

# Panel feed-through terminal block - TW 50/ 5-CL - 1708749

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Panel feed-through terminal block, connection method: T-LOX knee lever connection, Cable lug connection, number of positions: 5, load current: 150 A, cross section: 10 mm<sup>2</sup> - 50 mm<sup>2</sup>, connection direction of the conductor to plug-in direction: 0 °, width: 118 mm, color: gray

## Your advantages

- Lever actuation enables time-saving and smooth connection of large conductors
- Defined contact force ensures that contact remains stable over the long term
- 90° open clamping space allows the conductor to be conveniently swiveled
- Quick, tool-free mounting on the housing wall using a fixing wedge



## Key Commercial Data

Packing unit	5 pc
Minimum order quantity	5 pc
GTIN	
GTIN	4055626020358

## Technical data

### Item properties

Brief article description	Panel feed-through terminal block
Range of articles	TW 50/..-CL
Number of positions	5
Connection method	T-LOX knee lever connection
Number of connections	10
Number of potentials	5

### Electrical parameters

Nominal current	150 A
Nom. voltage	1000 V
Rated voltage	1000 V

# Panel feed-through terminal block - TW 50/ 5-CL - 1708749

## Technical data

### Connection capacity, external

Connection method	T-LOX knee lever connection
Connection direction of the conductor to plug-in direction	0 °
Conductor cross section solid	10 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross section flexible	16 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	10 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	10 mm <sup>2</sup> ... 50 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	6 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Stripping length	20 mm (10 mm <sup>2</sup> to 25 mm <sup>2</sup> = 18 mm, 35 mm <sup>2</sup> to 50 mm <sup>2</sup> = 20 mm)

### Connection capacity, internal

Connection method	Cable lug connection
Connection direction of the conductor to plug-in direction	0 °
Cable lug connection according to standard	DIN 46234:1980-03 10 mm <sup>2</sup> 50 mm <sup>2</sup> 6.5 mm 18 mm M6 6 Nm 8 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

### Material data - housing

Housing color	gray (7042)
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

Width [ w ]	118 mm
Pitch	20 mm

### Dimensions for mounting cutout

Caption	Dimension a = 109 mm
Plate thickness	1 mm ... 5 mm

### Packaging information

Pieces per package	5
Denomination packing units	Pcs.

### General product information

Type of note	Notes on safety
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## Technical data

### General product information

Note	The cable entry funnel is not touch-proof. Never connect or disconnect the terminal when it is energized. Take appropriate steps to ensure touch proofness.
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### Ambient conditions

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

### Termination and connection method

Test for conductor damage and slackening	IEC 60947-7-1:2009-04
	Test passed

### Pull-out test

Pull-out test	DIN EN 60947-7-1 (VDE 0611-1):2010-03
	Test passed
Conductor cross section / conductor type / tensile force	10 mm <sup>2</sup> / solid / > 90 N
	10 mm <sup>2</sup> / flexible / > 90 N
	50 mm <sup>2</sup> / solid / > 236 N
	50 mm <sup>2</sup> / flexible / > 236 N
	6 mm <sup>2</sup> / flexible with ferrule / > 80 N
	16 mm <sup>2</sup> / flexible with ferrule / > 100 N

### Mechanical tests according to standard

Test specification	IEC 60947-7-1 (following)
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### Electrical tests

Rated current	150 A
Conductor cross section	50 mm <sup>2</sup>

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60947-1:2007-06 + A1:2010-12
Specification	IEC 60947-1:2007-06 + A1:2010-12
Minimum clearance - inhomogeneous field (III/3)	8 mm
Minimum clearance - inhomogeneous field (III/2)	8 mm
Minimum clearance - inhomogeneous field (II/2)	5.5 mm
Minimum creepage distance value (III/3)	12.5 mm
Minimum creepage distance value (III/2)	8 mm
Minimum creepage distance value (II/2)	5.5 mm

### Temperature-rise test

Specification	IEC 60947-7-1:2009-04 (following)
Result	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K

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## Technical data

### Current carrying capacity / derating curves

Caption	Type: TW 50/...-CL
Specification	IEC 60947-7-1:2009-04
Number of positions	5
Reduction factor	1
Note	Representation based on IEC 60512-5-2:2002-02

