

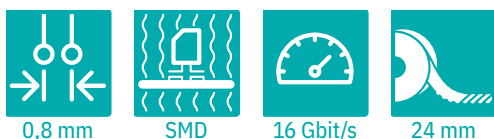
Item No.: 1545346

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

SMD female connector, Reflow soldering



1 Main features



- | | | | |
|----------------|-----------------|------------------------|-------------------------|
| • No. of pos. | 20 | • 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 | 24 mm wide tape |

2 Your advantages

- ✓ Compatible PCB footprint enables flexible replacement of the shielded and unshielded version
- ✓ 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.

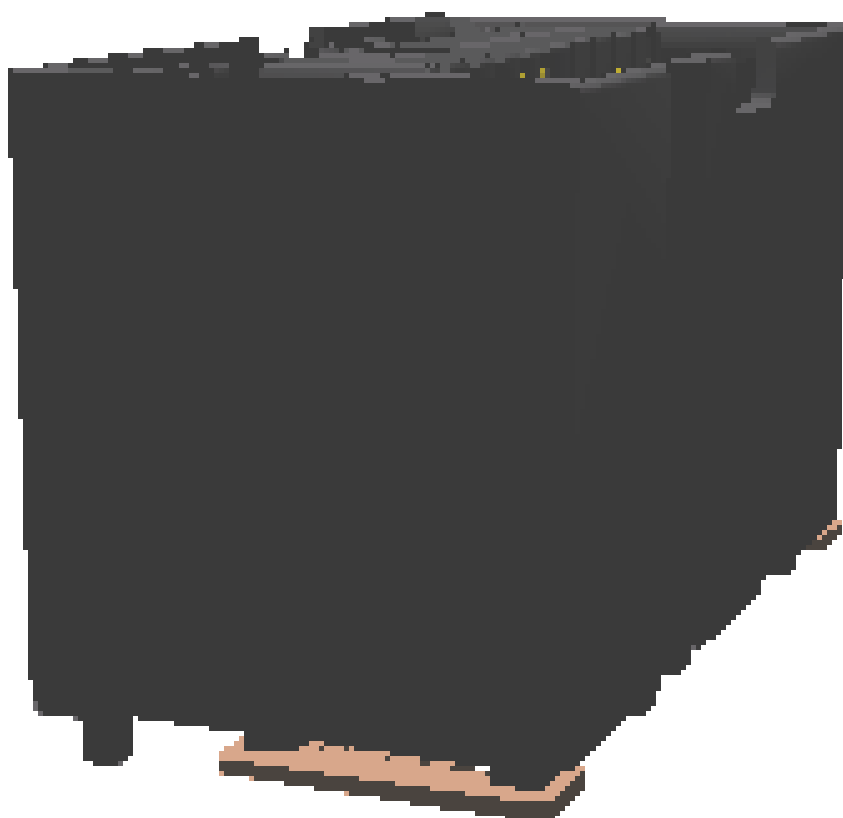
It can be downloaded at: phoenixcontact.com/product/1545346

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1545346 FP 0,8/ 20-FV-SL 7,85

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



1545346 FP 0,8/ 20-FV-SL 7,85**5 General Technical Data****5.1 item properties**

Item no.	1545346
Type	FP 0,8/ 20-FV-SL 7,85
Connector system	FINEPITCH FP 0,8
Product type	SMD female connector
Contact connection type	Socket
Range of articles	FP 0,8/...-FV-SL 7,85
Pitch	0.8 mm
Number of positions	20
Number of rows	2
Type of locking	without
Mounting type	SMD soldering
Connection direction of the connector to the PCB	90 °
Pin layout	Linear pad geometry

1545346 FP 0,8/ 20-FV-SL 7,85**6 Mounting method****6.1 Flange mounting**

Type of locking	without
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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

