

## Data sheet

IT02308HMNU001 ETHERNET

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AIT0230899-001

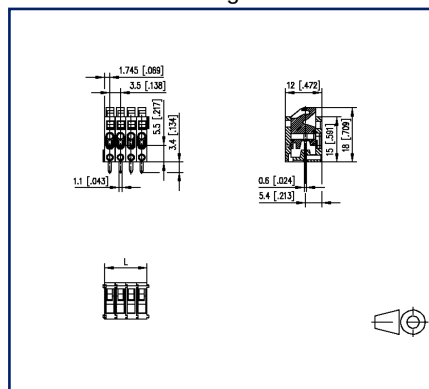
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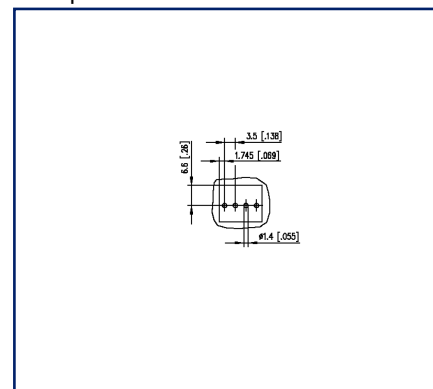
### Illustrations



Dimensional drawing



Drill pattern



See enlarged drawings at the end of document

### Product specification

- ethernet-compatible insulation displacement connector, solderable
- suitable for up to 10 GBit Ethernet (IEEE 802.3an)
- compliance with class E<sub>A</sub> according to ISO/IEC 11801, DIN EN 50173-1
- suitable for Power over Ethernet/Remote Powering (PoE, PoE plus, UPoE and 4PPoE)
- centerline 3.50 mm, direction of connection 90°
- modular
- color coding for conductor colors according to T568 (white/green/white/orange/white/blue/white/brown)

## Technical Data

### General Data

|                           |         |        |        |
|---------------------------|---------|--------|--------|
| Solder pin length         | 3.5 mm  |        |        |
| pole size                 | 8       |        |        |
| Insulating material class | CTI 600 |        |        |
| clearance/creepage dist.  | 2.3 mm  |        |        |
| Protection category       | IP20    |        |        |
| wire insulation           | 1.8 mm  |        |        |
| Rated current             | 2.5 A   |        |        |
| Overvoltage category      | III     | III    | II     |
| Pollution degree          | 2       | 2      | 2      |
| Rated voltage             | 160 V   | 400 V  | 400 V  |
| Rated test voltage        | 2.5 kV  | 2.5 kV | 2.5 kV |

### Terminal data

|                          |                                                              |  |  |
|--------------------------|--------------------------------------------------------------|--|--|
| rat.wiring solid AWGmax  | 0.2 mm <sup>2</sup> - 0.34 mm <sup>2</sup> / AWG 24 - AWG 22 |  |  |
| rat.wiring strand.AWGmax | 0.2 mm <sup>2</sup> - 0.34 mm <sup>2</sup> / AWG 24 - AWG 22 |  |  |

### Approvals

|                                                                                                          |                     |
|----------------------------------------------------------------------------------------------------------|---------------------|
|  V / A / AWG          | 150 / 2.5 / 24 - 22 |
| approval UL - File No.                                                                                   | E121004             |
|  0.34 mm <sup>2</sup> | 130 V / 5 A / T60   |

### Transmission characteristics

|                                             |                                                                                   |
|---------------------------------------------|-----------------------------------------------------------------------------------|
| Data transmission according to IEEE 802.3ab | 1 GBit/s up to 100 m                                                              |
| Data transmission according to IEEE 802.3an | 10 GBit/s up to 100 m                                                             |
| Power transmission                          | PoE, IEEE 802.3af, 15,4 W<br>PoE+, IEEE 802.3at, 30 W<br>4PPoE, IEEE802.3bt, 90 W |

### Material

|                             |                               |
|-----------------------------|-------------------------------|
| insulating material         | PA66                          |
| flammability class          | V0                            |
| contact material            | CuSn                          |
| Contact surface             | Sn                            |
| Glow-Wire Flammability GWFI | 850 °C acc. to IEC 60695-2-12 |

