

## Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

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>)



The figure shows a 10-position version of the product


PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

### Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Screwable flange for superior mechanical stability



### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	 4 017918 121167
GTIN	4017918121167
Weight per Piece (excluding packing)	6.710 g
Custom tariff number	85366990
Country of origin	Germany

### Technical data

#### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	MINI COMBICON
Type of contact	Female connector
Range of articles	MCVR 1,5/...-STF

# Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

## Technical data

### Item properties

Pitch	3.5 mm
Number of positions	7
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M2
Locking	Screw flange
Number of levels	1
Number of connections	7
Number of potentials	7

### Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage	160 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	320 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

### Connection capacity

Connection method	Screw connection with tension sleeve
pluggable	Yes
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	28 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
2 conductors with same cross section, solid	0.08 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.08 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.5 mm
Stripping length	7 mm
Torque	0.22 Nm ... 0.25 Nm

### Flange specifications

Type of locking	Screw locking
-----------------	---------------

# Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

## Technical data

### Flange specifications

Mounting flange	Screw flange
Torque	0.3 Nm

### 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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

### Material data - housing

Housing color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

### Dimensions for the product

Length [ l ]	10.4 mm
Width [ w ]	34.9 mm
Height [ h ]	19.1 mm
Pitch	3.5 mm
Height (without solder pin)	19.1 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

### 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)

### Termination and connection method

Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed

# Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

## Technical data

### Pull-out test

Conductor cross section / conductor type / tensile force	0.14 mm <sup>2</sup> / solid / > 10 N
	0.14 mm <sup>2</sup> / flexible / > 10 N
	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

### Mechanical tests according to standard

Test specification	IEC 61984
Visual examination	Test passed IEC 60512-1-1:2002-02
Dimensional test	Test passed IEC 60512-1-2:2002-02
Resistance of marking	Test passed IEC 60068-2-70:1995-12
Result	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	8 N
Polarization and coding	Test passed IEC 60512-13-5:2006-02
Result	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	23 N

### 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 mm
Minimum creepage distance value (III/2)	1.5 mm
Minimum creepage distance value (II/2)	1.6 mm

### Current carrying capacity / derating curves

Specification	IEC 61984
---------------	-----------

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	8 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

## Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

### Technical data

#### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	3.5 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	3.6 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	> 0.2 TΩ

#### 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

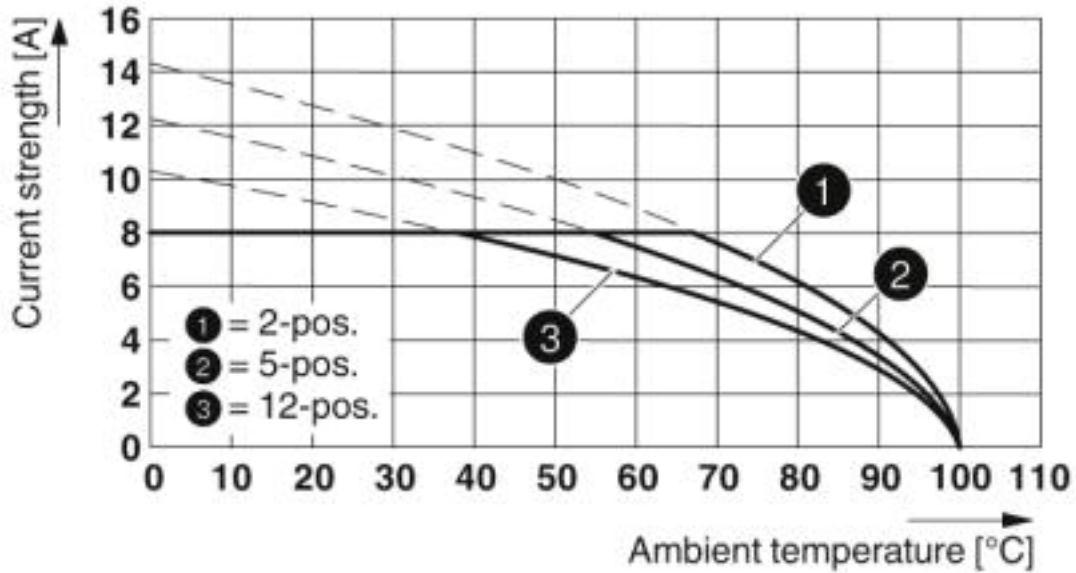
#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

