

Item No.: 1332120

Type: FS 0,635/ 20-MV-R- 5,0

SMD male connector, Reflow soldering

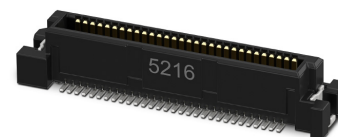


Figure shows the 60-pos. version

## 1 Main features



- |                |              |                        |                 |
|----------------|--------------|------------------------|-----------------|
| • No. of pos.  | 20           | • Nominal current      | 0.5 A           |
| • Test voltage | 500 V AC     | • Mounting type        | SMD soldering   |
| • Color        | black (9005) | • Connection direction | 90 °            |
| • Pitch        | 0.635 mm     | • Type of packaging    | 32 mm wide tape |

## 2 Your advantages

- ✓ Design-in support during device development through M-CAD/E-CAD data and a free sample service
- ✓ Cost and space savings with the comprehensive portfolio available in various stack heights
- ✓ Easy mating with integrated keyways and tolerance compensation for error-free production
- ✓ High-speed data transmission up to 20 Gbps for various possible applications
- ✓ Time savings during the development process with customer-specific simulations for data integrity
- ✓ Gold-plated contacts ensure transfer quality remains stable over the long term



Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1332120](https://phoenixcontact.net/product/1332120)

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



**1332120 FS 0,635/ 20-MV-R- 5,0****5 General Technical Data****5.1 item properties**

Item no.	1332120
Type	FS 0,635/ 20-MV-R- 5,0
Connector system	FINEPITCH FS 0,635
Product type	SMD male connector
Range of articles	FS 0,635-MV-R- 5,0
Pitch	0.635 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

**1332120 FS 0,635/ 20-MV-R- 5,0****6 Mounting****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
Insulating material	LCP

**1332120 FS 0,635/ 20-MV-R- 5,0****8 Dimensions****8.1 Dimensions for the product**

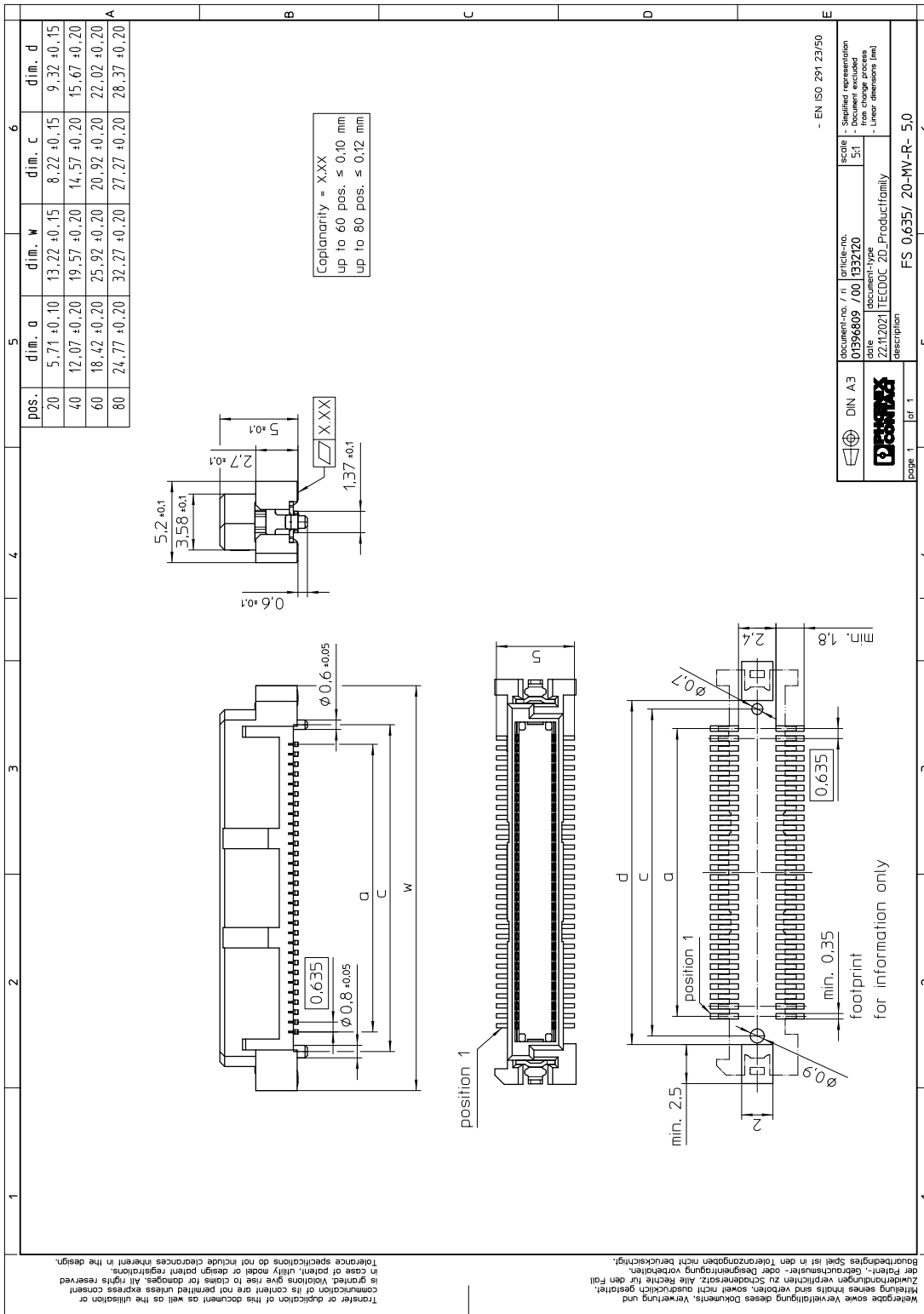
Length	5.2 mm
Width	13.22 mm
Total height	5.6 mm
Installed height	5 mm
Coplanarity	≤ 0.1 mm

