

# Data sheet

## PT-C12 24 V AC/DC

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P/N  
110501

EAN 4250184122173

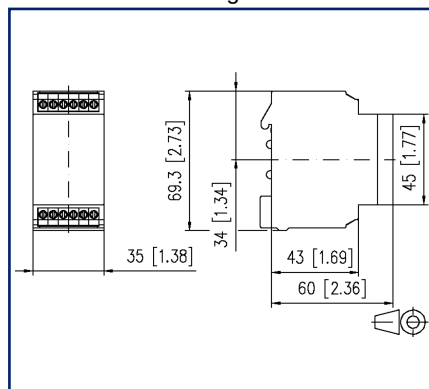
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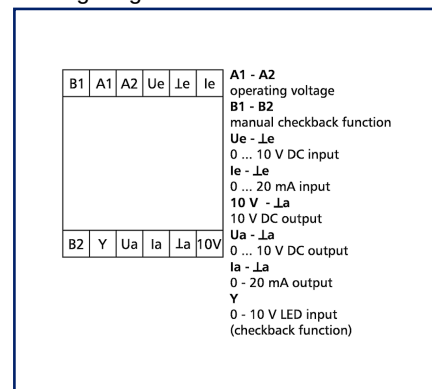
### Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

### Product specification

The potential isolator / signal converter is used for isolating analog signals in the range from 0 to 10 V DC, and 0 to 20 mA DC or for a signal conversion from 0 to 10 V DC to 0 to 20 mA DC or 0 to 20 mA DC to 0 to 10 V DC. The input and output signals as well as the supply voltage are electrically isolated from each other. An input signal from 0 to 10 V or 0 to 20 mA can be connected to the device. Electrical isolation function: With the PT-C12, the input signal 0 to 10 V is adjusted proportionally to the output signal 0 to 10 V. The PTi-C12 adjusts the input signal from 0 to 20 mA proportional to the output signal from 0 to 20 mA. Function Signal conversion with potential separation: With a signal conversion from 0 to 10 V to 0 to 20 mA, or from 0 to 20 mA to 0 to 10 V, the output signal converted thereby can be readjusted using an integrated spindle trimmer. In addition, a manual emergency operating option with a MANUAL AUTO switch with feedback contact is also integrated. The output signal from 0 to 10 V or 0 to 20 mA can be set via the front potentiometer when the switch is in the MANUAL position. A constant output voltage of max. 10 V DC and 5 mA is available at the 10 V terminal. Input Y is used for the LED display of the output voltage Ua. The brightness of the LED depends on the level of the output signal (bridge between Ua and Y). Alternatively, an external signal at the input Y can be connected to the LED display from 0 to 10 V DC.

- Connection with screw type terminal blocks



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### Technical Data

#### Supply

|                             |                          |
|-----------------------------|--------------------------|
| Operating voltage           | 24 V AC/DC -20% ... +15% |
| Power consumption AC (max.) | 200 mA                   |
| Power consumption DC (max.) | 110 mA                   |
| Power consumption AC (max.) | 4.8 VA                   |
| Power consumption DC (max.) | 2.64 W                   |
| Duty cycle relative         | 100 %                    |

#### Inputs

|                                  |          |
|----------------------------------|----------|
| Voltage input                    |          |
| Voltage input - input resistance | > 50 K/W |
| Current input                    |          |
| Current input - input resistance | 45       |

#### Outputs

|                             |              |
|-----------------------------|--------------|
| Current output current load | max. 500 Ohm |
| Indicator                   | green LED    |

#### General information

|           |                          |
|-----------|--------------------------|
| Isolation | 1000 V DC, 50 Hz, 1 min. |
|-----------|--------------------------|

#### Housing

|                       |                                   |
|-----------------------|-----------------------------------|
| Dimensions            |                                   |
| Dimension (W x H x D) | 35 mm x 69.3 mm x 60 mm           |
| Dimension (W x H x D) | 1.378 in. x 2.728 in. x 2.362 in. |
| Weight                | 78 g                              |
| Mounting style        | Standard rail TH35                |
| Mounting position     | any                               |
| Apposition            | without distance                  |
| Connection type       | Screw type terminal blocks        |

#### Terminal blocks

|                                      |                                                        |
|--------------------------------------|--------------------------------------------------------|
| Wire cross section solid             | 0,34 mm <sup>2</sup> - 2,5mm <sup>2</sup> / AWG 22-12  |
| Wire cross section multi             | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12 |
| Wire cross section with wire ferrule | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12 |
| Screw torque (max.)                  | 0.5 Nm                                                 |
| Stripping length (min.)              | 8 mm                                                   |

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### Technical Data

#### Material

|                           |                 |
|---------------------------|-----------------|
| Material - Housing        | Polyamid 6.6 V0 |
| Color                     | gray            |
| Material - Terminal block | Polyamid 6.6 V0 |
| Material - Covers         | Polycarbonat    |