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## Technical Data

|                             |                               |
|-----------------------------|-------------------------------|
| Glow-Wire Flammability GWIT | 775 °C acc. to IEC 60695-2-13 |
|-----------------------------|-------------------------------|

### Climatic Data

|                         |        |
|-------------------------|--------|
| upper limit temperature | 105 °C |
|-------------------------|--------|

|                         |        |
|-------------------------|--------|
| lower limit temperature | -40 °C |
|-------------------------|--------|

### general

|           |              |
|-----------|--------------|
| Tolerance | ISO 2768 -mH |
|-----------|--------------|

|               |                                     |
|---------------|-------------------------------------|
| Solderability | Acc. to JEDEC JESD22-B102E 245°C/5s |
|---------------|-------------------------------------|

|                       |                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------|
| Note PCB compensation | The PCB compensation is necessary to achieve the specified data transmission specifications |
|-----------------------|---------------------------------------------------------------------------------------------|

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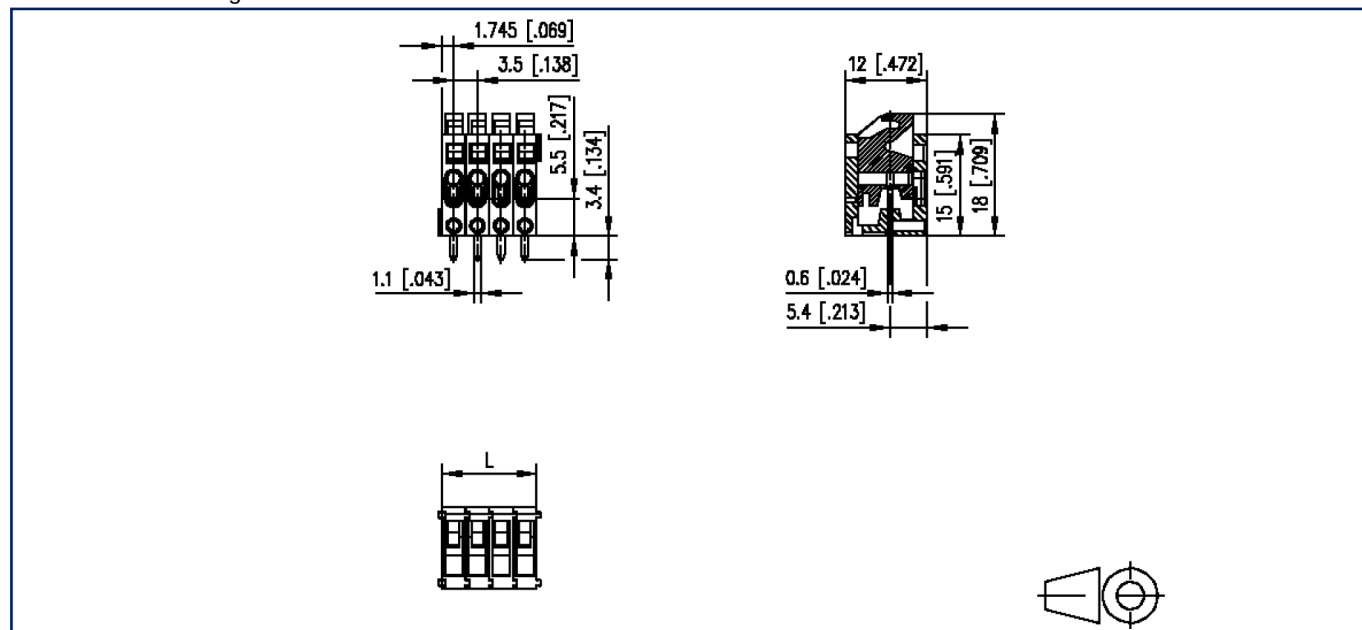
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## Illustrations