### Standards and Regulations

Flammability rating according to UL 94	V0
Safety note	<ul style="list-style-type: none"> <li>• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li> </ul>
	<ul style="list-style-type: none"> <li>• The installation notes/Design In documents online on the download page at phoenixcontact.com/products must be observed for this product.</li> </ul>
	<ul style="list-style-type: none"> <li>• The cable entry funnel is not safe to touch. Never connect or disconnect the terminal when it is energized. Take appropriate steps to ensure touch protection.</li> </ul>

### 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

### Glow-wire test

Specification	IEC 60695-2-11:2000-10
Result	Test passed
Temperature	960 °C
Time of exposure	30 s

### Needle flame test

Specification	DIN EN 60695-11-5 (VDE 0471-11-5):2005-11
Result	Test passed
Time of exposure	10 s

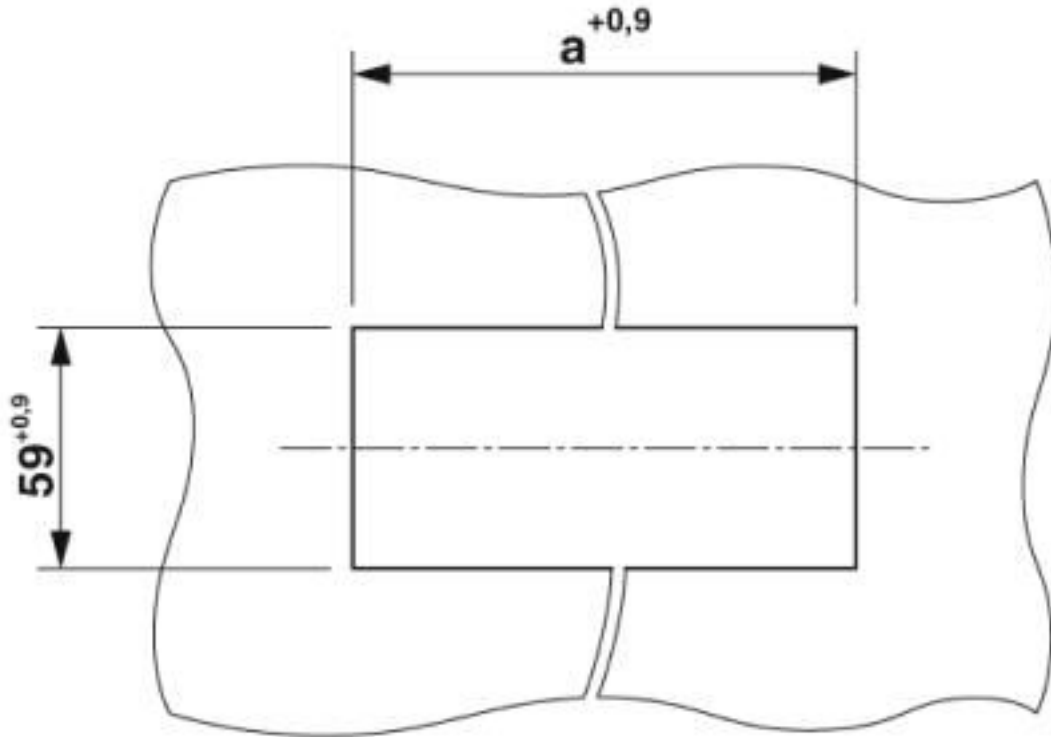
### Environmental Product Compliance

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

## Drawings

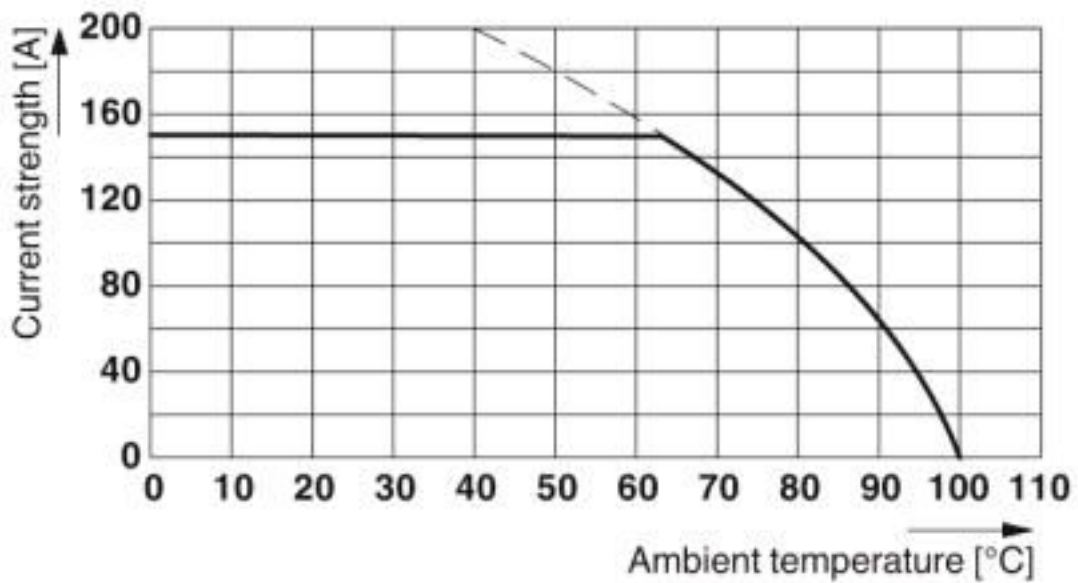
# Panel feed-through terminal block - TW 50/ 5-CL - 1708749

