Insulating material data</b>	
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	150
Flammability rating according to UL 94	V0
Color	black (9005)

**1053614 FP 0,8/ 20-FV-SH 7,85****6 Dimensions****6.1 Dimensions for the product**

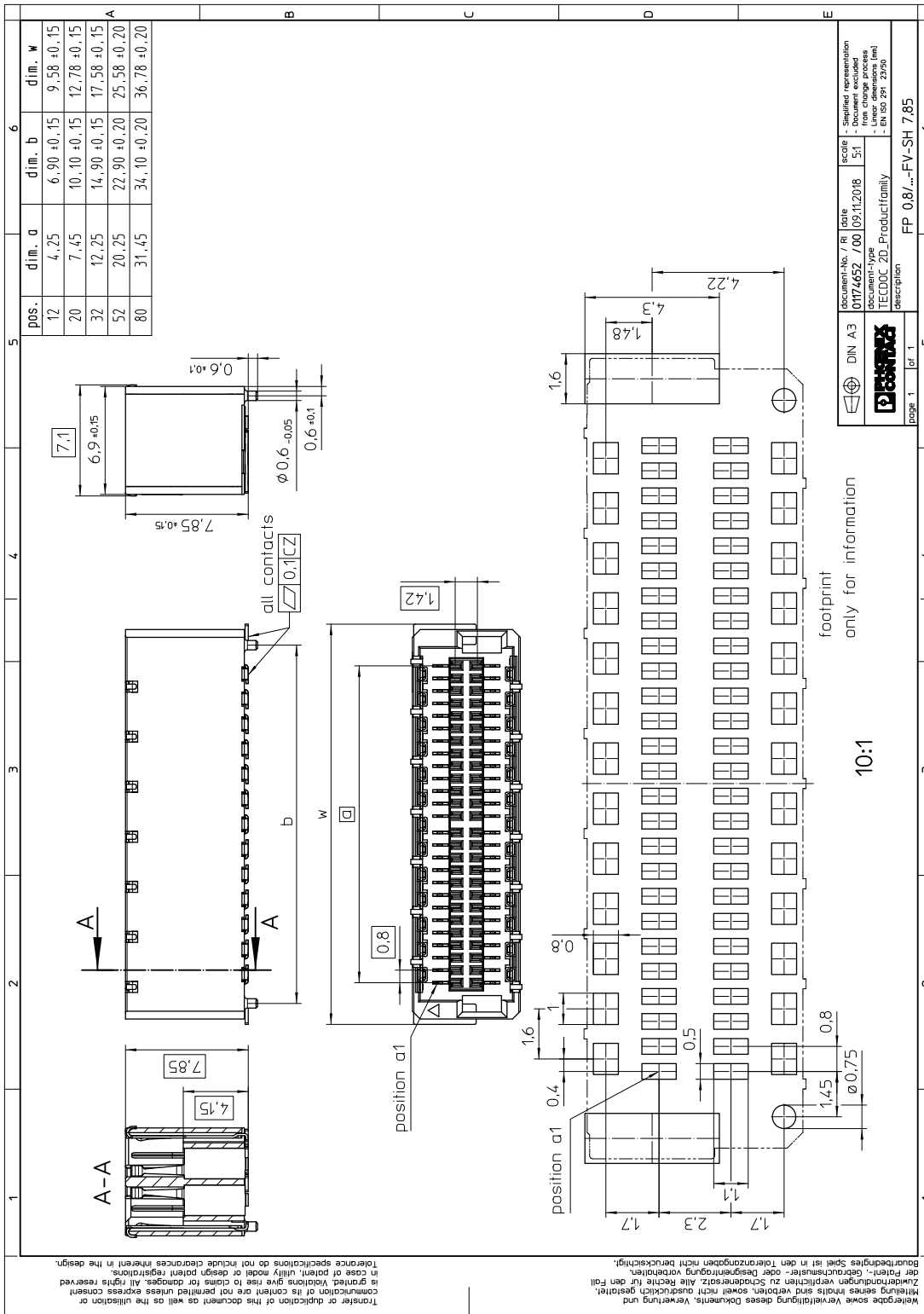
Length	7.1 mm
Width	12.78 mm
Total height	8.45 mm
Height	7.85 mm
Base height	7.85 mm
Positioning pin geometry	, Length of positioning pin: 0.6 mm
Coplanarity	≤ 0.1 mm

**6.2 Dimensions for the application**

Contact cover	0.8 mm
Overlap length	1.5 mm
Medium offset	± 0.7 mm in longitudinal and transverse direction
Angular tolerance	± 2 ° in longitudinal direction
Angular tolerance	± 4 ° in transverse direction
Stacking height	9 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SH 1,15)
Stacking height	10.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SH 2,65)

