# imall

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Inline ECO, Temperature measurement terminal, Analog RTD inputs: 4 (Pt 1000), connection method: 2-wire, transmission speed in the local bus: 500 kbps, including Inline connector

#### **Product Description**

The terminal is designed for use within an Inline station.

It is used to acquire signals from resistive temperature sensors.

The measured values are depicted in standardized representation format.

Inline ECO terminals are approved for the temperature range from 0°C to +55°C. The electronics base and Inline connector are supplied as standard.

#### Why buy this product

- 4 analog inputs
- Connection of sensors in 2-wire technology
- ☑ Supported sensors: Pt 1000
- ☑ Data format: standardized representation
- ☑ Diagnostic information in the process data word
- Diagnostic indicator

### RoHS

#### Key Commercial Data

| Packing unit | 1 STK           |
|--------------|-----------------|
| GTIN         | 4 055626 206035 |
| GTIN         | 4055626206035   |

#### Technical data

#### Note

| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|
|-------------------------|---|

Dimensions

| Width  | 12.2 mm  |
|--------|----------|
| Height | 119.8 mm |
| Depth  | 71.5 mm  |

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#### Technical data

#### Ambient conditions

| Ambient temperature (operation)          | 0 °C 55 °C                                    |  |
|--|---|--|
| Ambient temperature (storage/transport)  | -25 °C 85 °C                                  |  |
| Permissible humidity (operation)         | 10 % 95 % (according to DIN EN 61131-2)       |  |
| Permissible humidity (storage/transport) | 10 % 95 % (according to DIN EN 61131-2)       |  |
| Air pressure (operation)                 | 70 kPa 106 kPa (up to 3000 m above sea level) |  |
| Air pressure (storage/transport)         | 70 kPa 106 kPa (up to 3000 m above sea level) |  |
| Degree of protection                     | IP20  |  |

#### General

| Mounting type  | DIN rail   |  |
|--|--|--|
| Net weight 83.5 g  |  |  |
| Note on weight specifications with connector             |  |  |
| Diagnostics messages                                     | Failure of the internal I/O supply I/O error message sent to the bus coupler |  |
| Checksum error I/O error message sent to the bus coupler |  |  |

#### Interfaces

| Designation        | Inline local bus   |
|--------------------|--------------------|
| No. of channels    | 2                  |
| Connection method  | Inline data jumper |
| Transmission speed | 500 kbps           |

#### Inline potentials

| Designation                  | Communications power (U <sub>L</sub> )                         |  |  |
|------------------------------|--|--|--|
| Supply voltage               | 7.5 V DC (via voltage jumper)                                  |  |  |
| Current consumption          | typ. 56 mA   |  |  |
|                              | max. 85 mA   |  |  |
| Designation                  | Supply of analog modules (U <sub>ANA</sub> )                   |  |  |
| Supply voltage               | 24 V DC (via voltage jumper)                                   |  |  |
| Supply voltage range         | 19.2 V DC 30 V DC (including all tolerances, including ripple) |  |  |
| Current consumption          | typ. 7.3 mA  |  |  |
|                              | max. 14 mA   |  |  |
| ower consumption typ. 0.67 W |  |  |  |

#### Analog inputs

| Number of inputs 4 (Pt 1000)             |  |
|--|--|
| Input name                               | Analog RTD inputs  |
| Description of the input                 | Input for resistive temperature sensors                              |
| Connection method                        | Inline connector   |
| Connection technology                    | 2-wire   |
| Note regarding the connection technology | shielded   |
| Sensor types (RTD) that can be used      | Pt 1000 (IEC 60751/EN 60751)   |
| Nominal value of the current sources     | 210 µA (pulsed current, the data is valid during the sampling phase) |



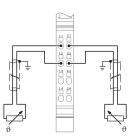
#### Technical data

#### Analog inputs

| A/D conversion time              | typ. 120 ms   |  |
|----------------------------------|---|--|
| Resolution A/D                   | 24 bit  |  |
| Process data update              | < 10 ms   |  |
| Type of protection               | Overload protection   |  |
|                                  | Transient protection  |  |
| Data formats                     | Standardized representation                                       |  |
| Input filter time                | 120 ms (per channel)  |  |
| Input filter                     | Digital filter  |  |
| Electrical isolation             |   |  |
| Test section                     | Bus logic (local bus, communications power) 500 V AC 50 Hz 1 min. |  |
|                                  | Analog I/O 500 V AC 50 Hz 1 min.                                  |  |
|                                  | Functional earth ground 500 V AC 50 Hz 1 min.                     |  |
| Standards and Regulations        |   |  |
| Protection class                 | III, IEC 61140, EN 61140, VDE 0140-1                              |  |
| Environmental Product Compliance |   |  |
| China RoHS                       | Environmentally friendly use period: unlimited = EFUP-e           |  |
|                                  | No hazardous substances above threshold values                    |  |

#### Drawings

#### Connection diagram



Connecting the sensors

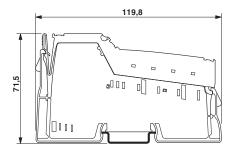
#### Approvals

Approvals

#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Dimensional drawing





#### Approvals

Ex Approvals

| Approval details |              |   |               |
|------------------|--------------|---|---------------|
| UL Listed        | UL<br>LISTED | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cUL Listed       | CUL          | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cULus Listed     | CULUSTED US  |   |               |

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