### Drawings

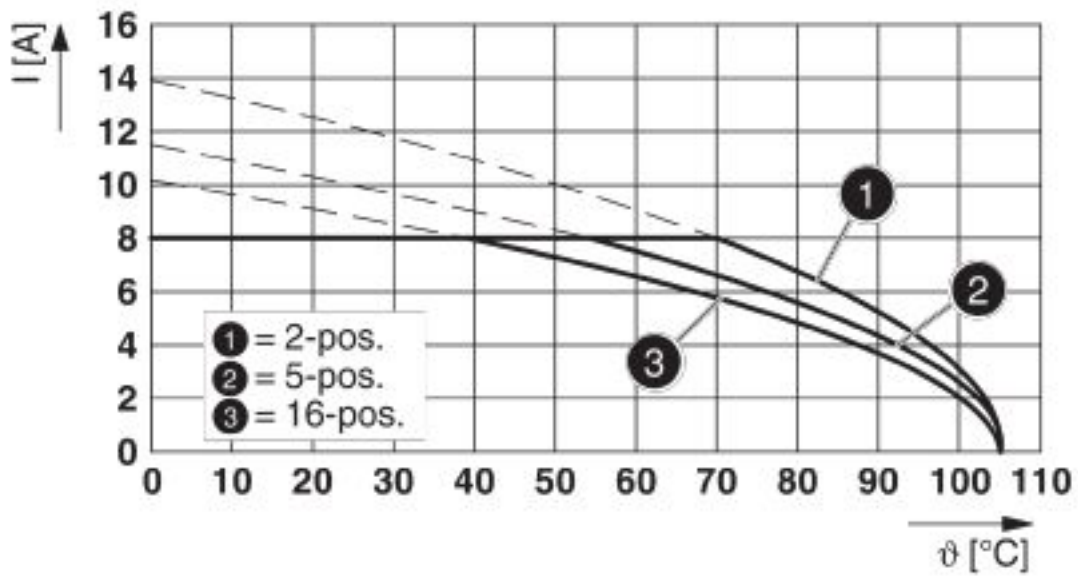
# Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

