

# IB STME 24 AI 4/EF - Replacement electronics module



2701955

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INTERBUS-ST analog input module, 4 inputs, 0 - 10 V,  $\pm 10$  V, 0 - 20 mA, 4 - 20 mA, degree of protection IP20, comprising: Module electronics only

## Your advantages

- 4 analog, differential input channels for the connection of either voltage or current signals
- Connection of sensors in 2-, 3-, and 4-conductor technology
- Sensor supply +15 V DC

## Commercial data

Item number	2701955
Packing unit	1 pc
Sales key	DR03
Product key	DRI341
GTIN	4046356895743
Weight per piece (including packing)	245.1 g
Weight per piece (excluding packing)	245.1 g
Customs tariff number	85389091
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.)	126
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. 4 (differential inputs, voltage or current)
A/D conversion time	max. 10 $\mu$ s (per channel)
Connection technology	2-, 3-, 4-conductor (shielded)
Measuring principle	Successive approximation
Measured value representation	16 bit two's complement

#### Analog:

Number of inputs	4 (differential inputs, voltage)
Voltage input signal	0 V ... 10 V (SF and SF4 mode) -10 V ... 10 V (Mode BP)
Input resistance of voltage input	200 k $\Omega$
A/D converter resolution	12 bit (4096 steps; 4.88 mV/quantization step (BP mode); 2.44 mV/quantization step (SF and SF4 mode))
Common mode voltage range signal - ground	-35 V DC ... 35 V DC

#### Analog:

Number of inputs	4 (Differential inputs, current)
A/D conversion time	max. 10 $\mu$ s
Current input signal	0 mA ... 20 mA (SF mode) 4 mA ... 20 mA (BP and SF4 mode)
Input resistance current input	50 $\Omega$

A/D converter resolution	12 bit (4096 steps; 4.88 $\mu$ A/quantization step (SF mode); 3.91 $\mu$ A (SF4 mode); 7.8 $\mu$ A (BP mode))
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## 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 $\pm$ 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
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## Environmental and real-life conditions

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## 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)
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## 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	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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