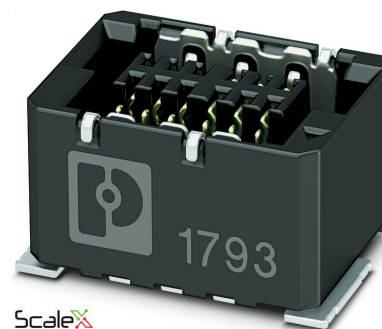


Order No.: 1043710

Type: FP 0,8/ 12-FV-SH 4,85

Shielded SMD female connector, Reflow soldering



ScaleX

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

1 Main features



- | | | | |
|----------------|--------------|------------------------|-----------------|
| • No. of pos. | 12 | • 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 | 24 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.

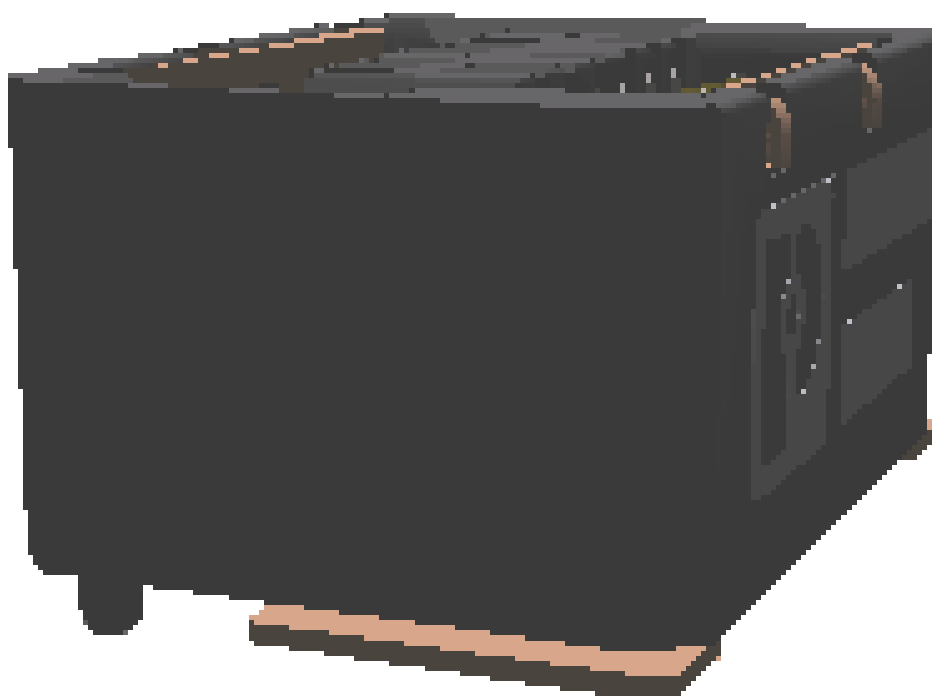
It can be downloaded at: phoenixcontact.net/product/1043710

3 Table of contents

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1043710 FP 0,8/ 12-FV-SH 4,85

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



1043710 FP 0,8/ 12-FV-SH 4,85**5 General Technical Data****5.1 item properties**

Order No.	1043710
Type	FP 0,8/ 12-FV-SH 4,85
Plug-in system	FINEPITCH 0,8 mm shielded
Product type	Shielded SMD female connector
Type of contact	Female connector
Range of articles	FP 0,8/...-FV-SH 4,85
Pitch	0.8 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), , Gold (Au)
Soldering area surface	Nickel (Ni) , Tin (Sn)
Surface characteristics	Selective coating
Insulating material data	
Color	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	150
Flammability rating according to UL 94	V0

