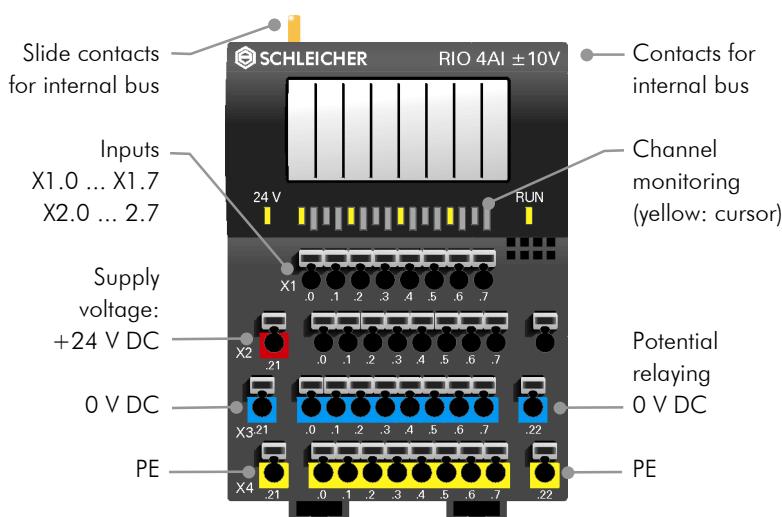


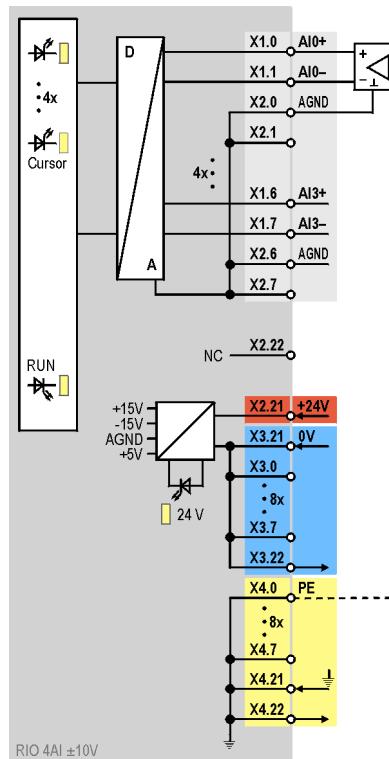
## Analog 4 Inputs ±10V

## RIO 4AI ±10V



The RIO 4AI ±10V analog module provides 4 differential input channels with four-wire connection system for DC signals in the range –10 V to +10 V. The analog signals are digitalized with 12 bits within 2 s. The bus coupler outputs the binary data via the internal slide bus and passes it, isolated, to the higher-level controller as a process map.

### Block diagram



### Technical Data

#### RIO 4AI ±10V

Article number	364 141 03
Number of inputs/outputs	4 inputs (differential)
Data width	2 bytes per channel I/O
External supply voltage	DC 24 V (±20%, max. 5% residual ripple)
Power consumption	3.6 W from external 24 V supply 0.325 W from internal 5 V supply
Connection system	Four-wire

### Inputs

Input range	–10 ... +10 V
Resolution	12-bit / 4.88 mV
Conversion time	2 ms
Input current	–15 ... +15 $\mu$ A
Input resistance	1 M $\Omega$
Maximum total error	±40 mV ±0.35% from measured value
Isolation	From internal bus

For general technical data see next page

## Technical Data RIO IP20

### Electrical data

Supply voltage	24 V DC ± 20% max. 5% residual ripple
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### Connection system

Sensors / actuators	Spring terminal
Field bus	Profibus-DP: Subminiature, 9-pin
Supply voltage	Interbus: Screw terminals CAN DeviceNet / CANopen: Open style connector
	Spring terminal
Cable cross-section	Finely stranded 0.14 – 1.5 mm <sup>2</sup> , single-core 0.5 – 2.5 mm <sup>2</sup>

### Housing and installation

Type of protection	IP 20 to EN 60529
Dimensions (W x H x D)	RIO microLine PLC: 74.5 x 93 x 51 mm RIO BC Bus Couplers: 74.5 x 93 x 51 mm RIO EC Bus Couplers: 63 x 93 x 51 mm RIO Expansion Modules: 69 x 93 x 51 mm RIO Compact I/Os: 69 x 93 x 51 mm RIO Terminal Extensions: 69 x 36 x 45 mm
Rail	DIN rail EN 50022-35
Installation position	Vertical, free air circulation

### Climatic Conditions

Ambient operating temperature	0 ... +55°C (category KV to DIN 40040)
Storage temperature	-25 ... +70°C (category HS to DIN 40040)
Relative humidity	30 ... 95% (category F to DIN 40040), no condensation
Air pressure in operation	860 ... 1060 hPa

### Mechanical strength

Vibration	10 ... 57 Hz constant amplitude 0.075 mm 57 ... 150 Hz constant acceleration 1 g (to DIN IEC 68-2-6)
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### Electromagnetic compatibility

Electrostatic discharge	EN 61000-4-2: 4 kV contact discharge
Electromagnetic fields	EN 61000-4-3: field intensity 10 V/m, 80 ... 1000 MHz
Burst	EN 61000-4-4: 2 kV on DC supply lines, 1 kV on I/O signal and serial interface lines
Interference emissions	EN 55011: Limit Category A, Group 1