Drilling diagram



Dimension a = 109 mm

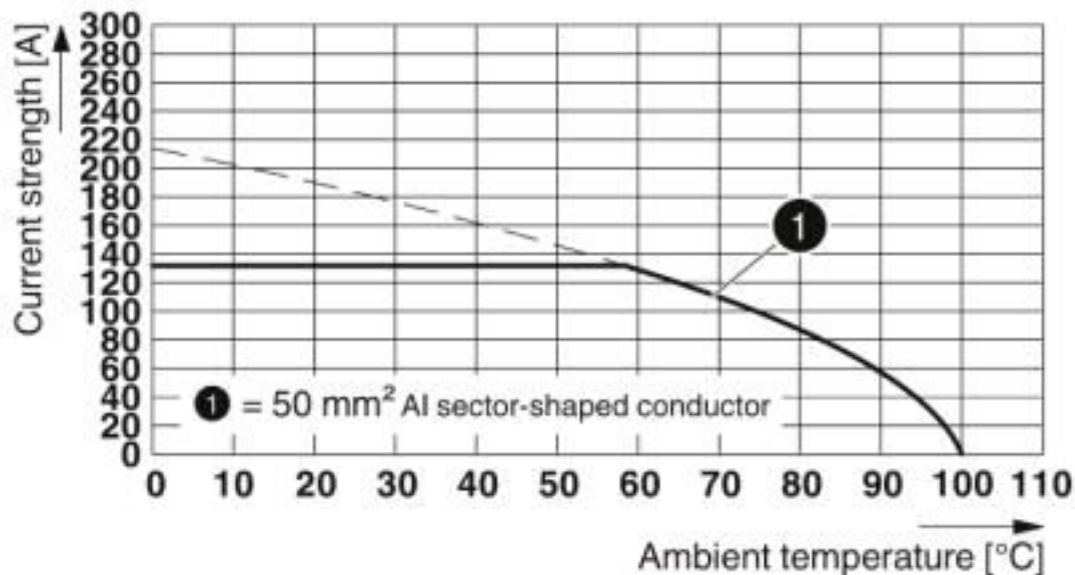
Diagram



Type: TW 50/...-CL

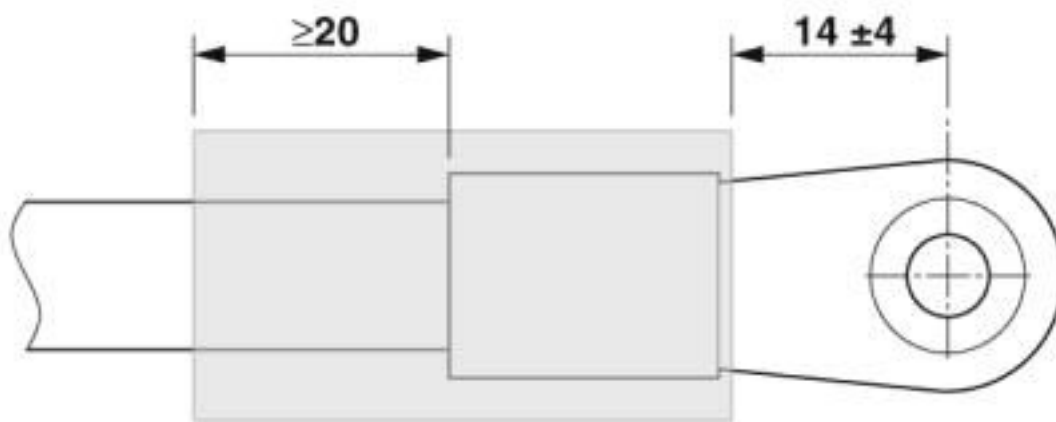
# Panel feed-through terminal block - TW 50/ 5-CL - 1708749

Diagram



Type: TW 50/...-CL

Dimensional drawing



Electric strength > 19.7 kV/mm (IEC243), min. Wall thickness, fully shrunk ≥ 0.5 mm

## Classifications

eCl@ss

eCl@ss 10.0.1	27141134
eCl@ss 5.0	27141100
eCl@ss 5.1	27141100
eCl@ss 6.0	27141100
eCl@ss 7.0	27141134
eCl@ss 8.0	27141134

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## Classifications

### eCl@ss

eCl@ss 9.0	27141134
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### ETIM

ETIM 5.0	EC001283
ETIM 6.0	EC001283
ETIM 7.0	EC001283

### UNSPSC

UNSPSC 13.2	39121410
UNSPSC 18.0	39121410
UNSPSC 19.0	39121410
UNSPSC 20.0	39121410
UNSPSC 21.0	39121410

## Approvals


### Approvals

#### Approvals

VDE Zeichengenehmigung / EAC / cULus Recognized

#### Ex Approvals

### Approval details

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>	40045667
Nominal voltage UN	1000 V		
Nominal current IN	150 A		
mm <sup>2</sup> /AWG/kcmil	10-50		

EAC		B.01687
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## Approvals

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>	E60425-20160914
		C	
Nominal voltage UN	600 V		
Nominal current IN	150 A		
mm²/AWG/kcmil	8		

## Accessories

### Accessories

#### Crimping tool

Crimping pliers - CRIMPFOX 25R - 1212039



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 10 mm² ... 25 mm², lateral entry, WM crimp

Crimping pliers - CRIMPFOX 50R - 1212041



