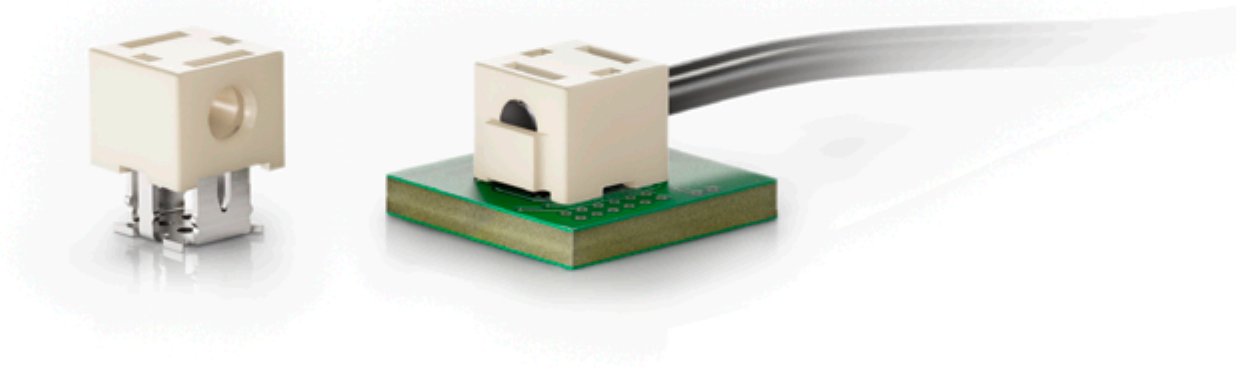


IDC Terminal

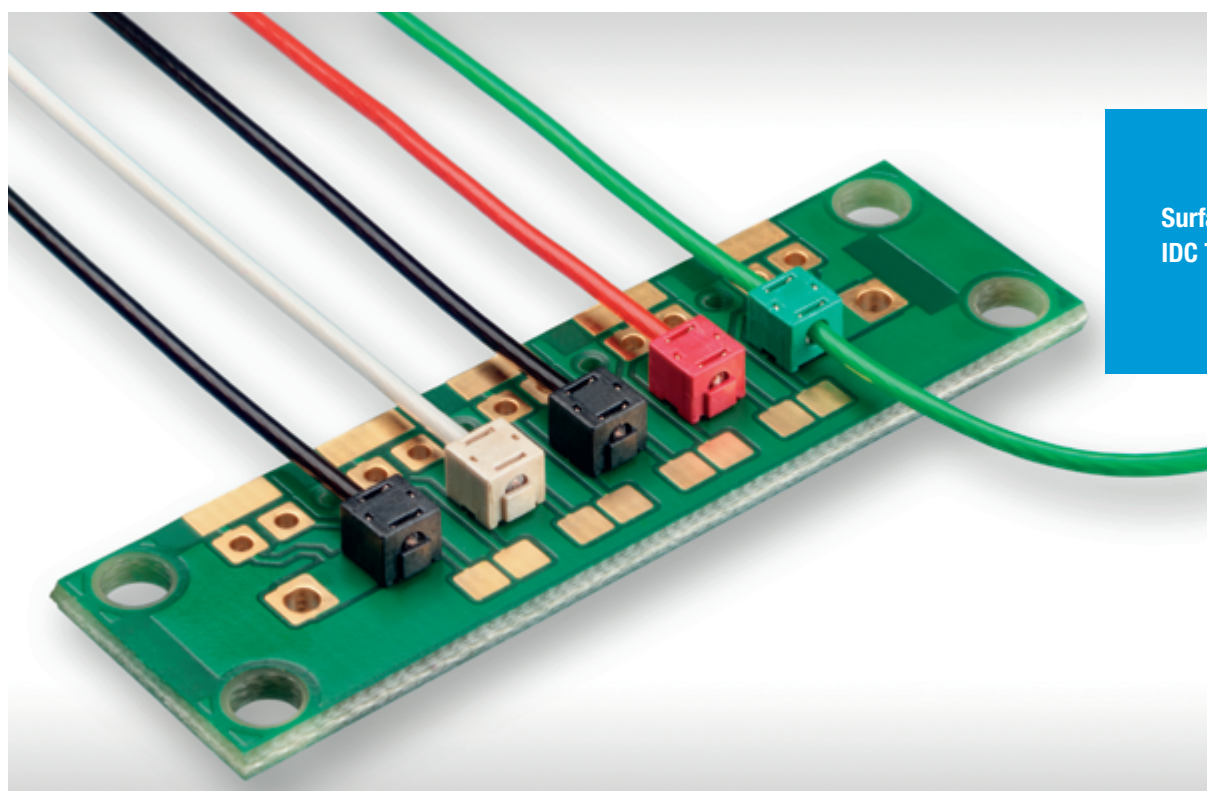
Wire-to-Board Solution



IDC Terminal

OVERVIEW

GENERAL



Surface mount
IDC Terminals

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 (SMT) IDC Terminals facilitate fully automated board assembly and eliminate the preparation (stripping) of wires prior to termination due to its IDC contacts.

As a result, costly and unreliable hand soldering can be 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).

In spite of their compact dimensions, the IDC Terminals can support a maximum 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 guarantee correct connection whilst detents ensure a secure hold.

