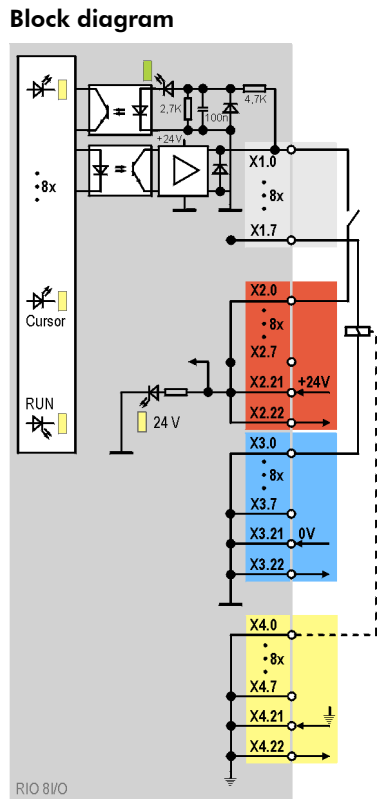
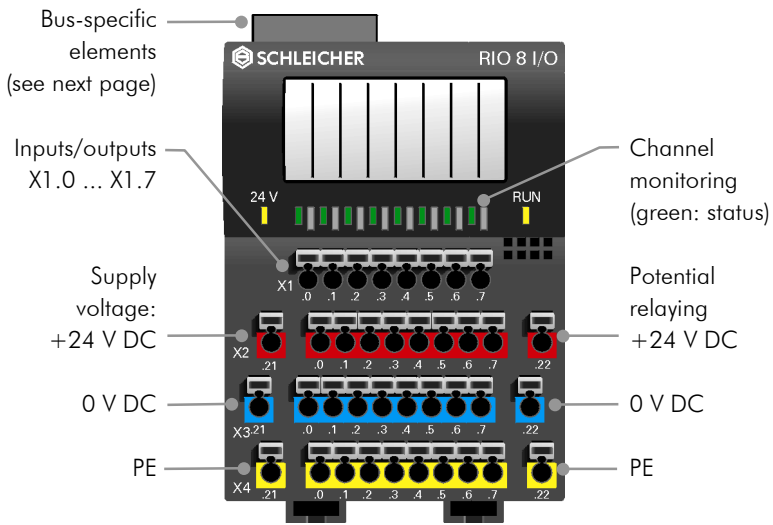