#### Protection category according to IEC 60529

|                                                           |      |
|-----------------------------------------------------------|------|
| Protection category - housing (acc. to IEC 60529)         | IP40 |
| Protection category - terminal blocks (acc. to IEC 60529) | IP20 |

#### Climatic Data

##### Operating

|                            |                          |
|----------------------------|--------------------------|
| Temperature - Operating °C | 0 °C - 55 °C             |
| Temperature - Operating °F | 32 °F - 131 °F           |
| Relative humidity          | max. 85 % non-condensing |

##### Storage

|                          |                |
|--------------------------|----------------|
| Temperature - Storage °C | -20 °C - 70 °C |
| Temperature - Storage °F | -4 °F - 158 °F |

#### Power loss

|                      |       |
|----------------------|-------|
| Power loss (typical) | 2.6 W |
|----------------------|-------|

#### Classifications

|           |          |
|-----------|----------|
| ETIM 7.0  | EC000310 |
| ETIM 8.0  | EC000310 |
| ETIM 9.0  | EC000310 |
| ETIM 10.0 | EC000310 |

#### Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way.

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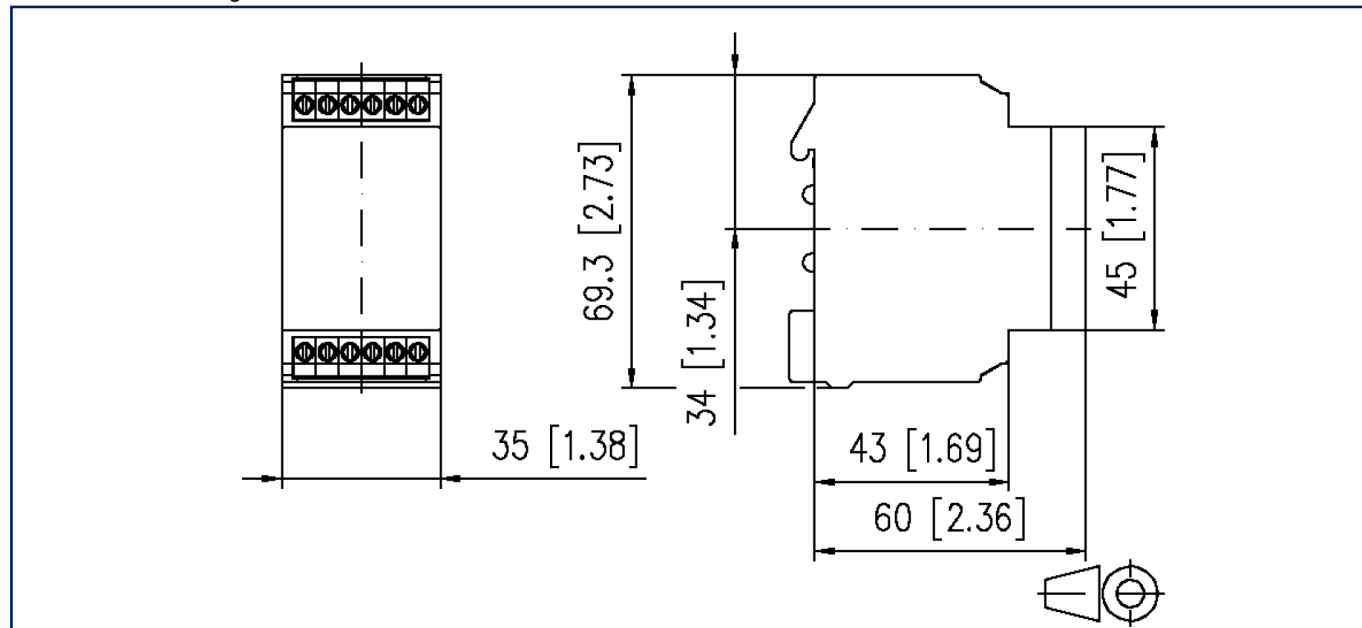
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## Illustrations

Dimensional drawing



Wiring diagram

| B1 | A1 | A2 | Ue | Ie | Ie  |
|----|----|----|----|----|-----|
|    |    |    |    |    |     |
| B2 | Y  | Ua | Ia | Ia | 10V |

**A1 - A2**  
operating voltage

**B1 - B2**  
manual checkback function

**Ue - Ie**  
0 ... 10 V DC input

**Ie - Ie**  
0 ... 20 mA input

**10 V - Ia**  
10 V DC output

**Ua - Ia**  
0 ... 10 V DC output

**Ia - Ia**  
0 - 20 mA output

**Y**  
0 - 10 V LED input  
(checkback function)

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Circuit diagram

