

# Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

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PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin




The figure shows a 10-position version of the product

## Your advantages

- Plug with inverted contact system (pin contact)
- Well-known connection principle allows worldwide use
- Easy PCB replacement thanks to plug-in modules
- Screwable flange for superior mechanical stability
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- Can be combined with the MSTB 2,5 range
- Low temperature rise, thanks to maximum contact force



## Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 049768
GTIN	4017918049768

## Technical data

### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	IC 2,5/..-STGF
Pitch	5.08 mm
Number of positions	12
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)

# Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

## Technical data

### Item properties

Screw thread	M3
Locking	Threaded flange
Number of levels	1
Number of connections	12
Number of potentials	12

### Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage	250 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	630 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV

### Connection capacity

Connection method	Screw connection with tension sleeve
pluggable	Yes
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 12
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Stripping length	7 mm
Torque	0.5 Nm ... 0.6 Nm

### Flange specifications

Type of locking	Screw locking
Mounting flange	Threaded 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	Tin-plated
Metal surface terminal point (top layer)	Tin (5 - 7 µm Sn)

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## Technical data

### Material data - contact

Metal surface terminal point (middle layer)	Nickel (2 - 3 µm Ni)
Metal surface contact area (top layer)	Tin (5 - 7 µm Sn)
Metal surface contact area (middle layer)	Nickel (2 - 3 µm Ni),

### 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
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

### Dimensions for the product

Length [ l ]	19.2 mm
Width [ w ]	71.08 mm
Height [ h ]	15 mm
Pitch	5.08 mm
Height (without solder pin)	15 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 – repeated connection and release	Test passed
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
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	2.5 mm <sup>2</sup> / solid / > 50 N
	2.5 mm <sup>2</sup> / flexible / > 50 N

### Mechanical tests according to standard

# Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

## Technical data

### Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	26 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)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	3.2 mm
Minimum creepage distance value (III/2)	3 mm
Minimum creepage distance value (II/2)	3.2 mm

### Current carrying capacity / derating curves

Caption	Type: FKC 2,5/..-STF-5,08 with IC 2,5/..-STGF-5,08
Specification	IEC 61984:2008-10
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 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>	1.5 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.6 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV

# Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

## Technical data

### Durability tests (B)

Insulation resistance, neighboring positions	> 0.6 TΩ
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### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Conductor cross section	2.5 mm <sup>2</sup>
Test current	12 A DC
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	4.8 kV
Power-frequency withstand voltage	2.21 kV

### Environmental and durability tests (E)

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

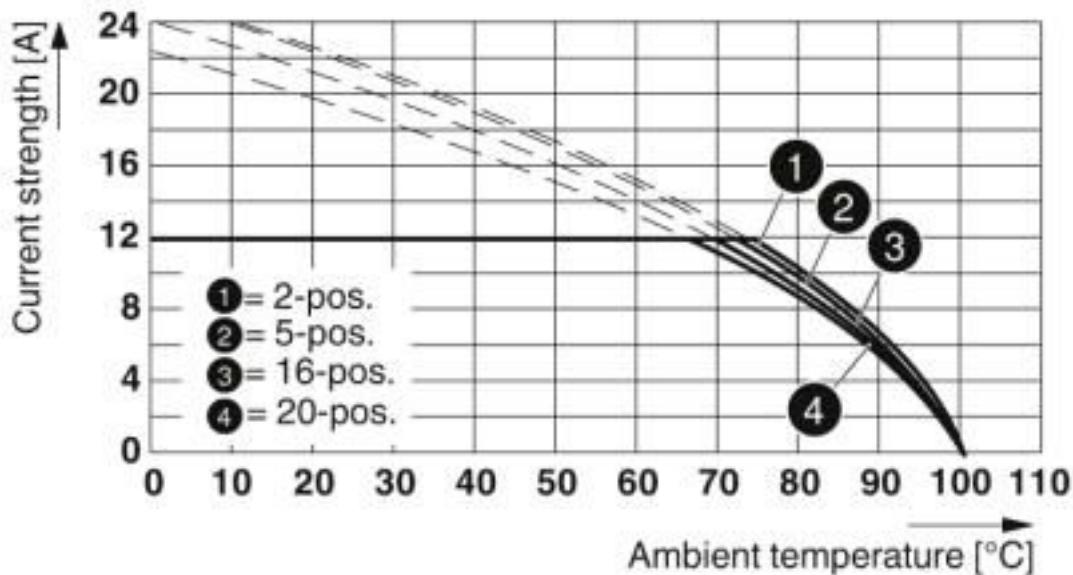
### Environmental Product Compliance

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

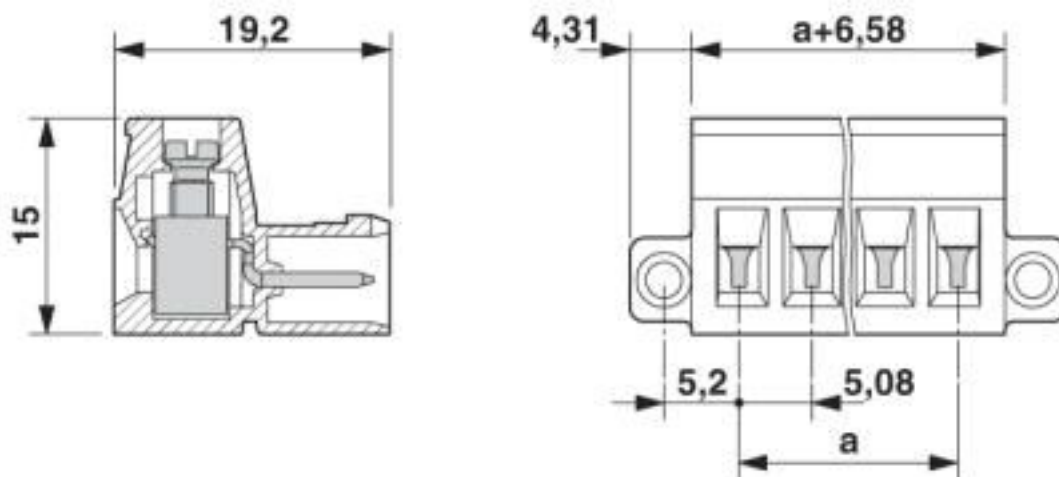
# Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

Diagram



Type: FKC 2,5/...-STF-5,08 with IC 2,5/...-STGF-5,08

Dimensional drawing



## 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

# Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

## Classifications

### eCl@ss

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

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### Approvals


CSA / IECCEB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

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### Ex Approvals

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### Approval details

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	

# Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

## Approvals

IECEE CB Scheme	<b>CB</b> scheme	<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60988-B1B2
Nominal voltage UN	250 V		
Nominal current IN	12 A		
mm <sup>2</sup> /AWG/kcmil	0.2-2.5		

EAC	<b>EAC</b>	B.01687
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cULus Recognized	<b>cULus</b>	<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>	E60425-19931014
	B	D	
Nominal voltage UN	250 V	300 V	
Nominal current IN	12 A	10 A	
mm <sup>2</sup> /AWG/kcmil	30-12	30-12	

VDE Zeichengenehmigung		<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>	40050694
Nominal voltage UN	250 V		
Nominal current IN	12 A		
mm <sup>2</sup> /AWG/kcmil	0.2-2.5		

## Accessories

### Accessories

#### Bridge

Insertion bridge - EBP 2- 5 - 1733169

Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch



### Cable housing



## Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

### Accessories

Cable housing - KGS-MSTB 2,5/12 - 1783818



Cable housing, pitch: 0 mm, number of positions: 12, dimension a: 60 mm, color: green

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### Coding element

Coding section - CR-MSTB - 1734401



Coding section, inserted into the recess in the header or the inverted plug, red insulating material

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### Filler plug

Accessories - MSTB-BL - 1755477



Keying cap, for forming sections, plugs onto header pin, green insulating material

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### Labeled terminal marker

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

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### Panel mounting frame

Accessories - IC-DFR 12 - 1852121



Panel mounting frame, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, color: green, This assembly frame can only be used in combination with IC 2,5/...-STGF-5,08

## Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

### Accessories

#### Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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### Additional products

Printed-circuit board connector - MSTB 2,5/12-STF-5,08 - 1778085



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - QC 1/12-STF-5,08 - 1883459



PCB connector, nominal current: 10 A, rated voltage (III/2): 630 V, nominal cross section: 1 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Displacement connection, color: green, contact surface: Tin

Printed-circuit board connector - MSTBC 2,5/12-STZF-5,08 - 1809831



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Crimp connection, color: green, Corresponding female crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte

Printed-circuit board connector - FRONT-MSTB 2,5/12-STF-5,08 - 1777895



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Front screw connection, color: green, contact surface: Tin

## Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

### Accessories

#### Printed-circuit board connector - FKCT 2,5/12-STF-5,08 - 1902408

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin



#### Printed-circuit board connector - FKCVR 2,5/12-STF-5,08 - 1874206

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin



#### Printed-circuit board connector - MSTBT 2,5/12-STF-5,08 - 1805398

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



#### Printed-circuit board connector - MVSTBR 2,5/12-STF-5,08 - 1835193

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



#### Printed-circuit board connector - MVSTBW 2,5/12-STF-5,08 - 1835009

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



## Printed-circuit board connector - IC 2,5/12-STGF-5,08 - 1825608

### Accessories

Printed-circuit board connector - FKCVW 2,5/12-STF-5,08 - 1873906



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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Printed-circuit board connector - FKC 2,5/12-STF-5,08 - 1873304



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 12, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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