# IB STME 24 BAI 8/EF - Replacement electronics module

2701956

https://www.phoenixcontact.com/us/products/2701956

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INTERBUS-ST analog input module, 8 inputs, 0 - 5 V, 0 - 10 V, 0 - 25 V, 0 - 50 V, 0 - 20 mA, 4 - 20 mA, 0 - 40 mA, 0 - 60 mA, degree of protection IP20, comprising: Module electronics only

## Your advantages

- 8 analog inputs for the connection of either voltage or current signals
- Connection of sensors in 2-conductor technology

## Commercial data

| | |
|---|---|
| Item number | 2701956 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Product key | DRI341 |
| GTIN | 4046356895750 |
| Weight per piece (including packing) | 249.7 g |
| Weight per piece (excluding packing) | 249.7 g |
| Country of origin | DE |

# Technical data

## Interfaces

ST local bus

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

## System properties

Programming data

| | |
|---|---|
| Length code (hex) | 4 |
| ID code (dec.) | 127 |
| Length code (dec) | 4 |
| Input address area | 8 Byte |
| Output address area | 0 Byte |
| Parameter channel (PCP) | 0 Byte |
| Register length (bus) | 8 Byte |

## Input data

Analog:

| | |
|---|---|
| Input name | Analog inputs |
| Number of inputs | max. 8 (Voltage or current) |
| A/D conversion time | max. 10 µs (per channel) |
| Connection technology | 2, 3-conductor |
| Measuring principle | Successive approximation |
| Measured value representation | 8 bit straight binary (default) or 12 bit two’s complement (can be parameterized) |

Analog:

| | |
|---|---|
| Number of inputs | 8 (Voltage inputs) |
| Voltage input signal | 0 V ... 10 V |
| | 0 V ... 5 V |
| | 0 V ... 25 V |
| | 0 V ... 50 V |
| Input resistance of voltage input | 150 kΩ |
| A/D converter resolution | 12 bit (4096 steps; 2.44 mV/quantization steps) |
| | 8 bit (256 steps; 39 mV/quantization steps) |

Analog:

| | |
|---|---|
| Number of inputs | 8 (Current inputs) |
| A/D conversion time | max. 10 µs |
| | 4 mA ... 20 mA |

| | |
|---|---|
| Current input signal | 0 mA ... 20 mA |
| | 0 mA ... 40 mA |
| | 0 mA ... 60 mA (rms) |
| | 0 mA ... 100 mA (peak) |
| Input resistance current input | 77 Ω |
| A/D converter resolution | 12 bit (4096 steps; 3.91 µA/quantization steps) |
| | 8 bit (256 steps; 62.7 µA/quantization steps) |

## 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

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 |
| | 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. 45 mA ($I_b$ = 0 mA ($I_b$ = total current for supplying passive sensors for all channels)) |
| | typ. 120 mA ($I_b$ = 100 mA ($I_b$ = total current for supplying passive sensors for all channels)) |

Supply: Passive sensor supply

| | |
|---|---|
| Designation | $U_B$ (generated internally) |
| Supply voltage | 15 V ±6 % |
| Current consumption | max. 100 mA (Total for all channels) |

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 method | Snap on |

## 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 |

## Classifications

### ECLASS

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

### UNSPSC

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

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 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) |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 0.563 kg CO2e |




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