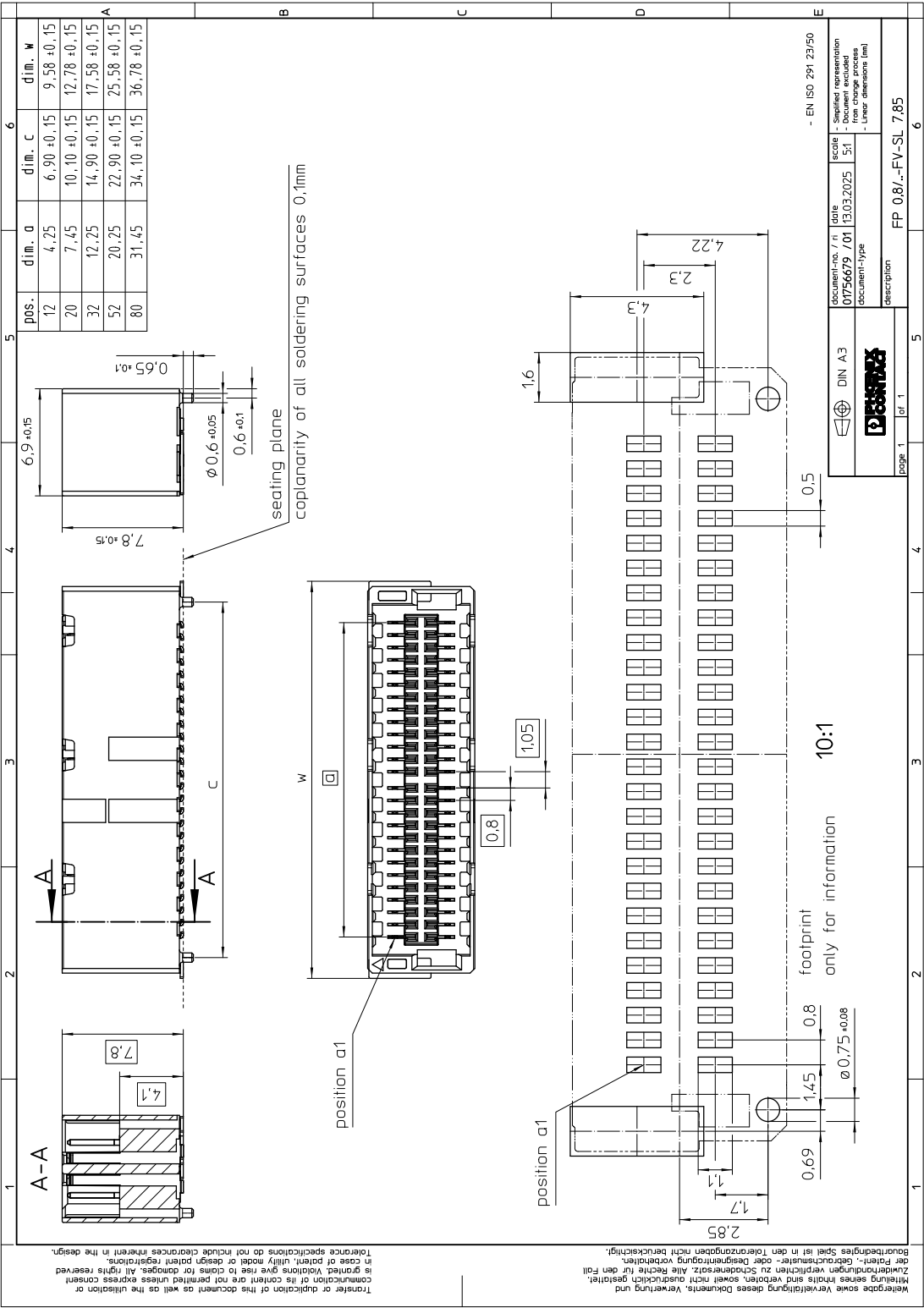
1545346 FP 0,8/ 20-FV-SL 7,85**8 Dimensions****8.1 Dimensions for the product**

Length	6.9 mm
Width	12.78 mm
Total height	8.45 mm
Installed height	7.8 mm
Base height	7.85 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	9 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SL 1,15)
Stacking height	10.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SL 2,65)
Stacking height	15 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SL 7,15)
Stacking height	16.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV-SL 8,65)
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)