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 35 mm² ... 50 mm², lateral entry, WM crimp

#### Labeled terminal marker

Zack Marker strip, flat - ZBF 15 CUS - 0825019



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 15 mm, lettering field size: 5.15 x 15.1 mm, Number of individual labels: 5

Zack marker strip - ZB 15,LGS:L1-N,PE - 0811998



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5



## Panel feed-through terminal block - TW 50/ 5-CL - 1708749

### Accessories

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#### Zack marker strip - ZB 15 CUS - 0824945



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

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#### Screwdriver tools

#### Philips screwdriver - SZK PZ2 VDE - 1206463



Screwdriver, PZ crosshead, VDE insulated, size: PZ 2 x 100 mm, 2-component grip, with non-slip grip

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#### Terminal marking

#### Zack Marker strip, flat - ZBF 15:UNBEDRUCKT - 0811202



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 15 mm, lettering field size: 15 x 5.2 mm, Number of individual labels: 5

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#### Zack marker strip - ZB 15:UNBEDRUCKT - 0811972



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

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[15602-04-08-21](#) [BA311TU](#) [BA411SU](#) [MV-152](#) [MV-252-D](#) [MV-253/NCNOC](#) [MV-254-D](#) [MV-255](#) [MV-462](#) [MV-493](#) [MVE-252](#) [MVE-253](#)  
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