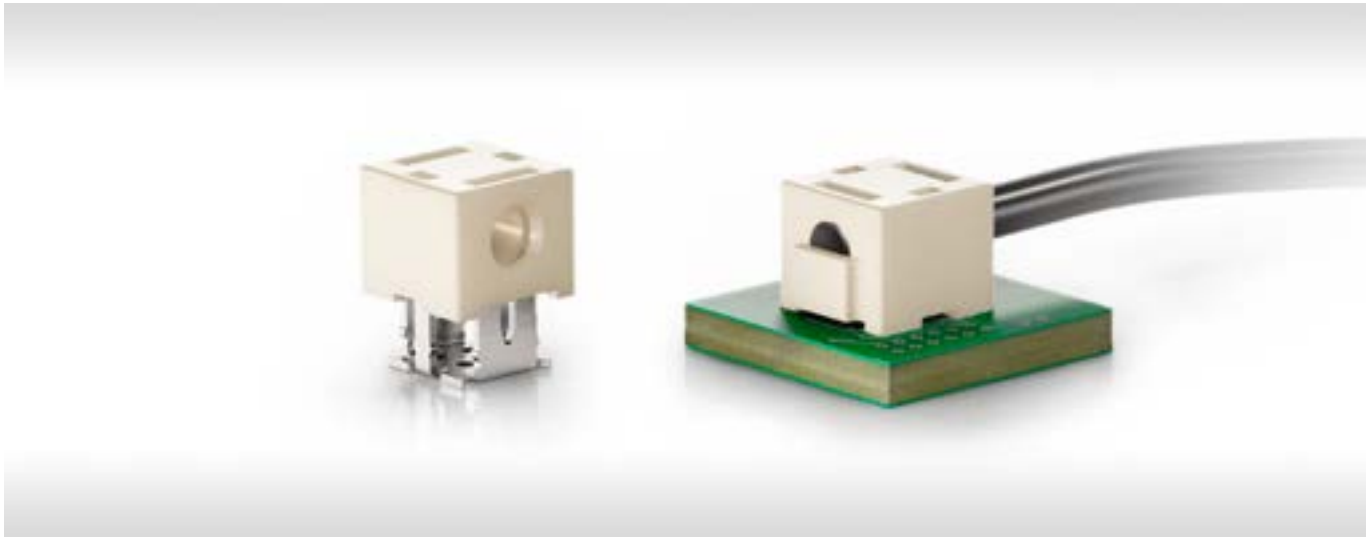
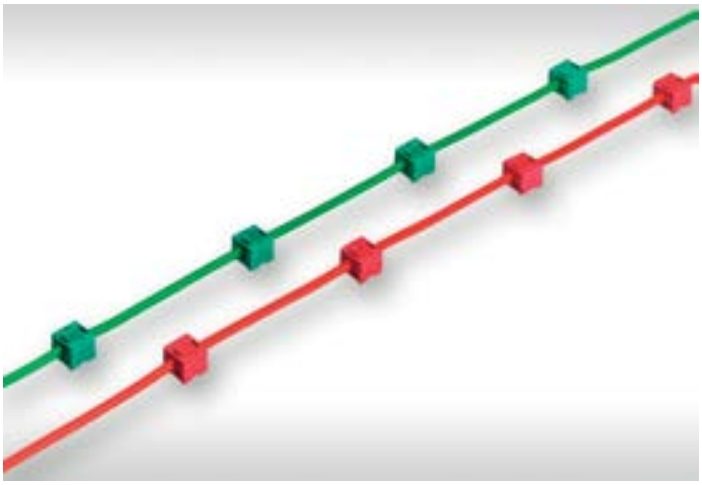
IDC TERMINAL

Wire-to-Board Solution







IDC TERMINAL - WIRE-TO-BOARD SOLUTION

The very compact IDC terminals enable highly reliable wire-to-board connections in extremely miniaturized applications such as retrofit LED lamps, medical equipment, mobile devices or smart metering equipment.