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7 Series drawing

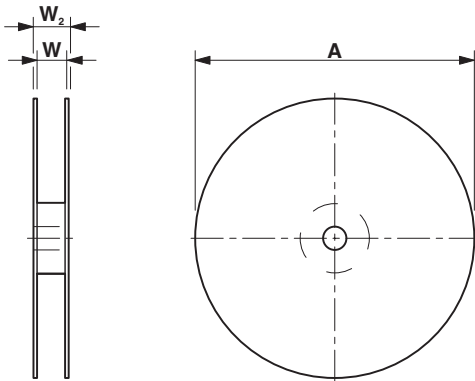


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	document-type		- Linear dimensions (mm)
	TECDOC 2D_Productfamily		- EN ISO 291, 2950
page 1	description	FP 0,8/...FV-SH 7,85	

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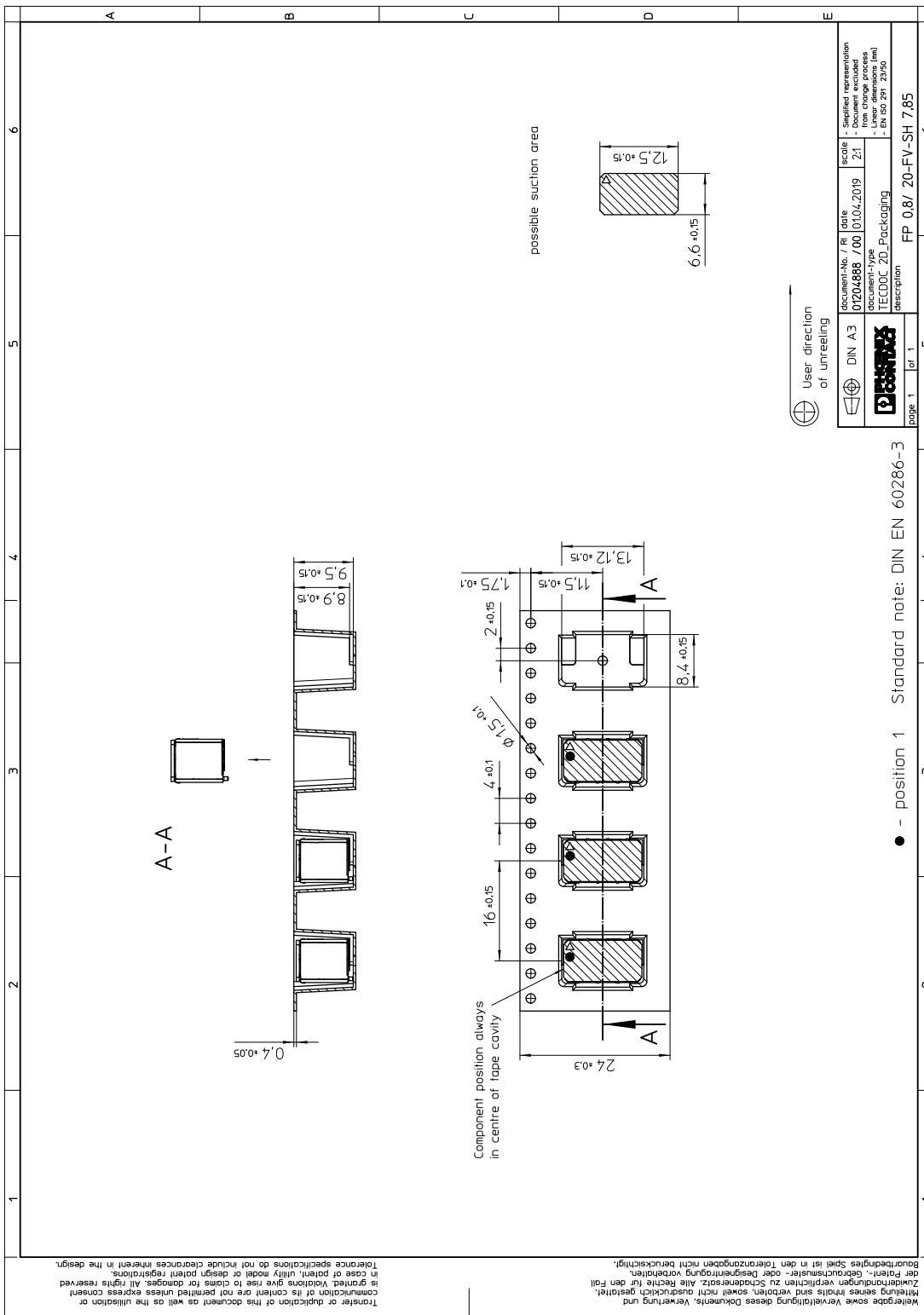
**1053614 FP 0,8/ 20-FV-SH 7,85****8 Packaging information**

