

TW 50/ 1-CL - Panel feed-through terminal block



1708744

<https://www.phoenixcontact.com/us/products/1708744>

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Panel feed-through terminal block, connection method: T-LOX knee lever connection, Cable lug connection, number of positions: 1, load current: 150 A, cross section: 10 mm² - 50 mm², connection direction of the conductor to plug-in direction: 0 °, width: 38 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

Commercial data

Item number	1708744
Packing unit	10 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AA28
Product key	AA1FFA
GTIN	4055626020310
Weight per piece (including packing)	168 g
Weight per piece (excluding packing)	151.6 g
Customs tariff number	85369010
Country of origin	PL

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Technical data

Product properties

Product type	Panel feed-through terminal block
Product family	TW 50/..-CL
Number of positions	1
Pitch	20 mm
Number of connections	2
Number of rows	1
Number of potentials	1

Electrical properties

Properties

Nominal current I_N	150 A
Nominal voltage U_N	1000 V
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

Connection data

Connection technology

Connector system	TW 50
Nominal cross section	50 mm ²

Conductor connection exterior

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

Conductor connection interior

Connection method	Cable lug connection
Connection direction of the conductor to plug-in direction	0 °

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Mounting

Panel thickness	1 mm...5 mm
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Material specifications

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	
Color (Housing)	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

Notes

Safety note	
Safety note	<ul style="list-style-type: none">Only electrically qualified personnel may install and operate the product.To recognize and prevent danger, the qualified personnel must be familiar with the basics of electrical engineering.Observe the technical data provided here and refer to the documents listed under "Downloads". The download area contains important information, such as installation notes, technical drawings, and 3D data.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.

Dimensions

Dimensional drawing	
Pitch	20 mm
Width [w]	38 mm

External dimensions	
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Width [w]	38 mm
Height [h1]	73.5 mm
Length [l1]	46 mm

Internal dimensions

Width [w]	38 mm
Height [h2]	58.16 mm
Length [l2]	58.1 mm

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60947-7-1:2009-04
Result	Test passed

Pull-out test

Specification	IEC 60947-7-1:2009-04
Conductor cross-section/conductor type/tractive force setpoint/actual value	10 mm ² / solid / > 90 N
	10 mm ² / flexible / > 90 N
	50 mm ² / solid / > 236 N
	50 mm ² / flexible / > 236 N
	6 mm ² / flexible with ferrule / > 80 N
	16 mm ² / flexible with ferrule / > 100 N

Electrical tests

Temperature-rise test

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

Short-time withstand current

Specification	IEC 60947-7-1:2009-04
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Air clearances and creepage distances | 1. Insulation coordination

Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

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1708744

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minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

Environmental and real-life conditions

Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Glow-wire test

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

Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
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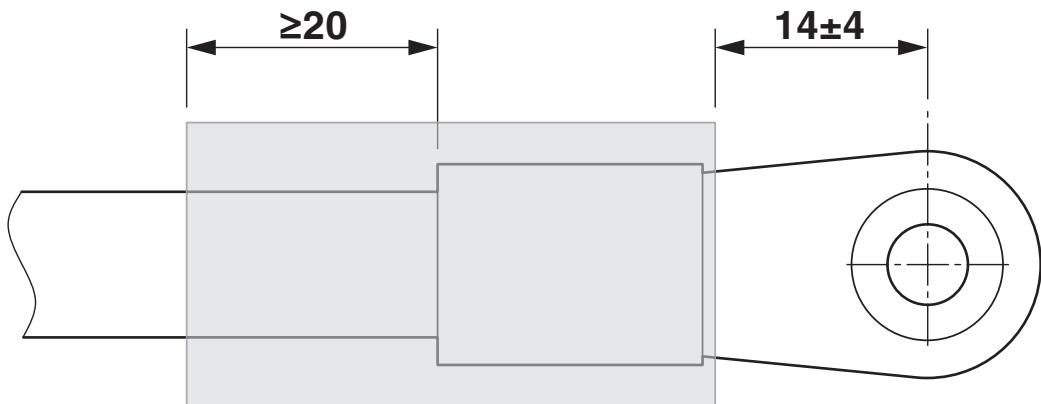


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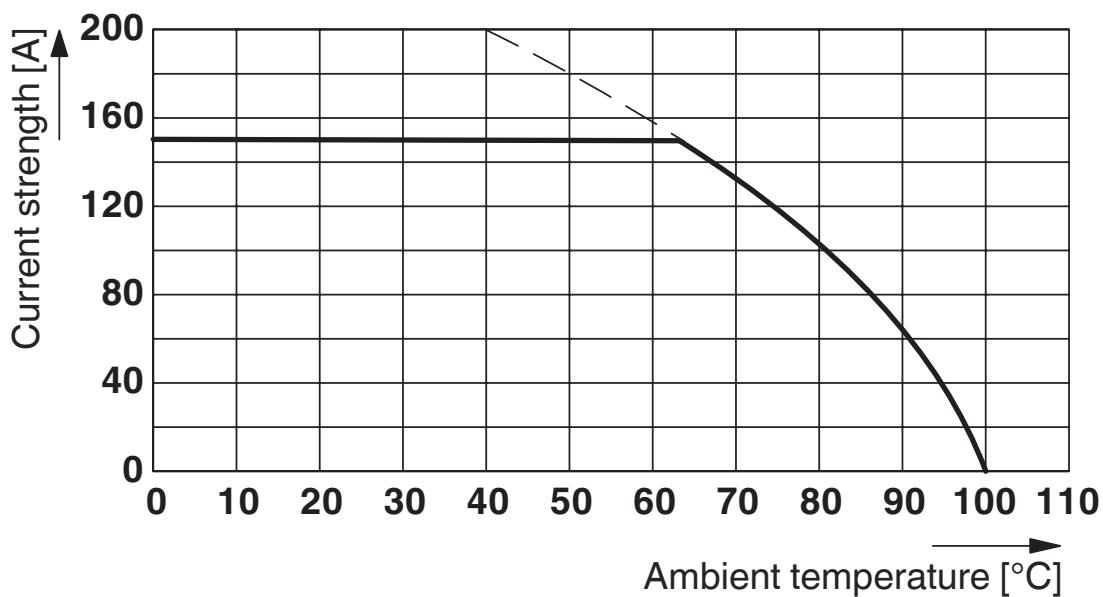
Drawings