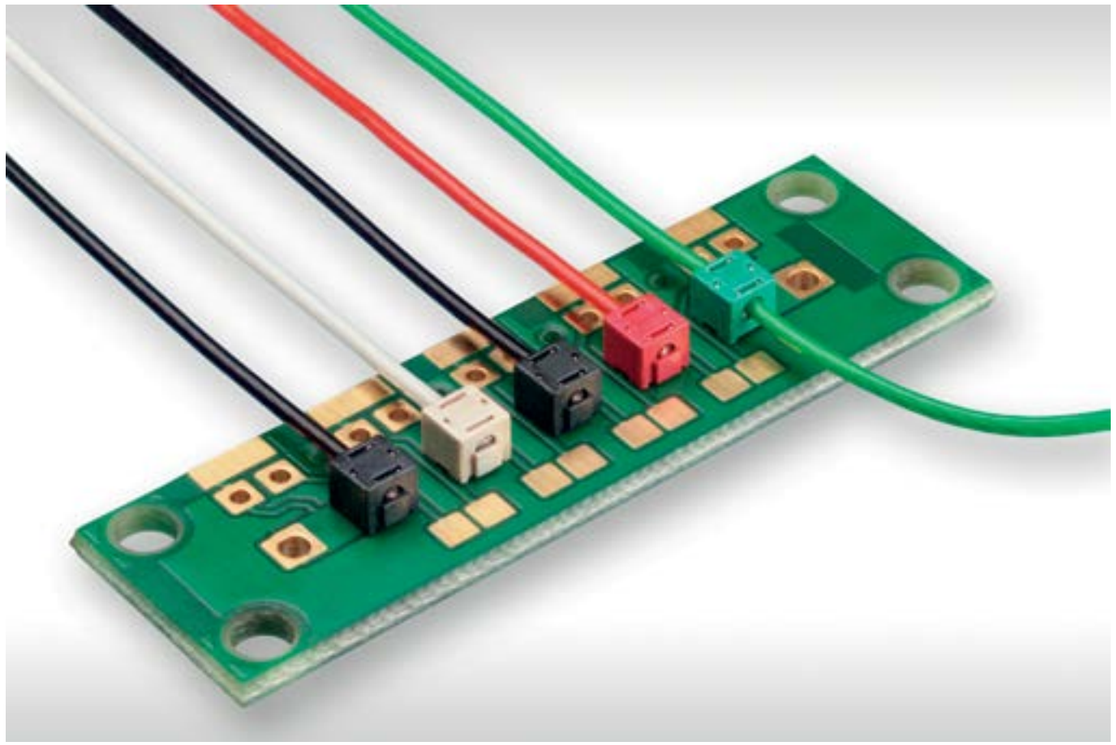
The Surface Mount Technology (SMT) IDC terminals facilitate automated board assembly and significantly reduce the preparation (stripping) of wires prior to termination due to its IDC contacts. As a result, costly and unreliable hand soldering can be virtually avoided as the discrete wires can be processed reliably and reproducibly.

IDC terminals are available for stranded and solid wires of different cross-sections and outer diameters (AWG 22 / 24 / 26). With its compact dimensions, the IDC terminals can support a current carrying capacity of up to 17 A (@ 20 °C for AWG 22/7).

Versions with closed end (wire stop) or feed-through (daisy chain capability) are available. Different colours support visual assignment of the discrete wires.

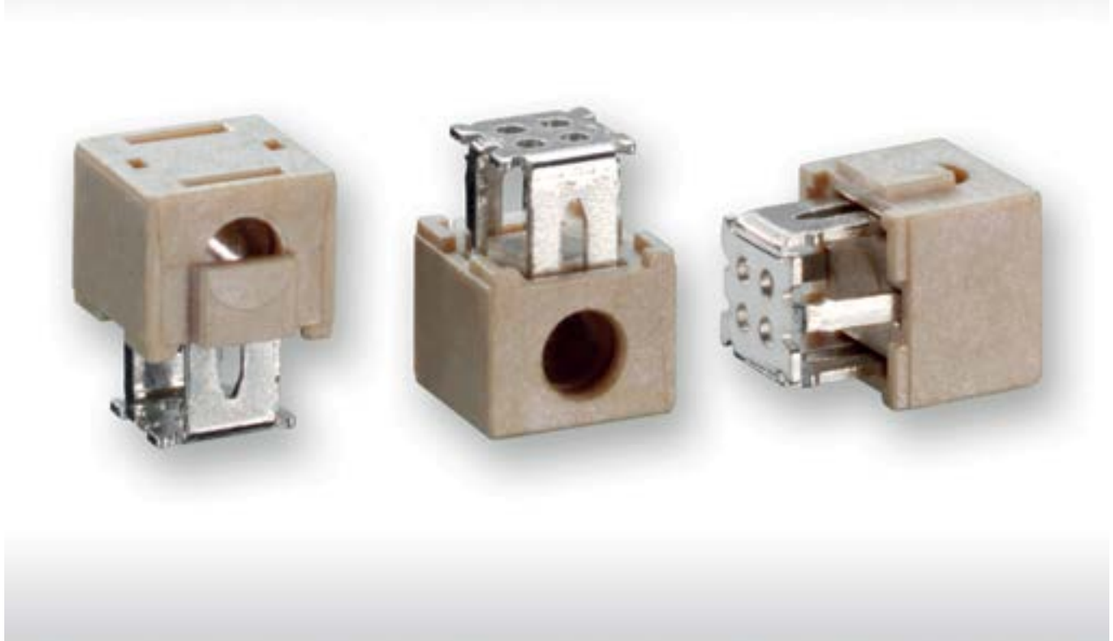
The IDC terminals are designed for one-time termination, its cap guides the wire into the contact element whilst also serving as a strain relief mechanism. Guiding latches on the contact element enable correct connection whilst detents help to ensure a secure hold.