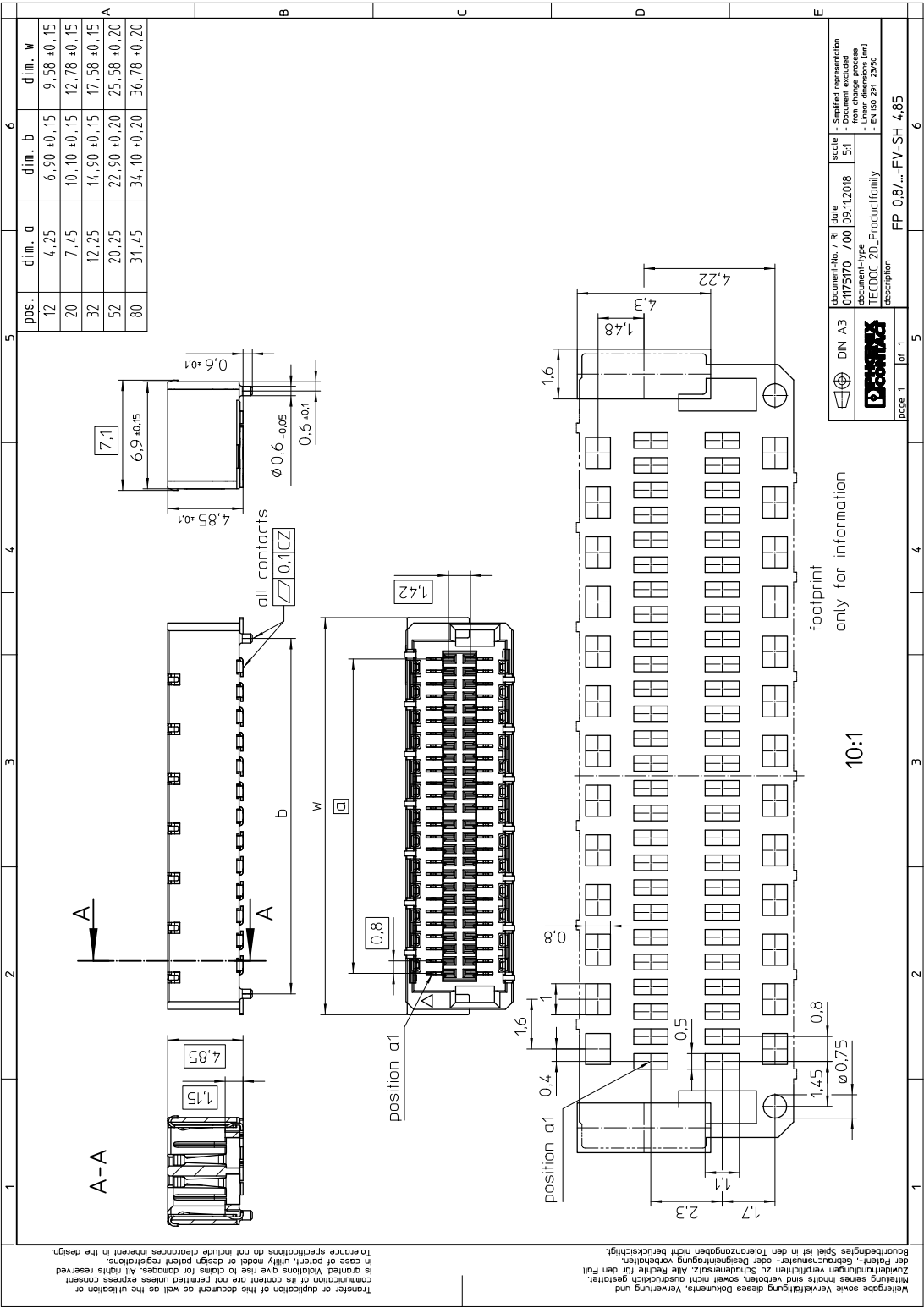
1043710 FP 0,8/ 12-FV-SH 4,85**6 Dimensions****6.1 Dimensions for the product**

Length	7.1 mm
Width	9.58 mm
Total height	5.45 mm
Installed height	4.85 mm
Base height	4.85 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	6 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SH 1,15)
Stacking height	7.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SH 2,65)

7 Series drawing



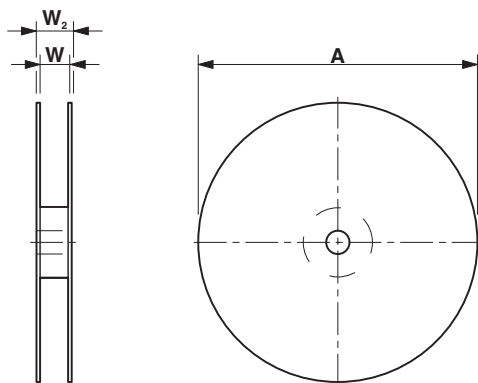
1043710 FP 0,8/ 12-FV-SH 4,85**8 Product notes****8.1 General information**