Diagram



Type: MCV(W/R) 2,5/...-STF-3,5 with MC 1,5/...-GF-3,5 P...THR

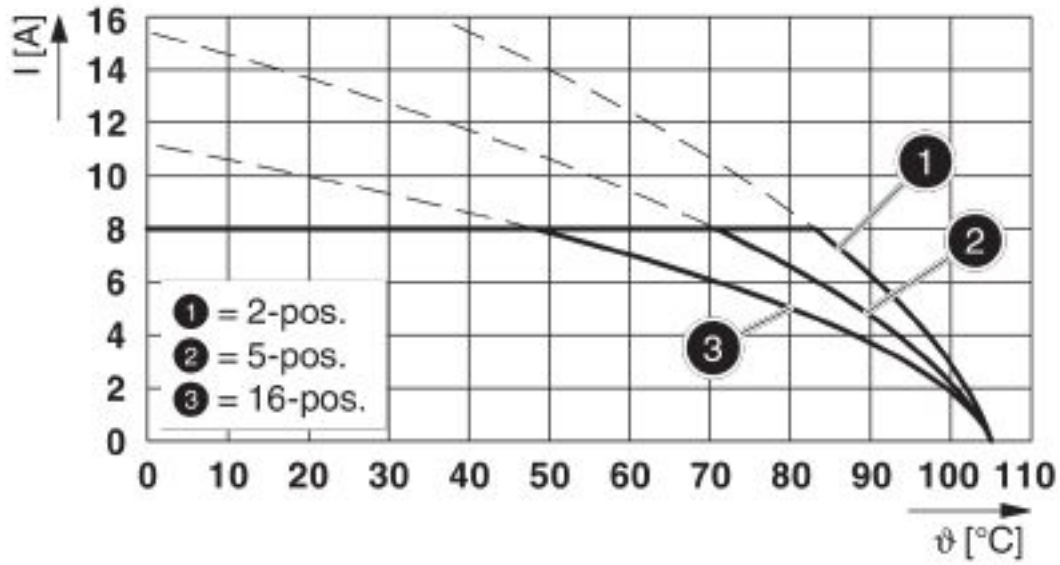
Diagram



Type: MCVR 1,5/...-STF-3,5 with MC 1,5/...-GF-3,5

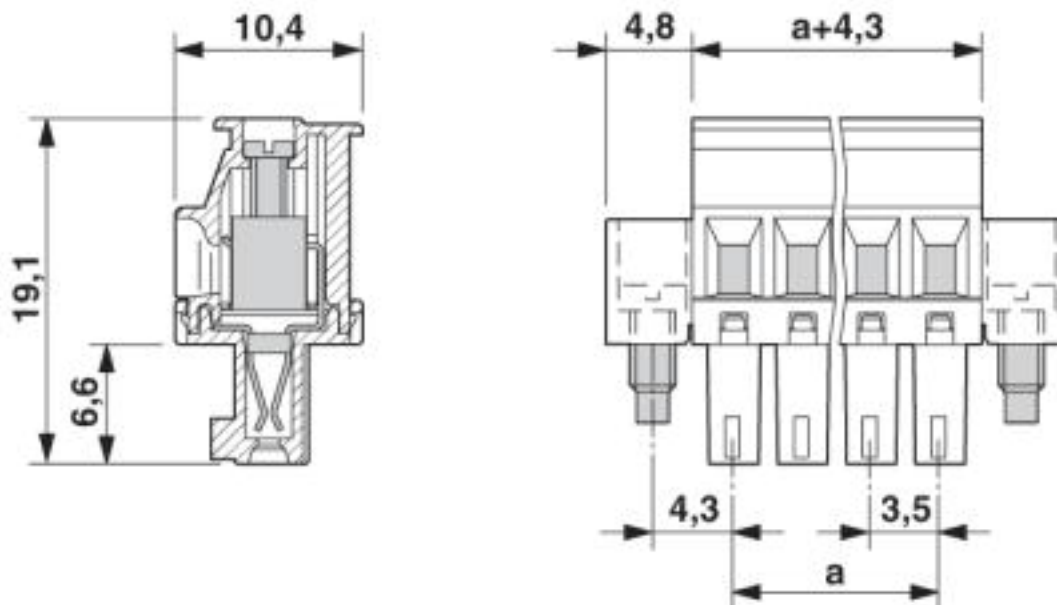
# Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

Diagram



Type: MCVR 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5

Dimensional drawing



# Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

## Classifications

### eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440309
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002638
ETIM 5.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

### 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


---

# Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356


## 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		
mm <sup>2</sup> /AWG/kcmil	0.2-1.5		

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		
mm <sup>2</sup> /AWG/kcmil	0.2-1.5		

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
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	8 A	8 A	
mm <sup>2</sup> /AWG/kcmil	30-14	30-14	

## Accessories

### Accessories

Labeled terminal marker

## Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

### Accessories

Marker card - SK 3,5/2,8:FORTL.ZAHLEN - 0804073



Marker card, Card, white, labeled, Horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 3.5 mm, lettering field size: 3.5 x 2.8 mm

---

### Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

---

### Screwdriver tools

Screwdriver - SZS 0,4X2,5 VDE - 1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

---

### Terminal marking

Marker card - SK U/2,8 WH:UNBEDRUCKT - 0803883



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 2.8 mm, Number of individual labels: 3600

---

### Additional products

## Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

### Accessories

#### Printed-circuit board connector - MCV 1,5/ 7-GF-3,5 P20 THRR56 - 1780765

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads



#### Printed-circuit board connector - MC 1,5/ 7-GF-3,5 P26 THR - 1789261

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm



#### Printed-circuit board connector - MC 1,5/ 7-GF-3,5 P26 THRR56 - 1789274

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm



#### Printed-circuit board connector - MC 1,5/ 7-GF-3,5 P14 THR - 1789708

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 1.4 mm



#### Feed-through header - MCV 1,5/ 7-GF-3,5 - 1843279

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm



## Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

### Accessories

#### Feed-through header - MC 1,5/ 7-GF-3,5 - 1843842

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm



#### Feed-through header - EMC 1,5/ 7-GF-3,5 - 1897296

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: green, contact surface: Tin, mounting: Press-in technology, pin layout: Linear pinning, solder pin [P]: 3.5 mm



#### Feed-through header - EMCV 1,5/ 7-GF-3,5 - 1911211

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 7, pitch: 3.5 mm, color: green, contact surface: Tin, mounting: Press-in technology, pin layout: Linear pinning, solder pin [P]: 3.8 mm



#### Feed-through header - MC 1,5/ 7-GF-3,5 THT - 1937363

PCB headers, number of positions: 7, pitch: 3.5 mm, color: black, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.4 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads



#### Feed-through header - MCV 1,5/ 7-GF-3,5 THT - 1937457

PCB headers, number of positions: 7, pitch: 3.5 mm, color: black, contact surface: Tin, pin layout: Linear pinning, User information and design recommendations for through hole reflow technology can be found under: Downloads



## Printed-circuit board connector - MCVR 1,5/ 7-STF-3,5 - 1863356

### Accessories

Feed-through header - MC 1,5/ 7-GF-3,5 THT-R56 - 1996919



PCB headers, number of positions: 7, pitch: 3.5 mm, color: black, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.4 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads