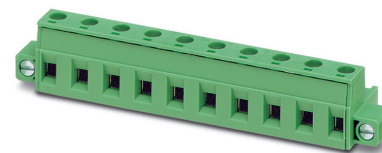


Order No.: 1858772

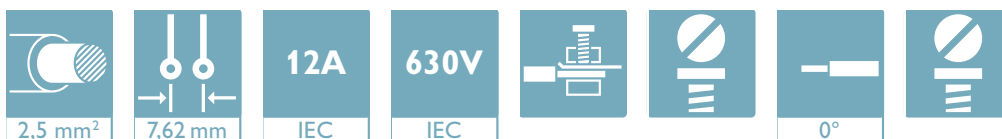
Type: GMSTB 2,5/ 3-STF-7,62

PCB connector, Screw connection with tension sleeve



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos. | 3 | • Nominal current | 12 A |
| • Conductor cross section | 2.5 mm ² | • Nominal voltage | 630 V |
| • Color | green (6021) | • Connection direction | 0 ° |
| • Pitch | 7.62 mm | • Type of packaging | packed in cardboard |
| • Connection method | Screw connection with tension sleeve | | |

2 Your advantages

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



Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1858772

3 Table of contents

1	Main features.....	1
2	Your advantages	1
3	Table of contents	2
4	3D model in PDF can be activated (Acrobat Reader only).....	3
5	General Technical Data	4
6	Mounting.....	5
7	Conductor connection	6
8	Material properties.....	7
9	Dimensions.....	8
10	Series drawing.....	9
11	Product notes	10
12	Packaging information	10
13	Application.....	10
14	General tests	11
15	Mechanical tests.....	11
16	Insertion and withdrawal forces	13
17	Electrical tests	14
18	Current carrying capacity/derating curves	15
19	Environmental and durability tests	16
20	Type approval and special tests	17
21	Classification for connectors.....	17
22	Approvals / Certificates.....	18
23	Commercial Data.....	19
24	corresponding headers.....	19
25	Accessories.....	19
26	Combination tests.....	20

1858772 GMSTB 2,5/ 3-STF-7,62

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



1858772 GMSTB 2,5/ 3-STF-7,62**5 General Technical Data****5.1 item properties**

Order No.	1858772
Type	GMSTB 2,5/ 3-STF-7,62
Connector system	CLASSIC COMBICON
Product type	PCB connector
Type of contact	Female connector
Range of articles	GMSTB 2,5/...-STF
Pitch	7.62 mm
Number of positions	3
Number of levels	1
Number of connections	3
Number of potentials	3
Connection method	Screw connection with tension sleeve
Screw thread	M3
Drive form screw head	Slotted (L)
Connection direction of the conductor to plug-in direction	0 °
Type	Standard

1858772 GMSTB 2,5/ 3-STF-7,62**6 Mounting****6.1 Flange mounting**

Type of locking	Screw locking
Mounting flange	Screw flange
Torque	0.3 Nm

1858772 GMSTB 2,5/ 3-STF-7,62**7 Conductor connection****7.1 Connection capacity**

Nominal cross section	2.5 mm ²
Conductor cross section, rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² ... 2.5 mm ²
2 conductors with same cross section, solid	0.2 mm ² ... 1 mm ²
2 conductors with same cross section, stranded	0.2 mm ² ... 1.5 mm ²
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm ² ... 1 mm ²
2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve	0.5 mm ² ... 1 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.4 mm / 2.5 mm
Stripping length	7 mm
Tightening torque	0.5 Nm ... 0.6 Nm

7.2 Connection capacity AWG

Conductor cross section AWG	24 ... 12
-----------------------------	-----------

1858772 GMSTB 2,5/ 3-STF-7,62**8 Material properties****8.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Terminal point surface	Tin (5 - 7 µm Sn)
Surface contact area	Tin (5 - 7 µm Sn)
Surface characteristics	hot-dip tin-plated

8.2 Material of plastic parts

	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

1858772 GMSTB 2,5/ 3-STF-7,62**9 Dimensions****9.1 Dimensions for the product**

Length		18.2 mm
Width		33.25 mm
Installed height		15 mm
Total height		15 mm

1858772 GMSTB 2,5/ 3-STF-7,62

10 Series drawing

pos.	dim. a	dim. b
2	7.62 ±0.15	25.63 ±0.20
3	15.24 ±0.15	33.25 ±0.20
4	22.86 ±0.20	40.87 ±0.20
5	30.48 ±0.20	48.49 ±0.20
6	38.10 ±0.20	56.11 ±0.25
7	45.72 ±0.20	63.73 ±0.25
8	53.34 ±0.25	71.35 ±0.25
9	60.96 ±0.25	78.97 ±0.25
10	68.58 ±0.25	86.59 ±0.40
11	76.20 ±0.25	94.21 ±0.40
12	83.82 ±0.40	101.83 ±0.40

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General Information
 - Simplified representation
 - Document excluded from change process
 - Linear dimensions (mm)

document-No. / RI	document-No. / Ri	date	scale
DIN A3	00900290 / 00	05.10.2015	1:2:1
document-type	TECDOC 2D-PRODUCTFAMILY		
description	GMSTB 2,5/...-STF-7,62		

page 1 | of 1

11 Product notes

11.1 General information

Notes on operation

In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.