Notes on operation

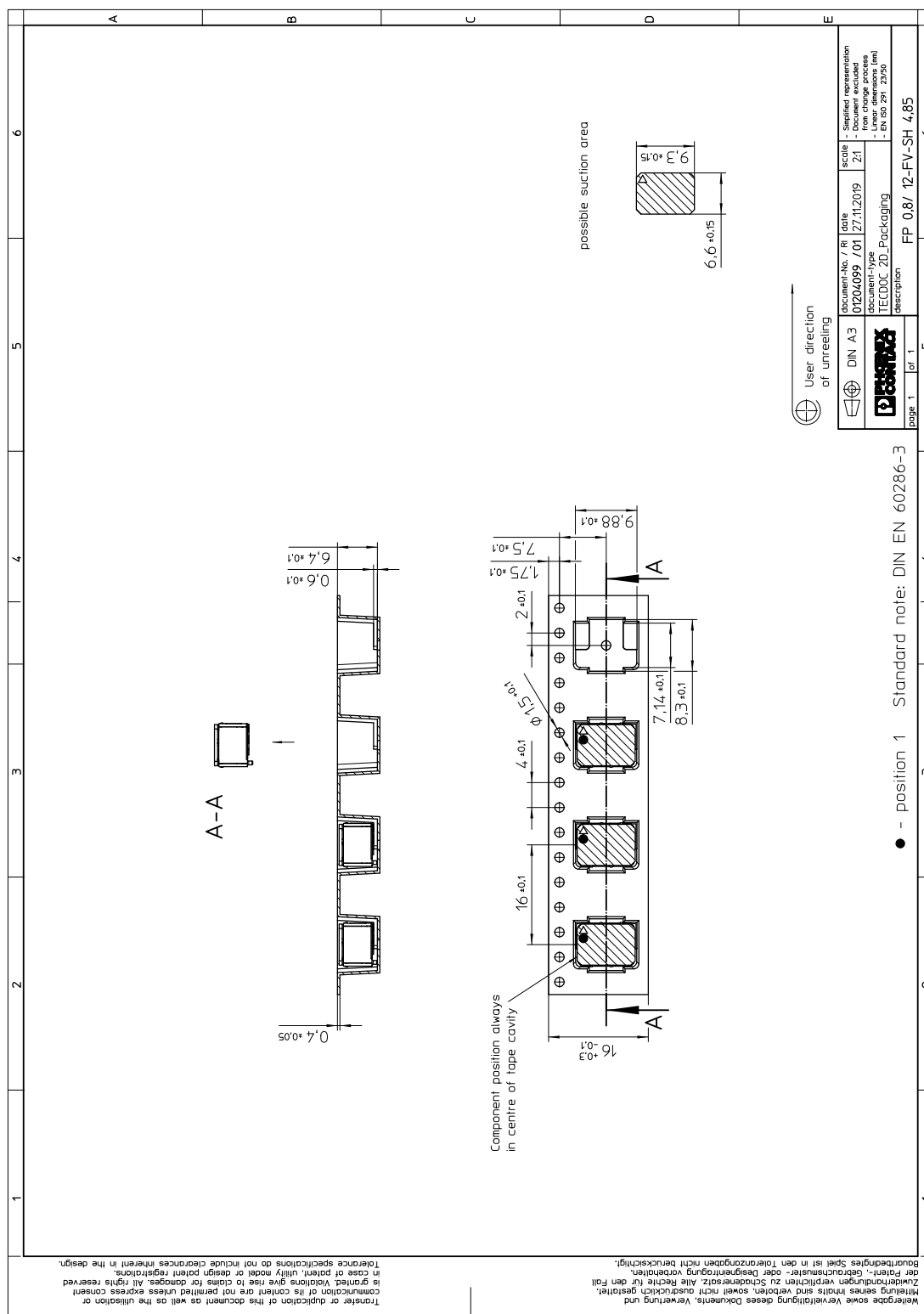
The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances within the scope of insulation requirements in accordance with IEC 60664-1.

9 Packaging information

Type of packaging	24 mm wide tape
Pieces per package	500
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	24 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	30.4 mm
Number of products per coil	500



10 Blister drawing



1043710 FP 0,8/ 12-FV-SH 4,85

11 Application

11.1 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

1043710 FP 0,8/ 12-FV-SH 4,85

12 General tests

12.1 Specification

Brief description

Board-to-board connectors

1043710 FP 0,8/ 12-FV-SH 4,85**13 Mechanical tests****13.1 Insertion and withdrawal force per contact**

Insertion and withdrawal force per contact	$\leq 1.2 \text{ N}$
--	----------------------

13.2 Service life

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

1043710 FP 0,8/ 12-FV-SH 4,85**14 Electrical tests****14.1 Electrical data**

Nominal current at 20 °C	1.7 A (52-pos.)
Test voltage	500 V AC IEC 60512-4-1:2003

