

# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 1.4 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads



## Your advantages

- Designed for integration into the SMT soldering process
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



## Key Commercial Data

Packing unit	470 pc
Minimum order quantity	470 pc
GTIN	
GTIN	4046356611862

## Technical data

### Item properties

Brief article description	Feed-through header
Plug-in system	MINI COMBICON
Type of contact	Male connector
Range of articles	MC 1,5/...-G-THR
Pitch	3.5 mm
Number of positions	4
Mounting type	THR soldering
Pin layout	Linear pinning
Locking	without
Number of levels	1
Number of connections	4
Number of potentials	4

### Electrical parameters

# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

## Technical data

### Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage	160 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	250 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 µm Sn)
Metal surface contact area (middle layer)	Nickel (1 - 3 µm Ni),
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1 - 3 µm Ni)

### Material data - housing

Housing color	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

### Dimensions for the product

Length [ l ]	9.2 mm
Width [ w ]	15.39 mm
Height [ h ]	8.3 mm
Pitch	3.5 mm
Height (without solder pin)	6.9 mm
Solder pin [P]	1.4 mm
Pin dimensions	0.8 x 0.8 mm

### Dimensions for PCB design

Hole diameter	1.4 mm
---------------	--------

### Packaging information

Type of packaging	32 mm wide tape
Pieces per package	470
Denomination packing units	Pcs.
[W] tape width	32 mm
[A] coil diameter	330 mm

# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

## Technical data

### Packaging information

[W2] coil overall dimension	38.4 mm
Outer packaging type	Transparent-Bag

### Processing notes

Process	Reflow/wave soldering
Specification	Following IPC/JEDEC J-STD-020E:2014-12
	Following IEC 61760-1:2006-04
	Following IEC 60068-2-58:2015-03
Moisture Sensitive Level	MSL 1
Classification temperature T <sub>c</sub>	260 °C
Solder cycles in the reflow	3

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	2.5 mm
Minimum creepage distance value (III/2)	1.6 mm
Minimum creepage distance value (II/2)	2.5 mm

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	5 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	1.3 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.3 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	> 4 TΩ

### Thermal tests (C)

# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

## Technical data

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Conductor cross section	1.5 mm <sup>2</sup>
Test current	8 A
Upper limiting temperature requirements <100 °C	Test passed

### Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV

### Environmental and durability tests (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

### Vibration test

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h

### Standards and Regulations

Connection in acc. with standard	EN-VDE
	CUL
Flammability rating according to UL 94	V0

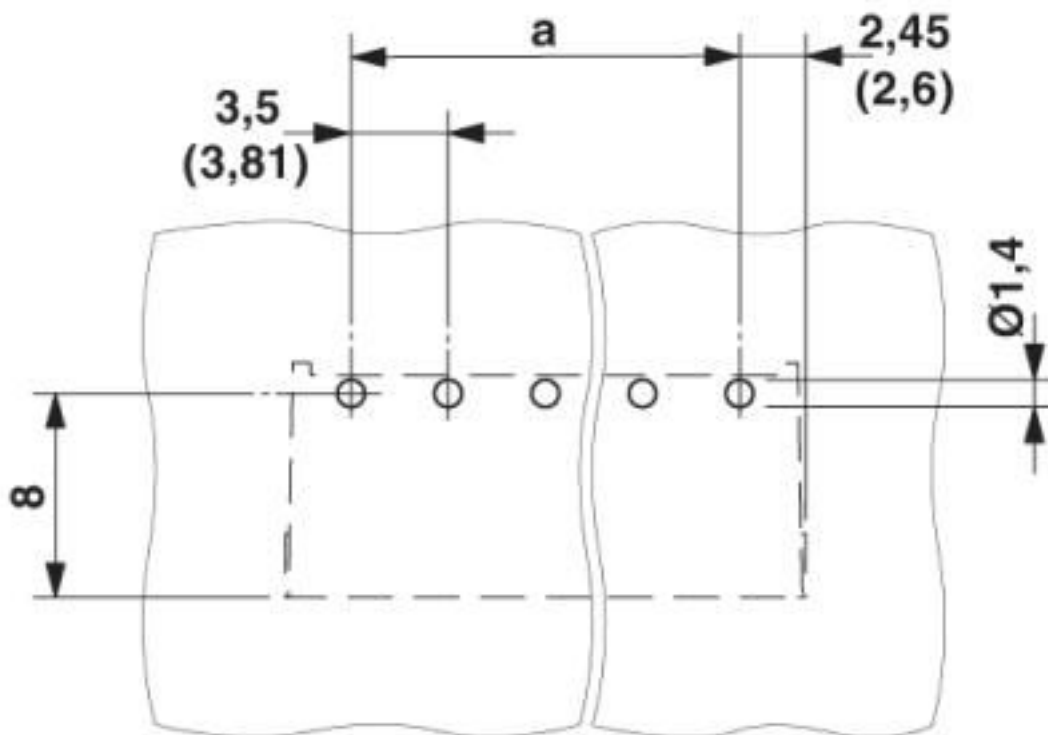
### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