ERNI IDC terminals: Small | Flexible | Cost-Effective



FEATURES

Category	Wire-to-board connectors
Termination height	2 mm / 2.8 mm
Current rate	Up to 17.5 A at 20 °C
Cables	Stranded wires: AWG 22/7, AWG 24/7, AWG 26/7 Solid wires: AWG 24/1
Features	Ultra-low profile, microminiature Printed Circuit Board (PCB) layout Two dual IDC contacts Wire stop feature and feed-though versions Extended temperature range from -55 to +150°C User-friendly wire termination
Benefits	Cost-effective and highly reliable Automated board assembly Eliminates preparation (stripping) or wires prior to termination



ELECTRICAL AND MECHANICAL CHARACTERISTICS

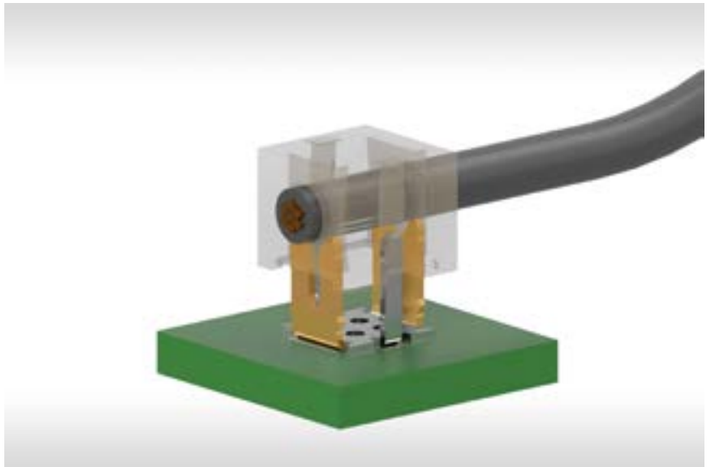
Technical Data

Description	Standard	IDC Terminal AWG 24/1	IDC Terminal AWG 24/7 - 26/7	IDC Terminal AWG 22/7
Climate category	DIN EN 60068-1 test b	-55/150/56		
Temperature range		-55/+150 °C		
Current rating		6 A at 20 °C	14 A at 20°C	17.5 A at 20 °C
Operating voltage	IEC 60664	The permissible operating voltages depend on the customer application and on the applicable or specified safety require-ments. Insulation coordination according to IEC 60664-1 has to be regarded for the complete electrical device. Therefore, the maximum creepage and clearance distances of the connectors are specified for consideration as a part of the whole current path. In practice, reductions in creepage or clearance distances may occur due to the conductive pattern of the printed board or the wiring used, and have to be taken into account separately. As a result the creepage and clearance distances for the application may be reduced compared to those of the connector.		
Contact resistance	IEC 60512 test 2a	< 10 mΩ		
Vibration, sinusoidal	IEC 60512 test 6d	10 – 2000 Hz 20 g		
Contact disturbance (while vibration test)	IEC 60512 test 2e	< 1 µs		
Bending of wire	IEC 60352-4 clause 12.2.1	5 N 10 cycles	2 N (AWG 24) 1 N (AWG 26) 10 cycles	9.4 N 10 cycles
Contact disturbance (while bending test)	IEC 60512 test 2e	< 1 µs		
Process conditions				
Reflow soldering temperature max.	JEDEC J-STD-020	30 s at 260 °C		
Typical press-in force ø		55 N	80 N (AWG 26)	89 N
Reusability		one-time termination		