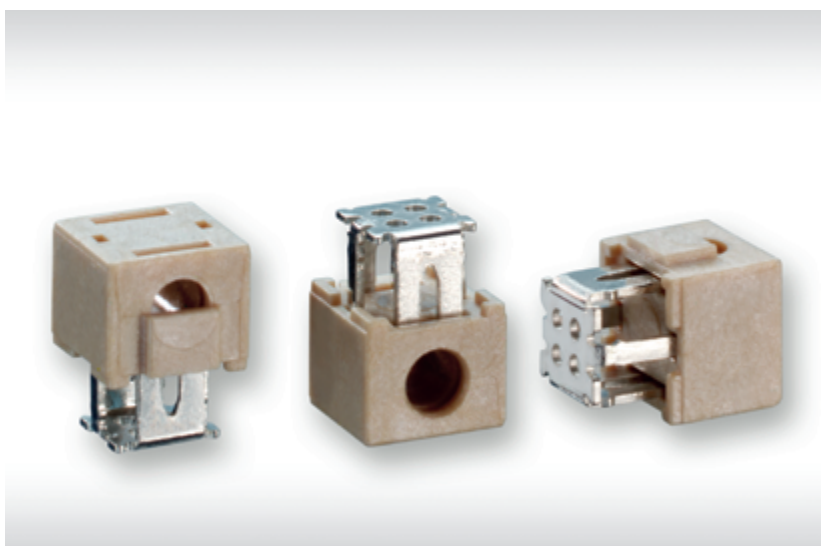
ERNI IDC Terminals:
Small | Flexible | Cost-Effective

IDC Terminal

FEATURES

FEATURES

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



For solid or stranded wires
AWG 24/1
AWG 22/7 / 24/7 / 26/7

IDC Terminal

CHARACTERISTICS

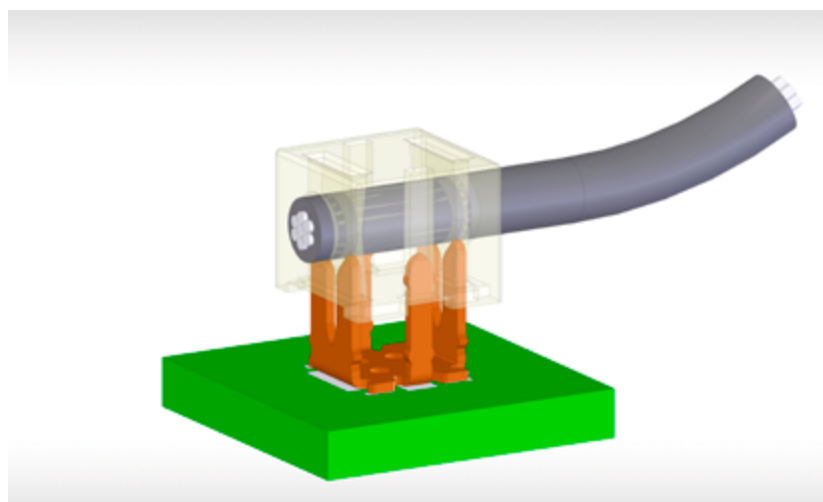
TECHNICAL DATA

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	<p>The permissible operating voltages depend on the customer application and on the applicable or specified safety requirements. 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.</p>		
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		