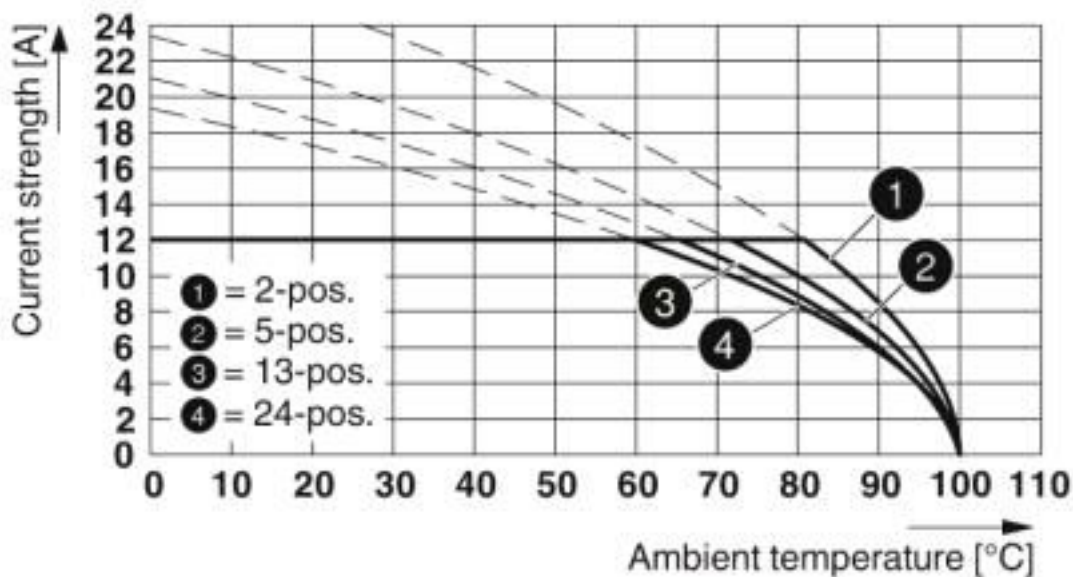
## Drawings

# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

Drilling diagram



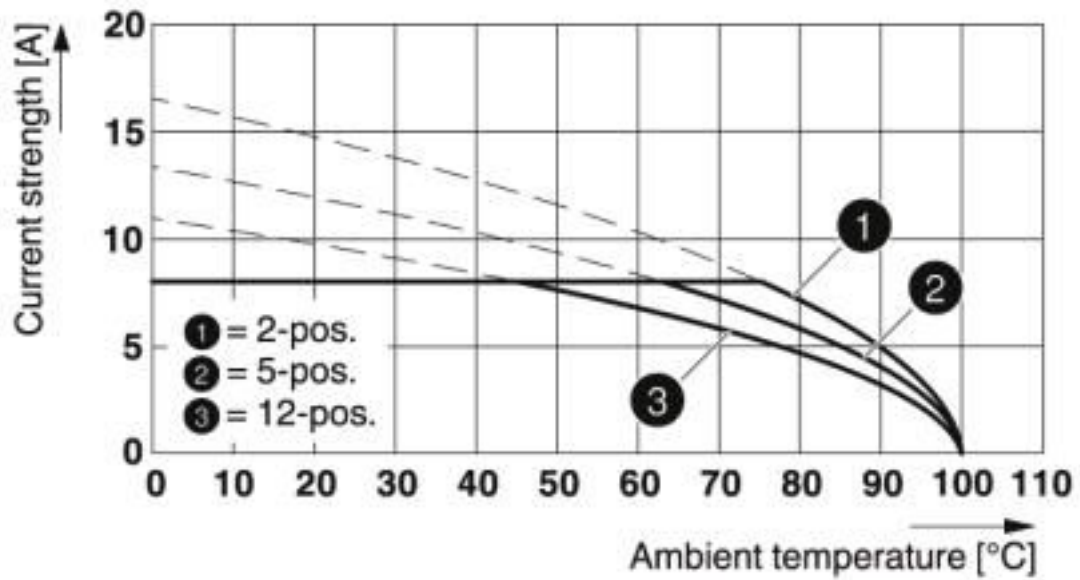
Diagram



Type: MC 1,5/...-ST(F)-3,5 with MC 1,5/...-G(F)-3,5 P... THR

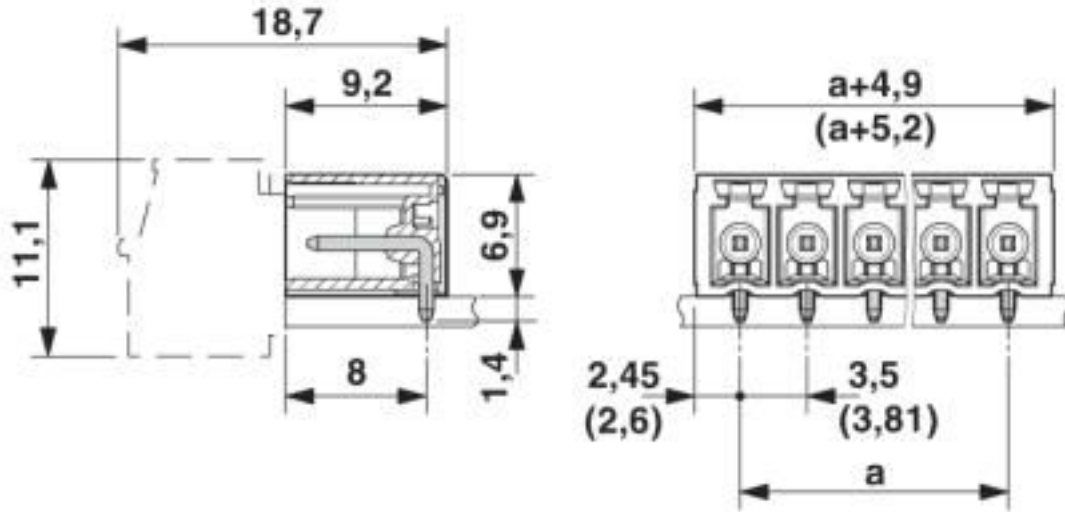
# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

Diagram



Type: MCVR 1,5/...-ST-3,5 with MC 1,5/...-G-3,5 P...THR

Dimensional drawing



## Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700

# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

## Classifications

### eCl@ss

eCl@ss 6.0	27260700
eCl@ss 7.0	27440402
eCl@ss 8.0	27440402
eCl@ss 9.0	27440402

### ETIM

ETIM 4.0	EC002637
ETIM 5.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

### UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

## Approvals

### Approvals

---

#### Approvals


IECEE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

---

#### Ex Approvals

---

### Approval details

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60987-B1B2
Nominal voltage UN	160 V		
Nominal current IN	8 A		

# Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

## Approvals

VDE Gutachten mit Fertigungsüberwachung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40011723
Nominal voltage UN		160 V	
Nominal current IN		8 A	

EAC		B.01687
-----	--	---------

cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20110128
Nominal voltage UN		B 300 V	D 300 V
Nominal current IN		8 A	8 A

## Accessories

### Additional products

Printed-circuit board connector - MC 1,5/ 4-ST-3,5 GY7035 - 1769074



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, color: light gray, contact surface: Tin

Printed-circuit board connector - TFMC 1,5/ 4-ST-3,5 - 1772634



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - MC 1,5/ 4-ST-3,5 - 1840382



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



## Printed-circuit board connector - MC 1,5/ 4-G-3,5 P14 THRR32 - 1788990

### Accessories

---

#### Printed-circuit board connector - MCVW 1,5/ 4-ST-3,5 - 1862878



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

---

#### Printed-circuit board connector - MCVR 1,5/ 4-ST-3,5 - 1863178



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

---

#### Printed-circuit board connector - FK-MCP 1,5/ 4-ST-3,5 - 1939934



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

---

#### Printed-circuit board connector - FMC 1,5/ 4-ST-3,5 - 1952283



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 4, pitch: 3.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

---

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Phoenix Contact:](#)

[1788990](#)