ELECTRICAL AND MECHANICAL CHARACTERISTICS

Technical Data

Description	Standard	IDC Terminal AWG 24/1	IDC Terminal AWG 24/7 - 26/7	IDC Terminal AWG 22/7
Housing material				
Insulation body		LCP		
CTI value		175		
UL flame rating		UL 94 V-0		
UL file plastic material		E83005		
MSL	JEDEC J-STD-020	Level 1		
Contact material				
Base material		Cu alloy		
Contact plating		Sn		
Environmental compatibility				
Recycling		no flame-retardant additives, no toxic additives allow easy recycling		
Product approval				
UL/CSA		E84703		



- Two dual IDC contacts ffor excellent connection
- Parallel guiding for more durable and more secure wire assembly

CHARACTERISTICS

Technical Data: Solid Wire AWG 24/1

Description	Solid wire AWG 24/1
Recommended wire	Young Chang Silicone Co. Ltd.: STW-B, STW-F
Wire construction	Solid wire
Wire cross-section	AWG 24
Conductor diameter	0.5 mm
Outer diameter	0.7 mm ±0.025 mm
Insulation	PE/PA
Temperature range	STW-B: +130 °C STW-F: +150 °C

Technical Data: Stranded Wire AWG 24/7 - AWG 26/7

Description	Stranded wire AWG 24/7	Stranded wire AWG 26/7
Recommended wire	Leoni: Mocar® 150 A	Leoni: Mocar® 150 A
Wire construction	Stranded wire 7x0.2	Stranded wire 7x0.17
Wire cross-section	AWG 24	AWG 26
Conductor diameter	0.6 mm	0.5 mm
Outer diameter	1.0 mm ±0.05 mm	1.03 mm ±0.03 mm
Insulation	TPE-E	TPE-E
Temperature range	-55 °C to +150 °C	-55 °C to +150 °C

Technical Data: Stranded Wire AWG 22/7

Description	Stranded wire AWG 22/7
Recommended wire	Gebauer & Griller: FLR13Y 0,35-A Leoni: Mocar® 150 A
Wire construction	Stranded wire 7/0.26
Wire cross-section	AWG 22
Conductor diameter	0.8 mm
Outer diameter	1.3 mm -0.1 mm
Insulation	TPE-E
Temperature range	-40 °C to +150 °C (3000 h) -40 °C to +180 °C (48 h)