**8.2 Dimensions for the application**

Contact cover	0.6 mm
Wipe length	0.6 mm
Center offset	± 0.5 mm in longitudinal and transverse direction
Angular tolerance	± 10 ° in longitudinal and transverse direction (when plugging in)
Angular tolerance	± 2 ° in longitudinal and transverse direction (when plugged in)
Stacking height	6 mm Tolerance: +0.6 mm (in combination with Range of articles:FS 0,635-FV-R-4,0)
Stacking height	12 mm Tolerance: +0.6 mm (in combination with Range of articles:FS 0,635-FV-R-10,0)

1332120 FS 0,635/ 20-MV-R- 5,0

9 Series drawing



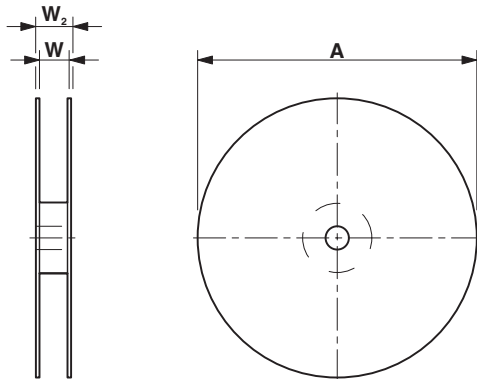
**1332120 FS 0,635/ 20-MV-R- 5,0****10 Product notes****10.1 General information**

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.

**11 Packaging information**

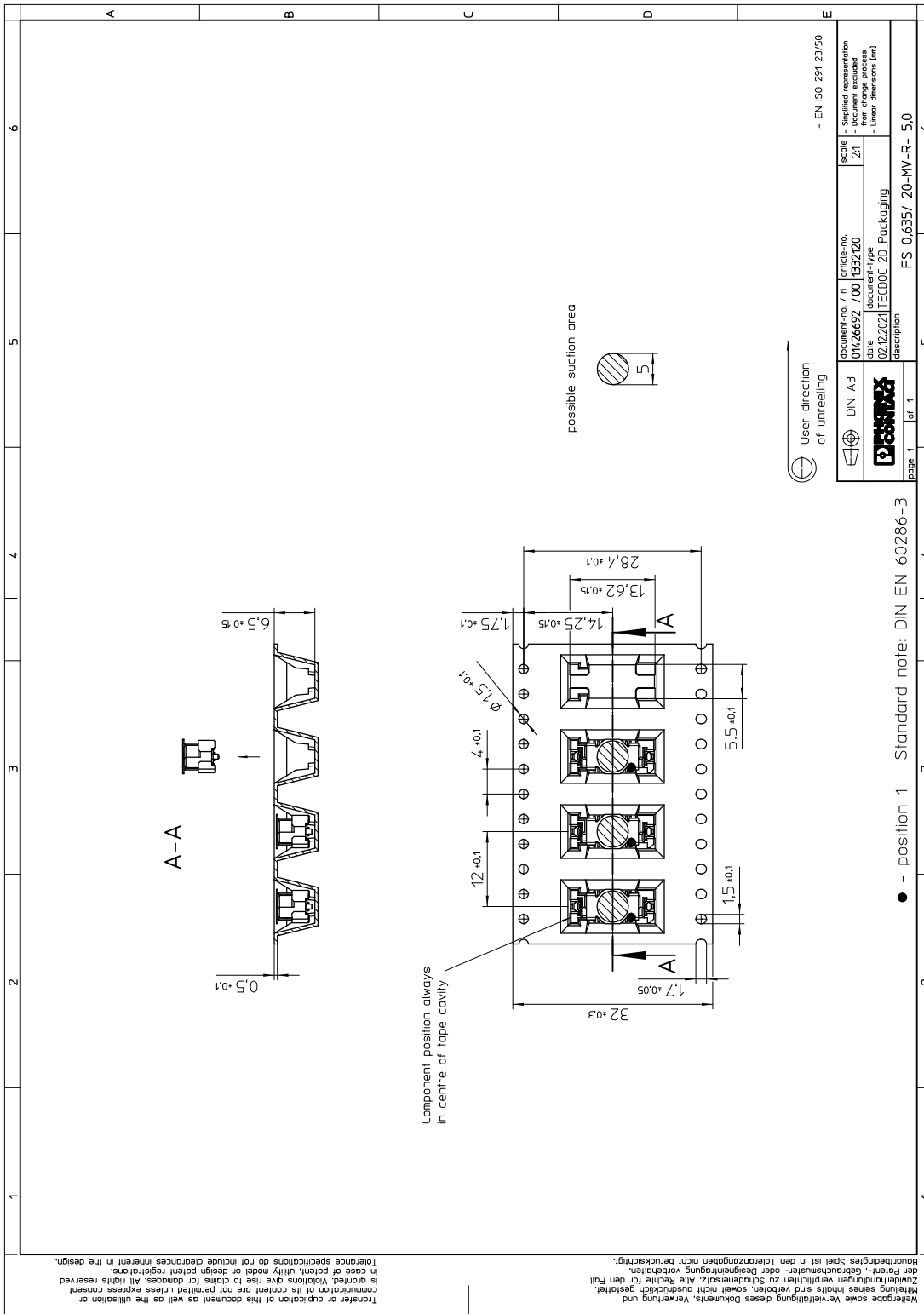
Type of packaging	32 mm wide tape
Pieces per package	850
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07
[W] tape width	32 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	38.4 mm
Number of products per coil	850