IDC Terminal

CHARACTERISTICS

Description	Standard	IDC-Terminal AWG 24/1	IDC-Terminal AWG 24/7 - 26/7	IDC-Terminal AWG 22/7
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	
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-retardent additives, no toxic additives allow easy recycling		
Product approval				
UL/CSA			E84703	



Two dual IDC contacts for best connection

Parallel guiding for durable and secure wire assembly

IDC Terminal

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

IDC Terminal

CHARACTERISTICS

TECHNICAL DATA: STRANDED WIRE AWG 22/7

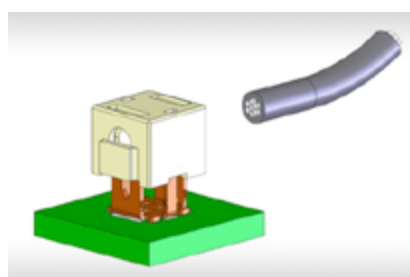
Description	Stranded wire AWG 22/7
Recommended wire	Gebauer & Griller: FLR13Y 0,35-A Leoni: Mocar® 150 A
Wire construction	Stranded wire 7/0.26
Wire cross-section	AWG 22
Conductor diameter	0.8 mm
Outer diameter	1.3 mm -0.1 mm
Insulation	TPE-E
Temperature range	-40 °C to +150 °C (3000 h) -40 °C to +180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