Type of packaging	32 mm wide tape
Pieces per package	250
Outer packaging type	Transparent-Bag
[W] tape width	32.4 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	40.4 mm
Number of products per coil	250



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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

## 12 Mechanical tests

### 12.1 Insertion and withdrawal force per contact

Insertion and withdrawal force per contact	$\leq 1.2 \text{ N}$
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### 12.2 Service life

Specification	IEC 60512-9-1:2010-03 (following)
Service life	500 Insertion/withdrawal cycles, Performance level 1

**1053614 FP 0,8/ 20-FV-SH 7,85****13 Electrical tests****13.1 Electrical data**

Nominal current at 20 °C	1.7 A (80-pos.)
Test voltage	500 V AC IEC 60512-4-1:2003

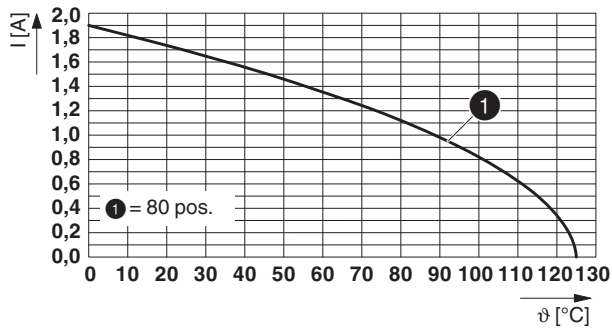
**13.2 Air and creepage distances**

Minimum value for clearance and creepage distance	0.25 mm
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## 1053614 FP 0,8/ 20-FV-SH 7,85

**14 Current carrying capacity/derating curves**

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

**14.1 Insulation resistance**

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

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

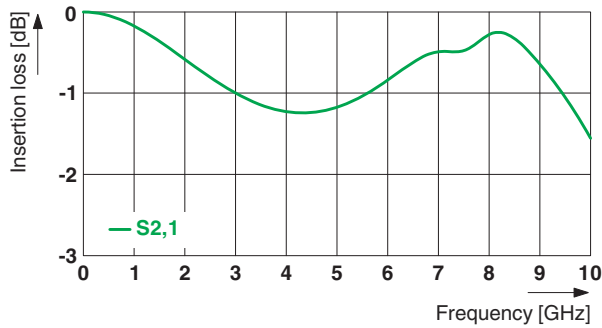
15.1 Data transmission rate

Data rate	up to 16 Gbps
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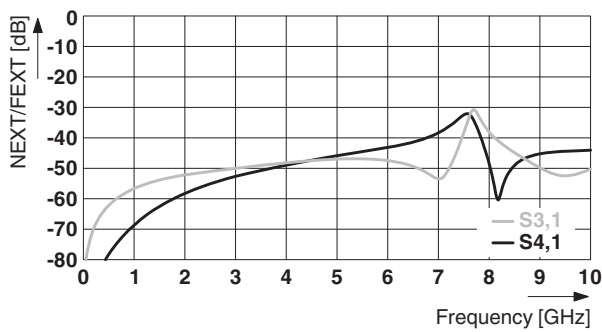
15.2 PIN assignment

Pin assignment	G, S, S, G, S, S, G
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Differential pair - 12 mm height



Differential pair - 12 mm height



16 Approvals

**1053614 FP 0,8/ 20-FV-SH 7,85****17 Commercial Data**

Order No.	1053614
Type	FP 0,8/ 20-FV-SH 7,85
Pieces per package	250
Net weight	2.472 g
GTIN	4055626686608
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

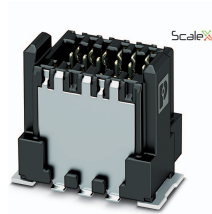
## 18 Combination tests



**FP 0,8/...-FV-SH 7,85**



**FP 0,8/...-MV-SH 1,15**



**FP 0,8/...-MV-SH 2,65**

Mechanical tests				
Durability tests				
Contact resistance $R_1$	20 m $\Omega$	15 m $\Omega$		
Insertion/withdrawal cycles	500	500		
Contact resistance $R_2$	20 m $\Omega$	15 m $\Omega$		
Thermal tests				