Digital 8 Inputs/Outputs DC 24 V RIO 8I/O xx

Profibus-DP • Interbus • CAN DeviceNet • CANopen

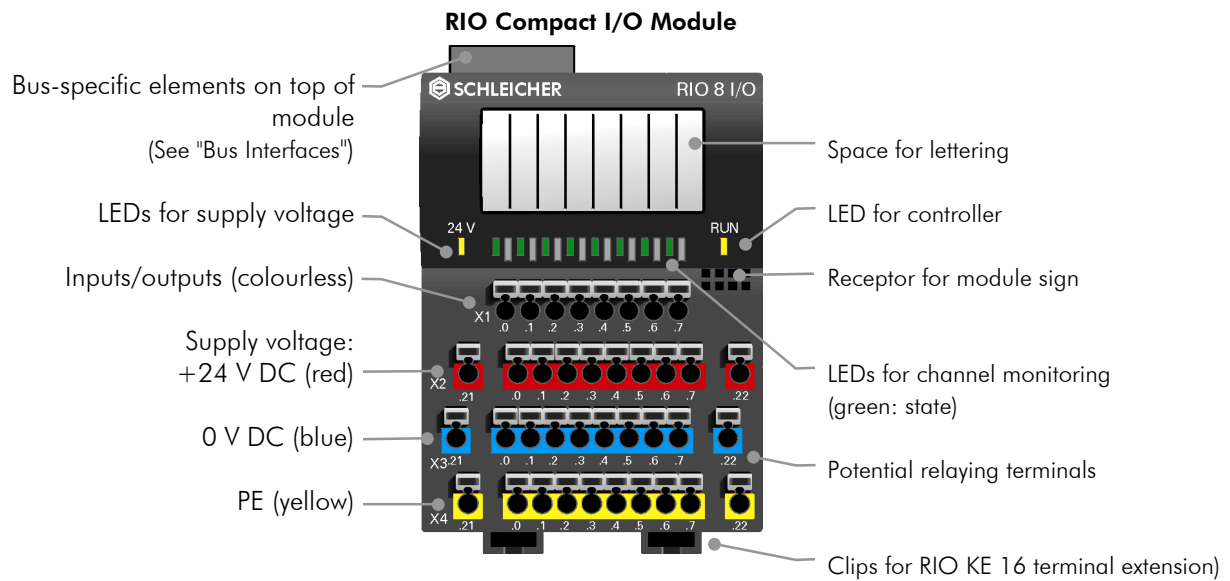


The RIO 8I/O xx digital compact module provides 8 combination channels with four-wire connection system for binary DC signals with 24 V level. Each combination channel can be used as input or output as required. The respective assignment is detected automatically by the module. The integrated bus coupler connects the module to Profibus-DP, InterBus, CAN DeviceNet or CANopen field buses. The field bus, module and channel statuses are signalled by LEDs.

Technical Data	RIO 8I/O DP	IBS	CAN DN	CANopen
Article number	362 141 05	362 141 06	362 141 07	362 154 99
Field bus	Profibus-DP	Interbus	CAN DeviceNet	CANopen
Number of inputs/outputs	8 combination channels binary, can each be used as input or output			
Data width	1 bit per channel I/O			
External supply voltage	DC 24 V (±20%, max. 5% residual ripple)			
Connection system	Four-wire			
Inputs				
Switching level	H level +15 ... +30 V L level -30 ... +5 V			
Input current	Min. H level (+15V): I ≥ 3.6 mA Max. L level (+5V): I ≤ 1.2 mA Typ. (+24 V): I = 6.1 mA			
Isolation	Each channel individually isolated from internal bus by optocouplers			
Signal delay	< 100 μs (hardware)			
Outputs				
Switching level	H level: supply voltage -0.5 V (I _L < 1 A) L level: ≤ 1 V (I _L = 0 A)			
Output current per output	Max. 1 A, short-circuit-proof and overcurrent-protected, can be connected in parallel in groups: 0-3, 4-7			
Total current for whole module	Max. 4 A			
Simultaneity	100% at max 0.5 A per channel			
Free-wheeling diode	Integrated			
Isolation	Each channel individually isolated from internal bus by optocouplers			
Signal delay	< 100 μs (hardware)			

For general technical data see last page

General Module Structure



Bus Interfaces

All the field bus-specific connections and controls are on the top of the compact module housing

- ▶ Terminals/connectors for field bus connection
- ▶ Setting switches for module address, baud rate and module diagnosis
- ▶ LEDs for simple field bus diagnosis

	Profibus-DP	Interbus	CAN DeviceNet	CANopen
Bus connection	<ol style="list-style-type: none"> Subminiature, 9-pin, socket connector 	<ol style="list-style-type: none"> Screw terminal, 6-pole, input Screw terminal, 8-pole, output 	<ol style="list-style-type: none"> Open style connector 5-pin 	<ol style="list-style-type: none"> Open style connector 5-pin
Settings	<ol style="list-style-type: none"> Rotary switch for slave address, address range 0 ... 99 Toggle switch for logical shut-off of station Set baud rate up to 12 MBaud automatic 	<p>Baud rate fixed 500 Kbaud</p>	<ol style="list-style-type: none"> DIP switches for - MAC-ID (address range 0 ... 63) - Baud rate (up to 500 Kbaud) 	<ol style="list-style-type: none"> DIP switches for - MAC-ID (address range 0 ... 127) - Baud rate (up to 1000 Kbaud)
Displays	<ol style="list-style-type: none"> Field bus diagnosis 	<ol style="list-style-type: none"> Field bus diagnosis 	<ol style="list-style-type: none"> Field bus diagnosis 	<ol style="list-style-type: none"> Field bus diagnosis

Technical Data RIO IP20

Electrical data

Supply voltage	24 V DC \pm 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 ² , single-core 0.5 – 2.5 mm ²

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)

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