DISCRETE WIRE-TO-BOARD APPLICATION

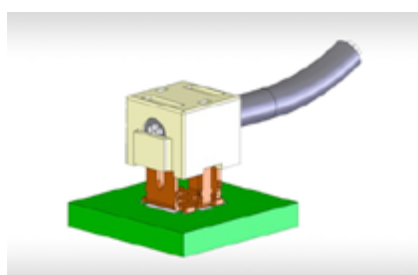
As shipped



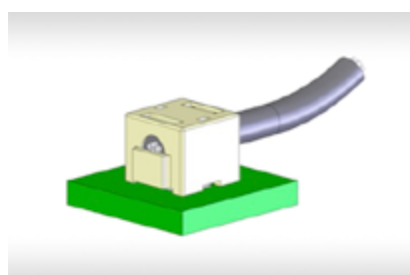
Wire stripping not necessary



Insert wire



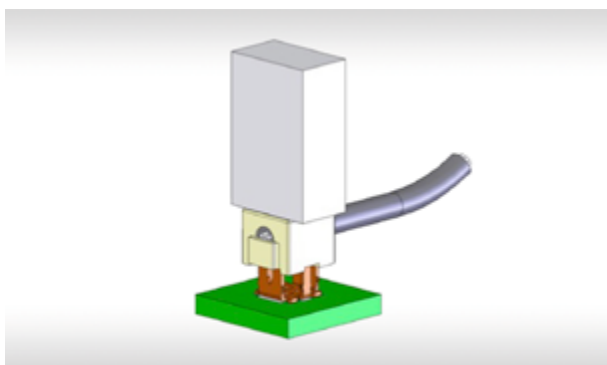
Terminated wire



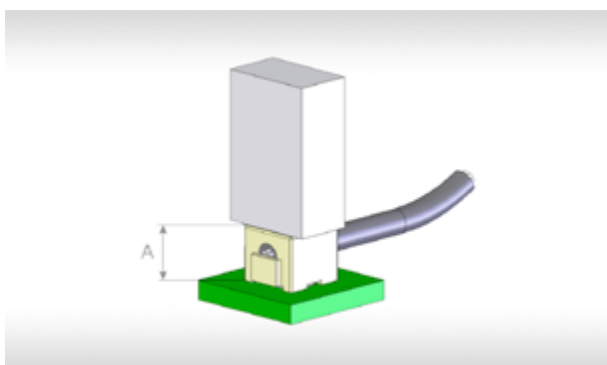
IDC Terminal

PROCESSING

WIRE TERMINATION

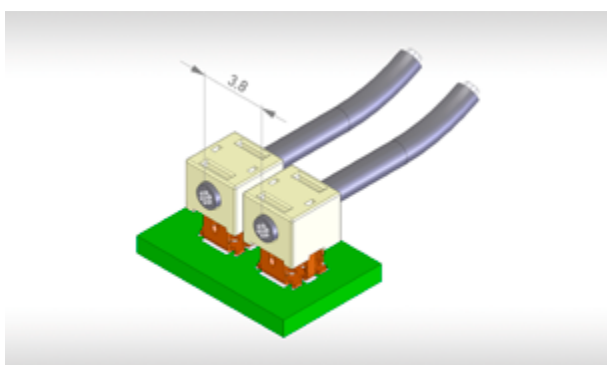


Easy termination using a flat press tool;
no specific tool required



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

USAGE OF MULTIPLE TERMINALS ON MINIMAL BOARD SPACE



Example:

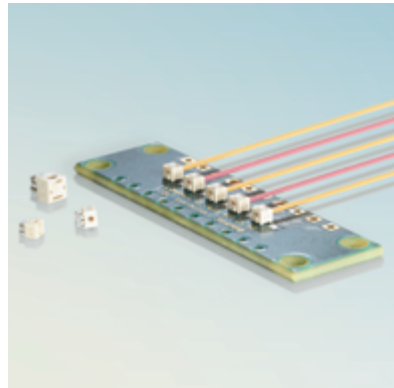
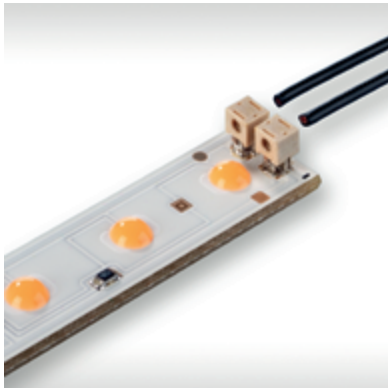
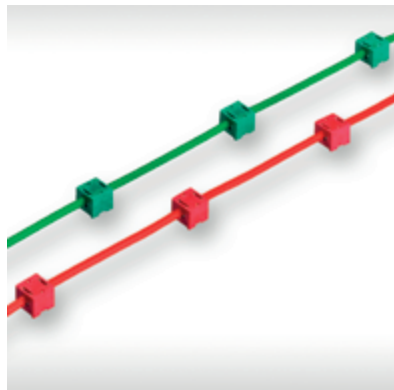
Center to center distance: 3.8 mm