Dimensional drawing



$L = (\text{pole size} - 1) \times \text{centerline} + 3.5 \text{ mm} [0.138]$



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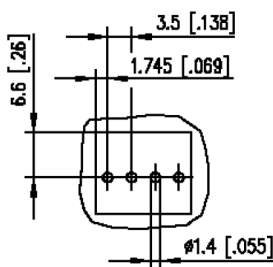
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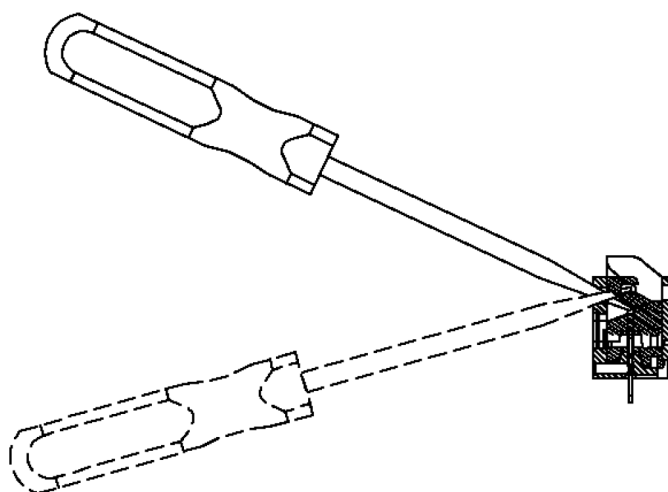
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## Illustrations

Drill pattern

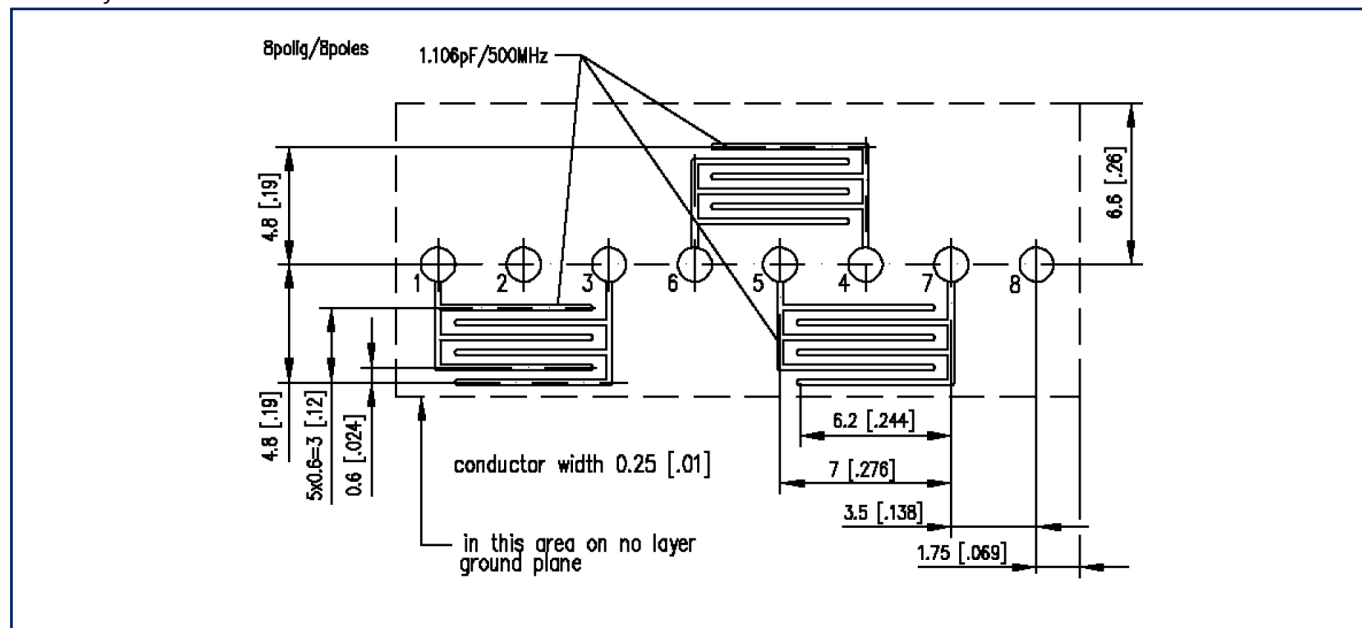


Application example



## Illustrations

### PCB-Layout



### General PCB specifications

- PCB with solder resist
- PCB thickness: 1.5 mm / 2-ply
- Material: FR4
- Dielectric constant: relative permittivity = 4.4
- Copper thickness: 40 µm