12 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

13 Application

13.1 Temperature limit values

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)

1858772 GMSTB 2,5/ 3-STF-7,62**14 General tests****14.1 Specification**

Specification	IEC 61984
Specification	IEC 60999-1
Brief description	Printed-circuit board connector

15 Mechanical tests**15.1 Check for damage to conductor or loosening**

Result	Test passed
Specification	IEC 60999-1:1999-11

15.2 Pull-out test

Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm ² / solid / > 50 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm ² / flexible / > 50 N

15.3 Torque test

Specification	IEC 60999-1:1999-11
Result	Test passed

15.4 Visual examination

Specification	IEC 61984:2008-10
Visual examination	Test passed
Specification	IEC 60512-1-1:2002-02

15.5 Dimensional test

Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02

15.6 Resistance of marking

Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12

15.7 Polarization and coding

1858772 GMSTB 2,5/ 3-STF-7,62

Polarization when inserted
Requirement >20 N

Test passed

Specification

IEC 60512-13-5:2006-02

1858772 GMSTB 2,5/ 3-STF-7,62**16 Insertion and withdrawal forces**

Insertion and withdrawal force	
Specification	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

1858772 GMSTB 2,5/ 3-STF-7,62**17 Electrical tests**

Rated current / conductor cross section	12 A / 2.5 mm ²
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Contact resistance	2.4 mΩ
Degree of pollution	2

17.1 Air and creepage distances

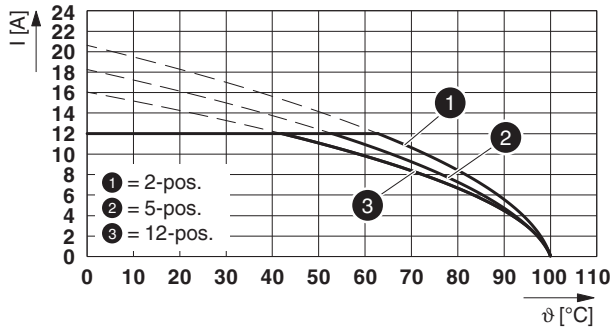
Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	400 V	630 V	1000 V
Rated surge voltage	6 kV	6 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	5.5 mm	5.5 mm	5.5 mm
Minimum value of the creepage path requirement in acc. with table	5 mm	3.2 mm	5 mm

1858772 GMSTB 2,5/ 3-STF-7,62

18 Current carrying capacity/derating curves

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Note	For number of positions, see diagram
Reduction factor	0.8
Conductor cross section	2.5 mm ²

Type: GMSTB 2,5/...-STF-7,62 with GMBSTBV 2,5/...-GF-7,62



1858772 GMSTB 2,5/ 3-STF-7,62**19 Environmental and durability tests****19.1 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
Test directions	X-, Y- and Z-axis
Note	

19.2 Insulation resistance






Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 5 MΩ

1858772 GMSTB 2,5/ 3-STF-7,62**20 Type approval and special tests****21 Classification for connectors**

Specification	IEC 61984:2008-10
Main features	Connectors without switching capacity (COC)
Construction form	Fixed connectors
Strain relief elements	without strain relief
Connection method	Can be reconnected
Protection against electric shock	Not encapsulated - touch-proof when inserted
Protective conductor	without PE
Lock	no
Connection method	Screw terminal points

1858772 GMSTB 2,5/ 3-STF-7,62

22 Approvals / Certificates

IECEE CB Scheme 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
	400 V	12 A	-	0.2 - 2.5
EAC 				
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
Usegroup B	300 V	15 A	30 - 12	-
Usegroup D	300 V	10 A	30 - 12	-
VDE Zeichengenehmigung 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
	400 V	12 A	-	0.2 - 2.5
VDE Zeichengenehmigung 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
	400 V	12 A	-	0.2 - 2.5

1858772 GMSTB 2,5/ 3-STF-7,62**23 Commercial Data**

Order No.	1858772
Type	GMSTB 2,5/ 3-STF-7,62
Pieces per package	50
Net weight	6.476 g
GTIN	4017918105846
	Information that applies locally, see link on page 1
	Information that applies locally, see link on page 1

24 corresponding headers

Order No.	Type
1806232	GMSTB 2,5/ 3-GF-7,62
1829167	GMSTBV 2,5/ 3-GF-7,62

25 Accessories

Description	Order No.	Type
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB
	0804549	SK 7,62/3,8:FORTL.ZAHLEN
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	1205053	SZS 0,6X3,5
	1948048	EB 2-CC 7,5
	1803882	KGG-MSTB 2,5/ 4

1858772 GMSTB 2,5/ 3-STF-7,62

26 Combination tests

**GMSTB 2,5/...-STF**

IEC 61984

Mechanical tests (A)

Insertion/withdrawal force per position

Polarization when inserted
Requirement >20 NContact holder in insert
Requirements >20 N**Durability tests (B)**Contact resistance R₁ 1st levelContact resistance R₁ 2nd level

Insertion/withdrawal cycles

Contact resistance R₂Rated impulse voltage at sea level
Voltage waveform ≥ (1.2/50 μs)Power-frequency withstand voltage
Voltage waveform ≥ (50/60 Hz)**Thermal tests (C)**

Tested number of positions

Tested conductor cross section

Test current

Upper limiting temperature
Requirements < 100°C**Climatic tests (D)**

Test sequence 1: low temperature storage

Test sequence 2: heat storage

Test sequence 3: noxious gas storage
(ISO 6988)Rated impulse voltage at sea level
Voltage waveform ≥ (1.2/50 μs)Power-frequency withstand voltage
Voltage waveform ≥ (50/60 Hz)**Environmental and endurance tests (E)**

Specification

Degree of protection

GMSTBV 2,5/...-GF

IEC 61984

approx. 8 N / 6 N

Test passed

Test passed

2.4 mΩ

25

2.5 mΩ

7.3 kV

3.31 kV

12

2.5 mm²

12 A

Test passed

-40 °C/2 h

100 °C/168 h

KFW 0.2 S/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

IP20