CHARACTERISTICS

Discrete Wire-to-Board Application

As shipped



Wire stripping not necessary



Insert wire



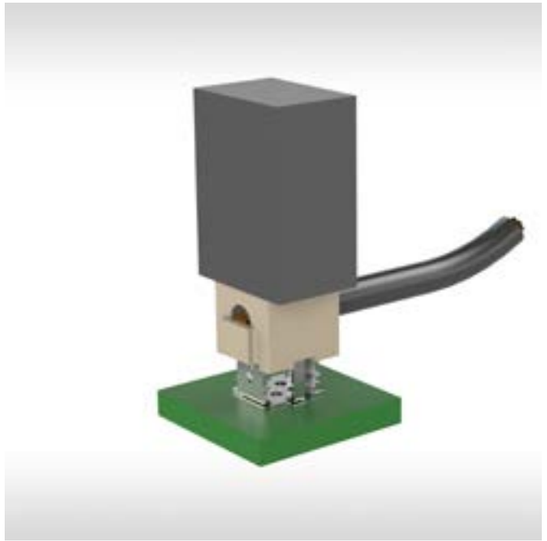
Terminated wire



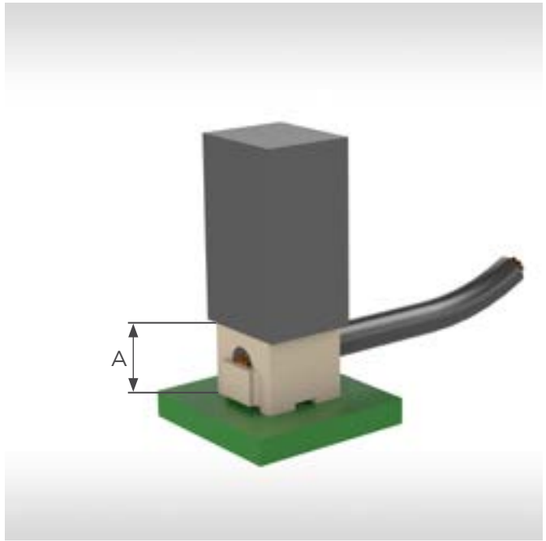
PROCESSING

Wire Termination

Easy termination using a flat press tool;
no specific tool required



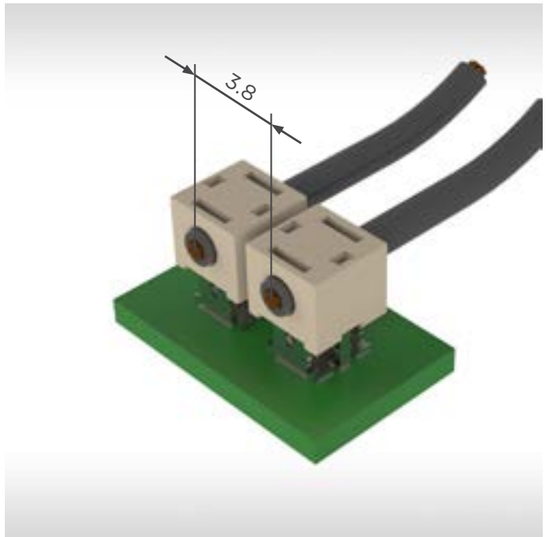
Press down the terminal cap to dimension A
(refer to product drawing)



Usage of Multiple Terminals on Minimal Board Space

Example:
Center to center distance: 3.8 mm

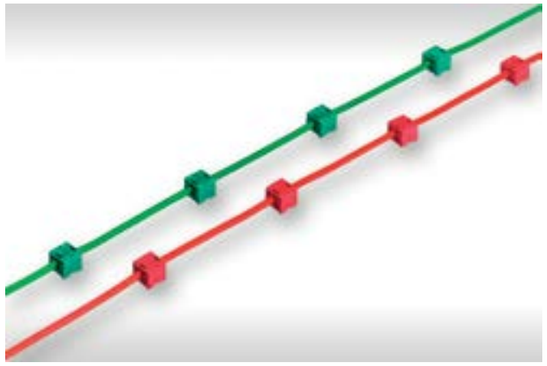
- minimum creepage and clearance: 1 mm
- space between terminals ca. 0.5 mm
- possible operating voltage ca. 250 V
  (depending on pollution degree)



APPLICATIONS

Solid-State Lighting | Medical | Mobile Applications

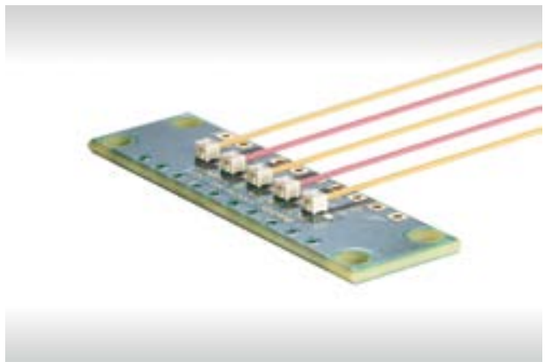












IDC-TERMINAL FOR SOLID WIRE AWG 24/1

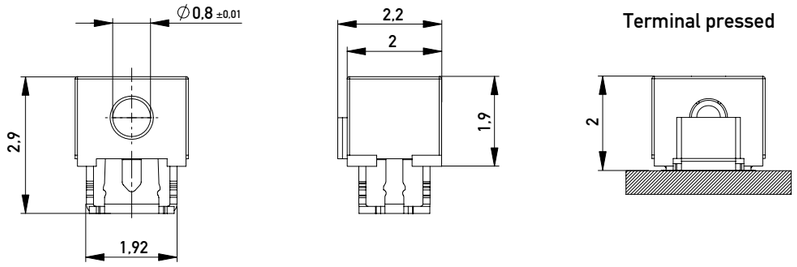
Product Specification

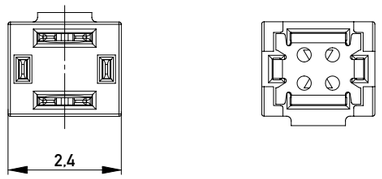
- Reliable contact due to gas tight connection of 2 dual IDC contacts
- Minimal PCB space required
- Versions with wire stop or feed-through available
- No special tool required for termination
- Automated pick & place assembly
- Current carrying capacity: up to 6 A at 20 °C
- for available part numbers please refer to our website