1332120 FS 0,635/ 20-MV-R- 5,0

12 Blister drawing



## 13 Application

### 13.1 PCB mounting/path geometries

Pad geometry	0.35 x 1.8 mm
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### 13.2 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

## 14 General tests

### 14.1 Specification

Brief description

Board-to-board connectors

**1332120 FS 0,635/ 20-MV-R- 5,0****15 Mechanical tests****15.1 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	
	50 Insertion/withdrawal cycles

**1332120 FS 0,635/ 20-MV-R- 5,0****16 Electrical tests**

Nominal current $I_N$	0.5 A IEC 60512-5-2:2002-02 (40-pos. / 60-pos.)
Test voltage	500 V AC IEC 60512-4-1:2003
Rated voltage (I/1)	125 V
Rated surge voltage (I/1)	0.8 kV

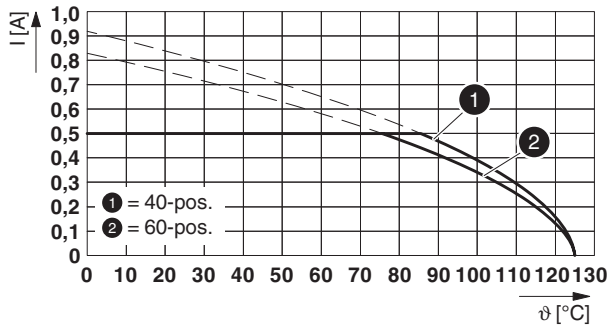
**16.1 Air and creepage distances**

Minimum value for clearance and creepage distance	0.19 mm
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**1332120 FS 0,635/ 20-MV-R- 5,0****17 Current carrying capacity/derating curves**

Specification	IEC 60512-5-2:2002-02
Note	max. 0.5 A (40-pos. / 60-pos.)
Reduction factor	0.8

**Type: FS 0,635/...-MV-R- 5,0 with FS 0,635/...-FV-R- 4,0**

**17.1 Insulation resistance**

Insulation resistance	≥ 5 GΩ, (IEC 60512-3-1:2002-02)
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**17.2 forward resistance**


Contact resistance	≤40 mΩ, (IEC 60512-2-1:2002-02)
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**17.3 Vibration test**

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 55 - 10 Hz
Sweep speed	1 octave/min
Amplitude	1.52 mm
Acceleration	181 m/s <sup>2</sup>
Test duration per axis	2 h
Test directions	X-, Y- and Z-axis
Note	

## 18 Data transmission

### 18.1 Data transmission rate



Data rate	up to 20 Gbps
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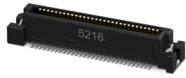
**1332120 FS 0,635/ 20-MV-R- 5,0****19 Commercial Data**

Item no.	1332120
Type	FS 0,635/ 20-MV-R- 5,0
Pieces per package	850
Net weight	0.91 g
GTIN	4063151629229
	Information that applies locally, see link on page 1



## 1332120 FS 0,635/ 20-MV-R- 5,0

## 20 Combination tests



## FS 0,635-MV-R- 5,0

Mechanical tests				
Durability tests				
Contact resistance $R_1$	40 m $\Omega$			
Insertion/withdrawal cycles	50			
Contact resistance $R_2$	40 m $\Omega$			
Test voltage	500 V AC			
Insulation resistance Requirements > 5 M $\Omega$	$\geq 5$ G $\Omega$			
Thermal tests				
Tested number of positions	60			
Test current	0.5 A			