Dimensional drawing



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

Diagram



Type: TW 50/...-CL

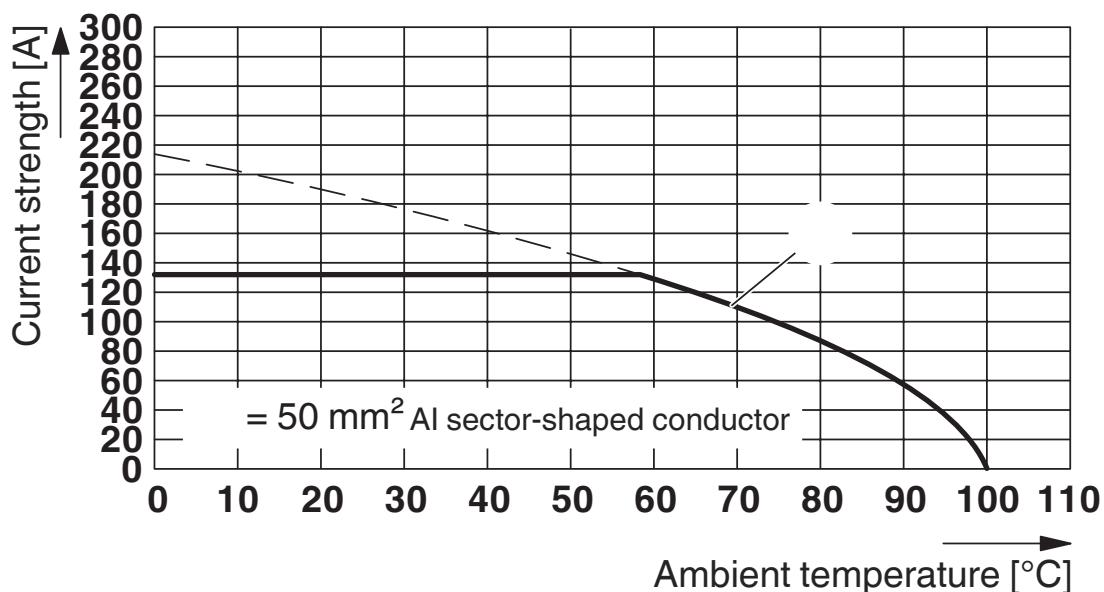
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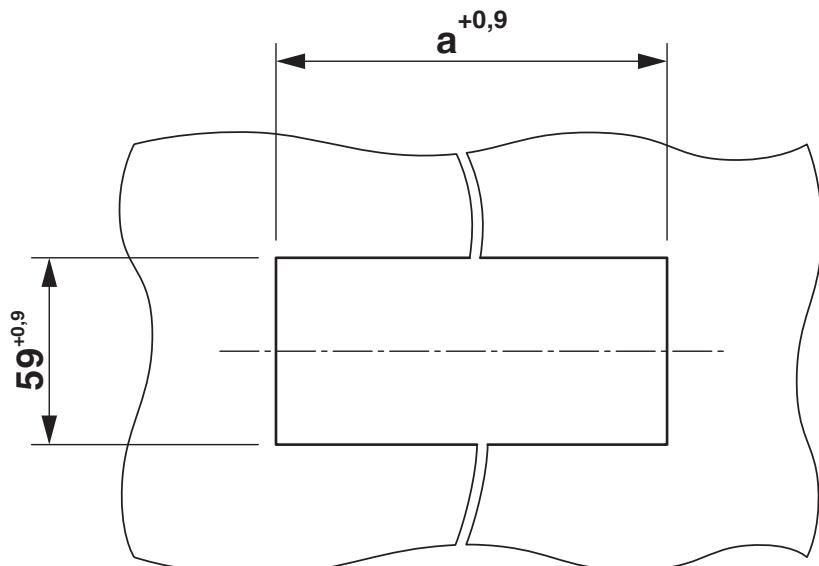
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Diagram



Type: TW 50/...-CL

Drilling plan/solder pad geometry



Dimension a = 29 mm

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1708744>

cULus Recognized				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
C	600 V	150 A	8 - 1/0	-

VDE approval of drawings				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine	1000 V	150 A	-	10 - 50

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Classifications

ECLASS

ECLASS-13.0	27141134
ECLASS-15.0	27141134

ETIM

ETIM 9.0	EC001283
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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Phoenix Contact USA

586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com