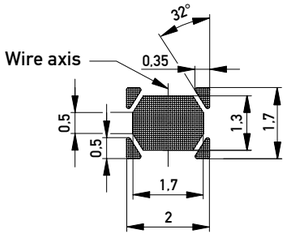
Dimensional Drawings

With wire stop





Recommended Layout



All dimensions in mm

IDC-TERMINAL FOR STRANDED WIRE AWG 24/7 - 26/7

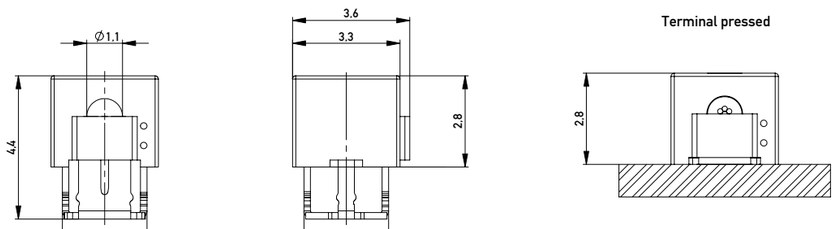
Product Specification

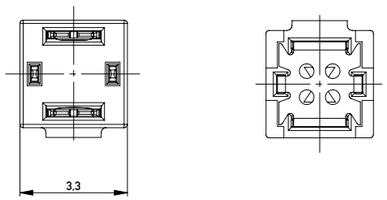
- Reliable contact due to gas tight connection of 2 dual IDC contacts
- Minimal PCB space required
- Versions with wire stop or feed-through available
- No special tool required for termination
- Automated pick & place assembly
- Current carrying capacity: up to 14 A at 20 °C
- for available part numbers please refer to our website



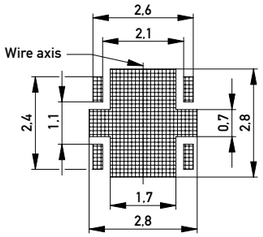
Dimensional Drawings

With wire stop





Recommended Layout



All dimensions in mm

IDC-TERMINAL FOR STRANDED WIRE AWG 22/7

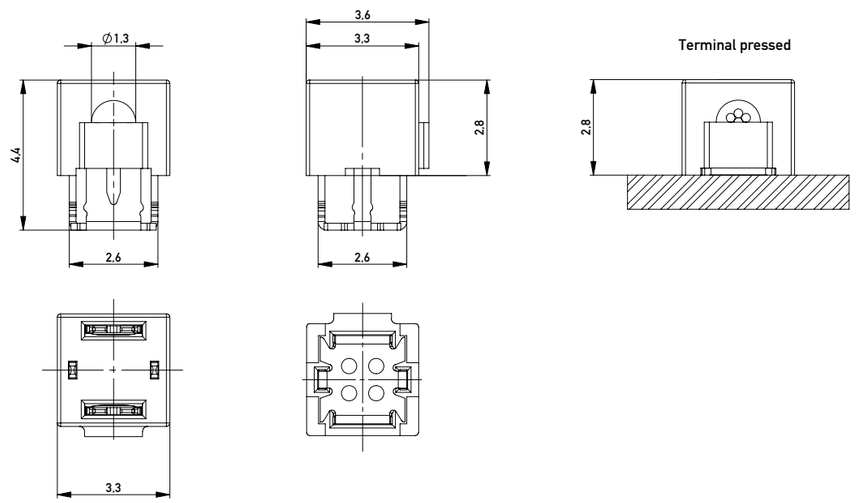
Product Specification

- Reliable contact due to gas tight connection of 2 dual IDC contacts
- Minimal PCB space required
- Versions with wire stop or feed-through available
- No special tool required for termination
- Automated pick & place assembly
- Current carrying capacity: up to 17.5 A at 20 °C
- for available part numbers please refer to our website

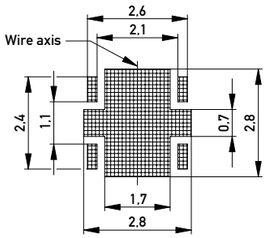


Dimensional Drawings

With wire stop



Recommended Layout



All dimensions in mm

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074615 03/22 Original

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MPT100C18RF RH73H2A40MKTN SBCHE64R7K TE50BR39J 175977-2 936348-1 CPF0402B37K4E1 ROX05SJ18R 1743455-2 2377783-2 1-794222-0 SBCHE154R7K 1393431-1 1969656-1 3430B2F51RTDF CRGCQ2010J3K3 SMW73R0JT U5254-000005-030PA 1903112-2 2834055-1 2-292161-3 2005330-1 2310537-1 2380312-2 3-1393225-0 917696-1 1-962915-1 141991-2 3631B101LL 650075-000