

IB ST ZF 24 TEMP 4 RTD - I/O module

2701959

<https://www.phoenixcontact.com/us/products/2701959>

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Image shows IB ST 24 TEMP 4 RTD
(2700843) version

INTERBUS-ST analog input module, 4 inputs, RTD, 2-, 3-, and 4-conductor connection, IP20 degree of protection, consisting of: terminal part with spring-cage connection and module electronics

Product description

The module is designed for use within an ST station.
It is used to acquire signals from resistive temperature sensors.

Your advantages

- 4 analog input channels for connecting resistance temperature detectors (RTDs)
- Connection of sensors in 2-, 3-, and 4-conductor technology

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2701959 |
| Packing unit | 1 pc |
| Sales key | DR03 |
| Product key | DRI343 |
| GTIN | 4046356895880 |
| Weight per piece (including packing) | 562.8 g |
| Weight per piece (excluding packing) | 562.8 g |
| Customs tariff number | 85389091 |
| Country of origin | DE |

Technical data

Dimensions

| | |
|--------|--------|
| Width | 118 mm |
| Height | 116 mm |
| Depth | 117 mm |

Interfaces

ST local bus

| | |
|----------------------|------------------------|
| No. of channels | 2 |
| Connection method | ST local bus connector |
| Transmission speed | 500 kbps |
| Transmission physics | Copper |

Input data

Analog:

| | |
|-------------------------------------|--|
| Input name | Analog RTD inputs |
| Description of the input | Inputs for resistive temperature sensors |
| Number of inputs | 4 (for resistance temperature detectors) |
| Connection technology | 2-, 3-, 4-conductor (shielded) |
| A/D converter resolution | 24 bit |
| Sensor types (RTD) that can be used | Pt 100, Pt 1000, Ni 100, Ni 1000 |
| Measuring principle | Sigma/Delta process |
| Measured value representation | 16 bit two's complement |

Product properties

| | |
|----------------------|---|
| Product type | I/O component |
| Type | modular INTERBUS Smart Terminal |
| Operating mode | Process data mode with 4 words |
| Diagnostics messages | Failure of the internal I/O supply I/O error message sent to the bus coupler F1 fuse failure I/O error message sent to the bus coupler I/O supply failure I/O error message sent to the bus coupler |

Electrical properties

| | |
|---|-------|
| Maximum power dissipation for nominal condition | 0.5 W |
|---|-------|

Supply: Module electronics

| | |
|---------------------|--------------------------------|
| Connection method | ST local bus connector |
| Designation | Communications power |
| Supply voltage | 9 V DC (from the ST local bus) |
| Current consumption | typ. 54 mA |

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| | |
|-------------------|------------|
| | max. 80 mA |
| Power consumption | typ. 0.5 W |

Supply:

| | |
|----------------------|--|
| Designation | U_S |
| Supply voltage | 24 V DC |
| Supply voltage range | 19.5 V DC ... 30.2 V DC (including all tolerances, including ripple) |
| Current consumption | typ. 15 mA |

Electrical isolation/isolation of the voltage ranges

| | |
|---|------------------------|
| Test voltage: Bus/Inputs | 500 V AC, 50 Hz, 1 min |
| Test voltage: Supply voltage/inputs | 500 V AC, 50 Hz, 1 min |
| Test voltage: Supply voltage/Ground conductor | 500 V AC, 50 Hz, 1 min |
| Test voltage: I/O voltage/Ground conductor | 500 V AC, 50 Hz, 1 min |

Connection data

Connection technology

| | |
|-----------------|----------------|
| Connection name | Terminal block |
|-----------------|----------------|

Terminal block

| | |
|-----------------------------------|---|
| Connection method | Spring-cage connection |
| Conductor cross-section, rigid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section, flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 12 |
| Stripping length | 8 mm |

Environmental and real-life conditions

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -25 °C ... 55 °C |
| Degree of protection | IP20 |
| Air pressure (operation) | 80 kPa ... 106 kPa (up to 2000 m above sea level) |
| Air pressure (storage/transport) | 80 kPa ... 106 kPa (up to 2000 m above sea level) |
| Ambient temperature (storage/transport) | -25 °C ... 70 °C |
| Permissible humidity (operation) | 10 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (non-condensing) |

Standards and regulations

| | |
|------------------|---------------------------------------|
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |
|------------------|---------------------------------------|

Mounting

| | |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27242601 |
| ECLASS-15.0 | 27242601 |

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|----------------------------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(a), 6(a)-I, 6(c), 7(a), 7(c)-I |

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

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