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

IDC Terminal

APPLICATIONS —

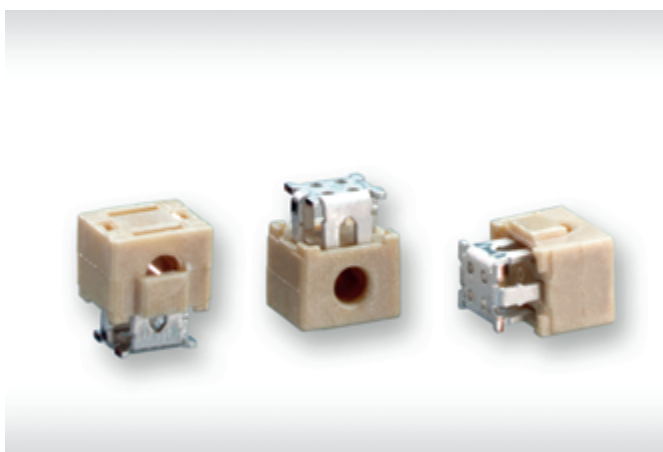
SOLID-STATE LIGHTING | MEDICAL | MOBILE APPLICATIONS



IDC Terminal

FOR SOLID WIRE AWG 24/1

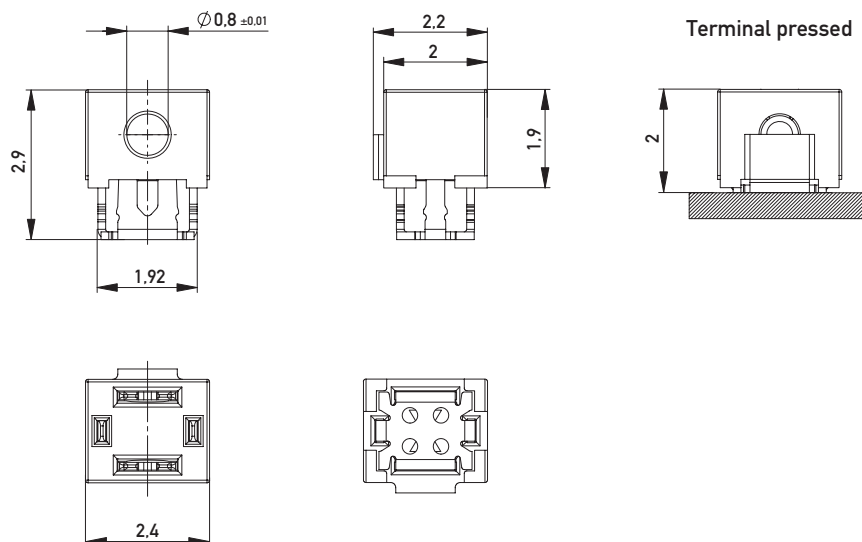
PRODUCT SPECIFICATION



- 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

DIMENSIONAL DRAWING

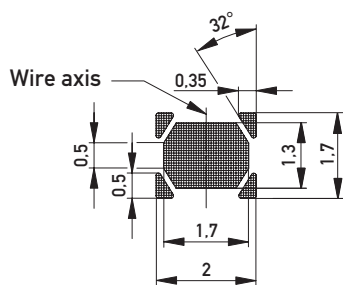
With wire stop



IDC Terminal

FOR SOLID WIRE AWG 24/1

PCB LAYOUT



ORDERING INFORMATION

Configuration	Color	Termination	Packaging	Part Number
Feed-through	white	SMT / IDC	Tape and reel / 5000 pcs	444347
Wire stop	white	SMT / IDC	Tape and reel / 5000 pcs	384980