14.2 Air and creepage distances

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

1043710 FP 0,8/ 12-FV-SH 4,85**15 Current carrying capacity/derating curves**

Specification

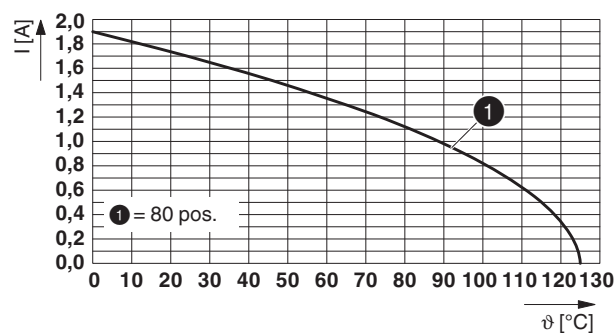
IEC 60512-5-2:2002-02

Note

max. 1.7 A at 20 °C (80-pos.)

Reduction factor

0.8

Type: FP 0,8/...-MV-SH 2,65 with FP 0,8/...-FV-SH 4,85**15.1 Insulation resistance**

Insulation resistance

 $\geq 5 \text{ G}\Omega$, (IEC 60512-3-1:2002-02)**15.2 forward resistance**

Contact resistance

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

1043710 FP 0,8/ 12-FV-SH 4,85**16 Environmental and durability tests****16.1 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 - 60.1 Hz)
Acceleration	200 m/s ² (58 - 2000 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Note	

16.2 Shock test

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

1043710 FP 0,8/ 12-FV-SH 4,85

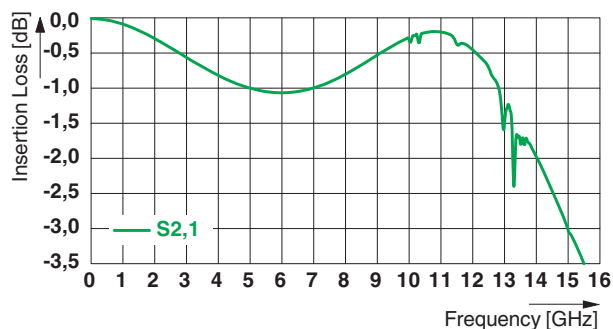
17 Data transmission

17.1 Data transmission rate

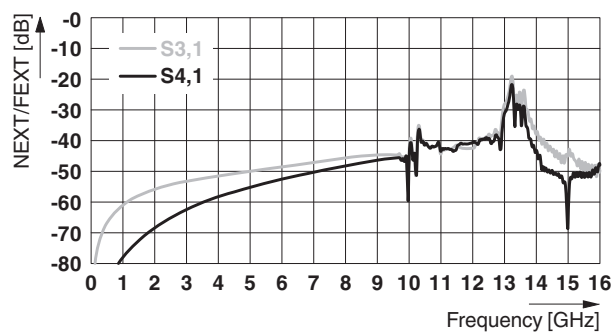
Data rate

up to 16 Gbps

Type: FP 0,8/...-FV-SH 4,85 with FP 0,8/...-MV-SH 1,15
Differential pair – 7.5 mm high



Type: FP 0,8/...-FV-SH 4,85 with FP 0,8/...-MV-SH 1,15
Differential pair – 7.5 mm high



1043710 FP 0,8/ 12-FV-SH 4,85**18 Approvals / Certificates**

cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
	-	-	-	-

1043710 FP 0,8/ 12-FV-SH 4,85**19 Commercial Data**

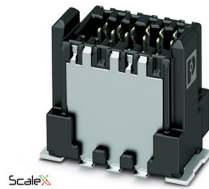
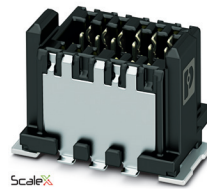
Order No.	1043710
Type	FP 0,8/ 12-FV-SH 4,85
Pieces per package	500
Net weight	1.166 g
GTIN	4055626616421
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

1043710 FP 0,8/ 12-FV-SH 4,85

20 Combination tests



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

FP 0,8/...-MV-SH
2,65FP 0,8/...-MV-SH
1,15

Mechanical tests				
Durability tests				
Contact resistance R_1	15 m Ω	20 m Ω		
Insertion/withdrawal cycles	500	500		
Contact resistance R_2	15 m Ω	20 m Ω		
Test voltage	500 V AC			
Thermal tests				
Tested number of positions	80			
Test current	1.7 A			