9 Series drawing



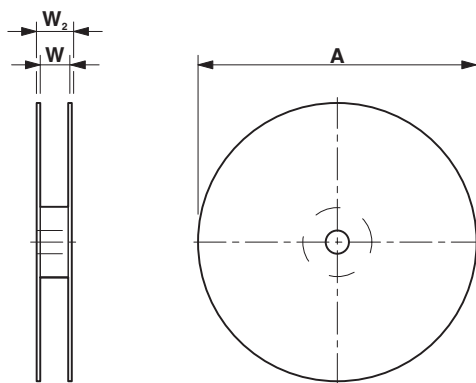
10 Product notes

10.1 General information

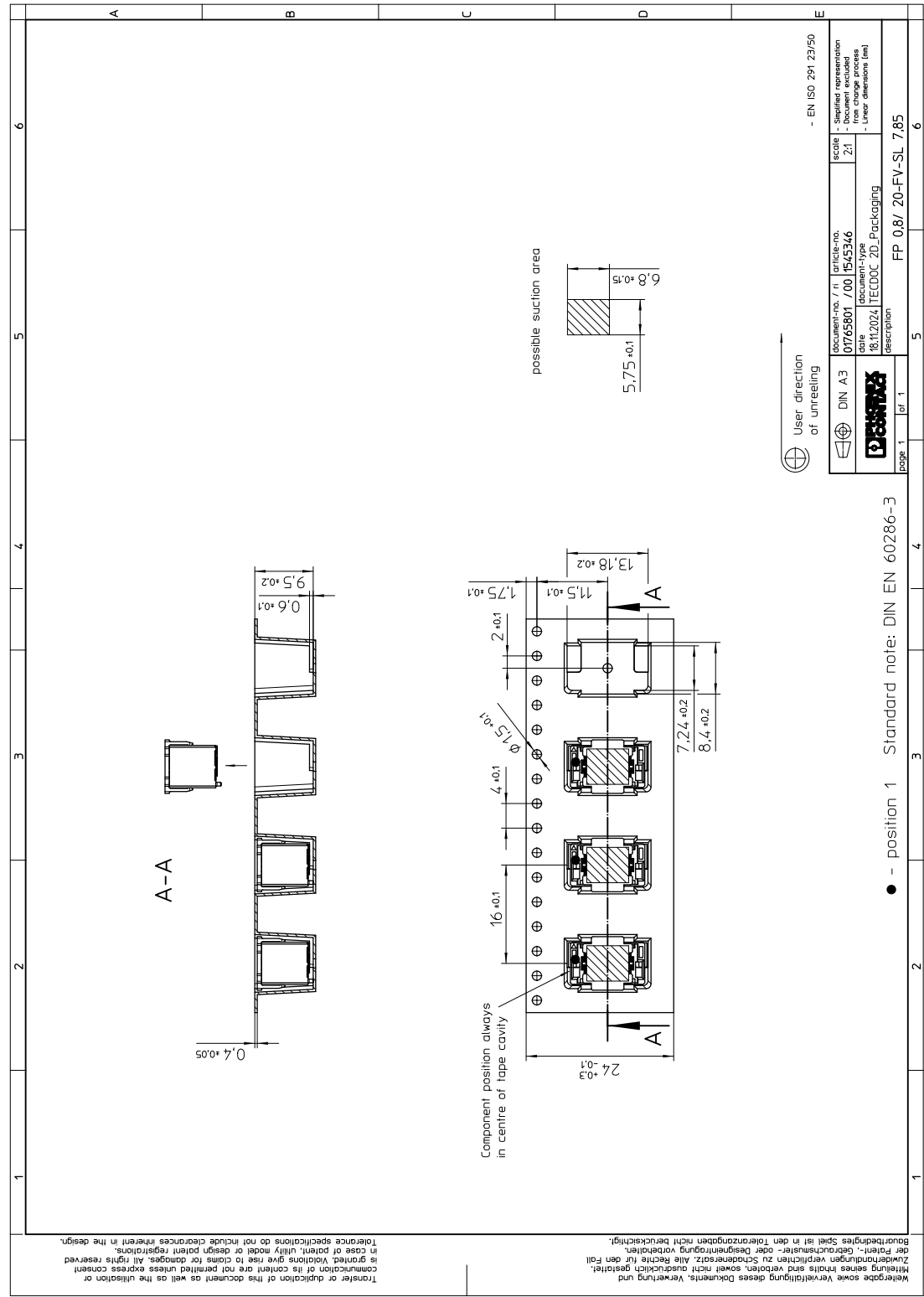
Notes on operation	The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances within the scope of insulation requirements in accordance with IEC 60664-1.
Details for soldering processes	The items are suitable for assembly on both sides and for overhead soldering.

11 Packaging specifications

Type of packaging	24 mm wide tape
Packing unit	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	24 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	30.4 mm
Number of products per coil	250



12 Blister drawing



1545346 FP 0,8/ 20-FV-SL 7,85**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
Solder cycles in the reflow	3
swash circumference	see dimensional drawing

13.3 PCB mounting/path geometries

Pad geometry	0.5 x 1.1 mm
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1545346 FP 0,8/ 20-FV-SL 7,85

14 Application drawing

1545346 FP 0,8/ 20-FV-SL 7,85

15 General tests

15.1 Specification

Brief description

Board-to-board connectors

16 Mechanical tests

16.1 Insertion and withdrawal force per contact

Insertion and withdrawal force per contact	$\leq 1.2 \text{ N}$
Specification	IEC 60512-9-1:2010-03 (following)
No. of cycles	500 Insertion/withdrawal cycles, Performance level 1