IDC Terminal

FOR STRANDED WIRE AWG 24/7 - 26/7

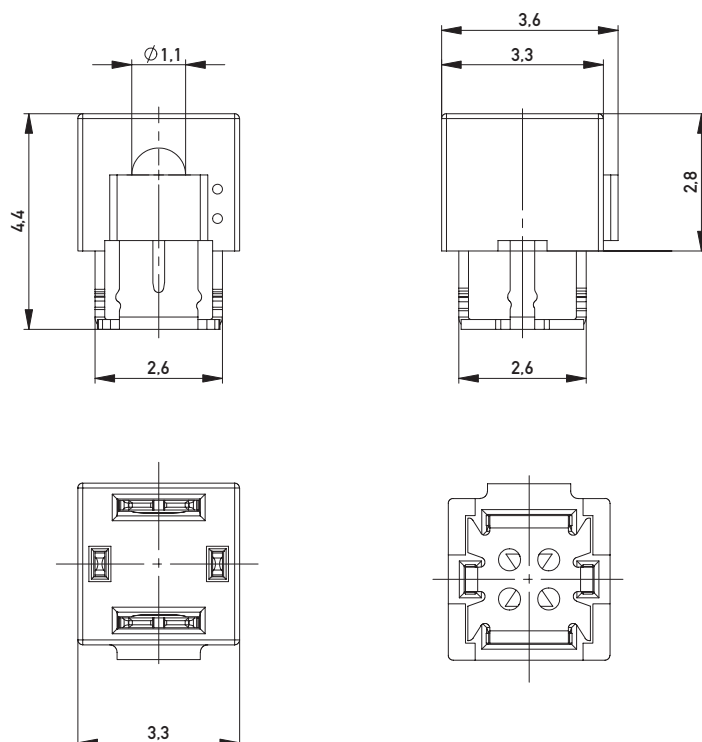
PRODUCT SPECIFICATION



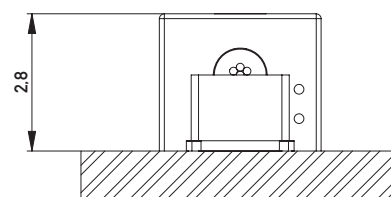
- Reliable contact due to gas tight connection of 2 dual IDC contacts
- Minimal pcb space required
- Versions with wire stop or feed-through available
- No special tool required for termination
- Automated pick & place assembly
- Current carrying capacity: up to 14 A at 20 °C

DIMENSIONAL DRAWING

With wire stop



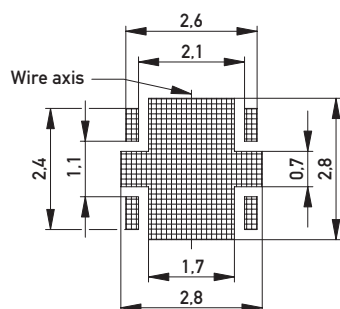
Terminal pressed



IDC Terminal

FOR STRANDED WIRE AWG 24/7 - 26/7

PCB LAYOUT



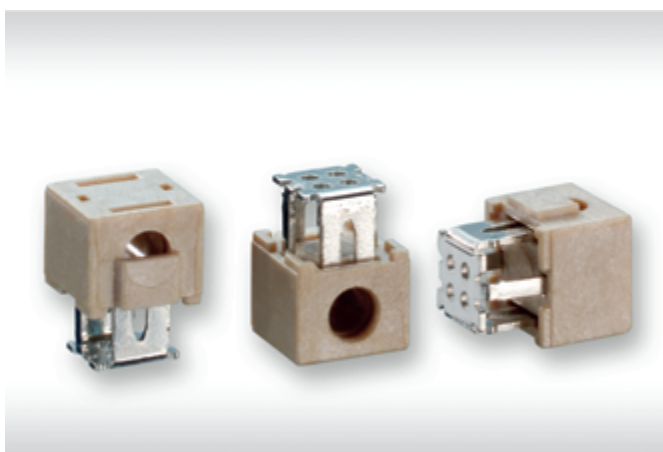
ORDERING INFORMATION

Configuration	Color	Termination	Packaging	Part Number
Feed-through	white	SMT / IDC	Tape and reel / 2000 pcs	474336
Feed-through	black	SMT / IDC	Tape and reel / 2000 pcs	474337
Feed-through	red	SMT / IDC	Tape and reel / 2000 pcs	474338
Feed-through	green	SMT / IDC	Tape and reel / 2000 pcs	474339
Wire stop	white	SMT / IDC	Tape and reel / 2000 pcs	474340
Wire stop	black	SMT / IDC	Tape and reel / 2000 pcs	474341
Wire stop	red	SMT / IDC	Tape and reel / 2000 pcs	474342
Wire stop	green	SMT / IDC	Tape and reel / 2000 pcs	474343