1545346 FP 0,8/ 20-FV-SL 7,85**17 Electrical tests**

Nominal current I_N	1.7 A IEC 60512-5-2:2002-02 (at 20°C 80-pos.)
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Test voltage	500 V AC IEC 60512-4-1:2003-05
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Note	max. 1.7 A at 20 °C (80-pos.)
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17.1 Air and creepage distances

Minimum value for clearance and creepage distance	0.25 mm
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1545346 FP 0,8/ 20-FV-SL 7,85

18 Current carrying capacity/derating curves

Specification

IEC 60512-5-2:2002-02

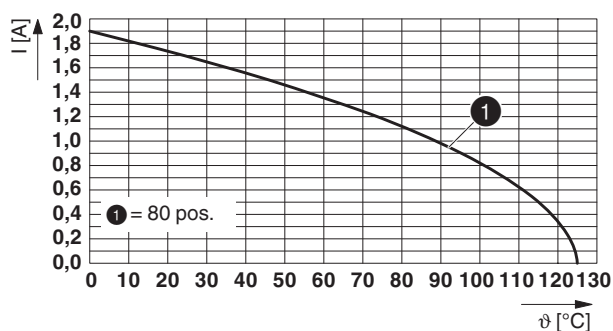
Note

max. 1.7 A at 20 °C (80-pos.)

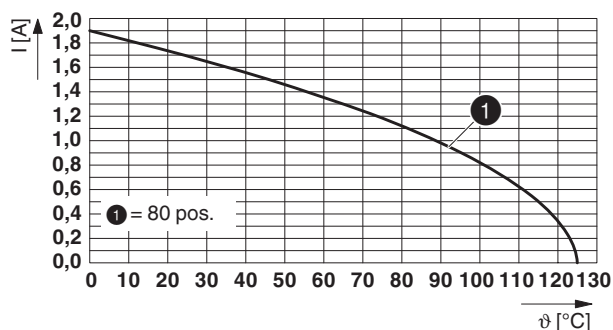
Reduction factor

0.8

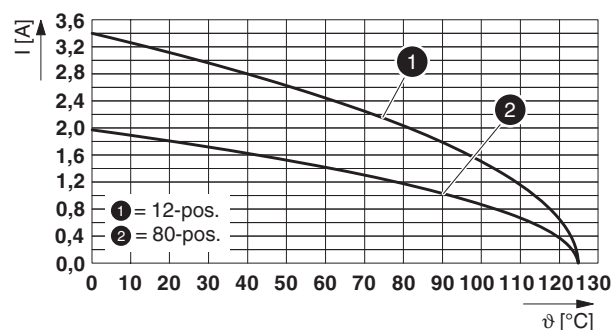
Type: FP 0,8/...-MV-SL 2,65 with FP 0,8/...-FV-SL 7,85



Type: FP 0,8/...-MV-SL 1,15 with FP 0,8/...-FV-SL 7,85



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



18.1 Insulation resistance

Insulation resistance

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

18.2 forward resistance

1545346 FP 0,8/ 20-FV-SL 7,85

Contact resistance

≤15 mΩ, (IEC 60512-2-1:2002-02)

1545346 FP 0,8/ 20-FV-SL 7,85**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 ² (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 ²
Shock duration	11 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

1545346 FP 0,8/ 20-FV-SL 7,85

20 Data transmission

20.1 Data transmission rate

Data rate	16 Gbps

1545346 FP 0,8/ 20-FV-SL 7,85

21 Commercial Data

Item no.		1545346
Type		FP 0,8/ 20-FV-SL 7,85
Packing unit		250
Net weight		0.746 g
GTIN		4067923019065
		Information that applies locally, see link on page 1

22 Combination tests



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

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

FP 0,8/...-MV-SL
1,15

FP 0,8/...-MV-SL
8,65

Mechanical tests				
Durability tests				
Contact resistance R ₁	15 mΩ	25 mΩ	25 mΩ	
Insertion/withdrawal cycles	500	500	500	
Contact resistance R ₂	15 mΩ	25 mΩ	25 mΩ	
Test voltage	500 V AC	500 V AC	500 V AC	
Insulation resistance Requirements > 5 MΩ	≥ 5 GΩ	≥ 5 GΩ	≥ 5 GΩ	
Thermal tests				
Tested number of positions	80	80	80	
Test current	1.7 A	1.7 A	1.7 A	
Data transmission				