IDC Terminal

FOR STRANDED WIRE AWG 22/7 —

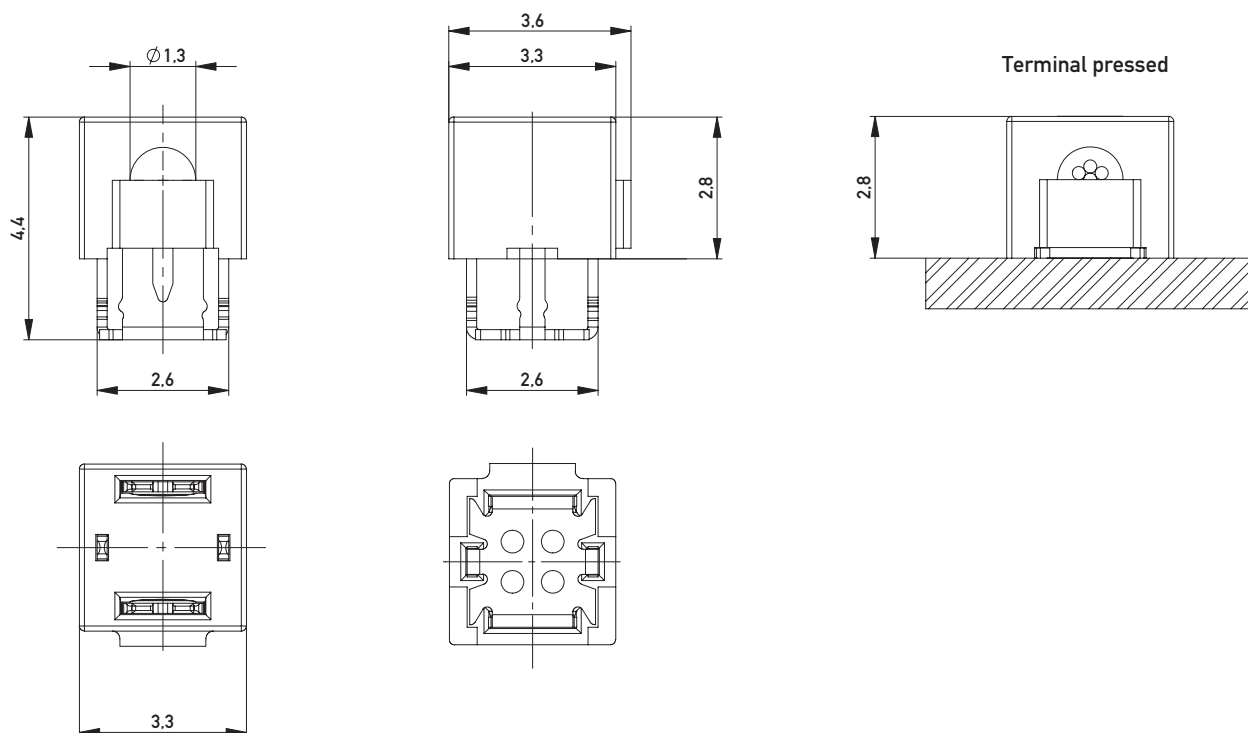
PRODUCT SPECIFICATION



- 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

DIMENSIONAL DRAWING

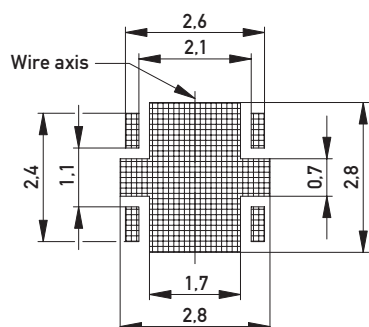
With wire stop



IDC Terminal

FOR STRANDED WIRE AWG 22/7

PCB LAYOUT



ORDERING INFORMATION

Configuration	Color	Termination	Packaging	Part Number
Feed-through	white	SMT / IDC	Tape and reel / 2000 pcs	454302
Feed-through	black	SMT / IDC	Tape and reel / 2000 pcs	474322
Feed-through	red	SMT / IDC	Tape and reel / 2000 pcs	474323
Feed-through	green	SMT / IDC	Tape and reel / 2000 pcs	474324
Wire stop	white	SMT / IDC	Tape and reel / 2000 pcs	454303
Wire stop	black	SMT / IDC	Tape and reel / 2000 pcs	474325
Wire stop	red	SMT / IDC	Tape and reel / 2000 pcs	474326
Wire stop	green	SMT / IDC	Tape and reel / 2000 pcs	474327

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