

CIB – Module of combined inputs/outputs on DIN rail

Type	DI	RO	AI	AO	Comm
C-IR-0203M	2× DI/AI	2× RO		1× AO/PWM	CIB

Basic features

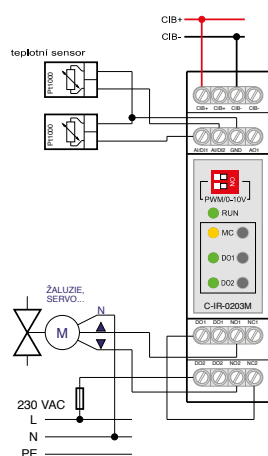
- Module is an actuator on CIB bus with two independent relays 16A with NO/NC contacts.
- Each relay is independently addressed and controlled. Status of each relay is signalled at front panel.
- Module may be switched into manual mode by MC button. Then, outputs are controlled independently manually by buttons DO1 and DO2.
- Module is an actuator with one analog output 0-10V.
- Analog output may be switched by button at front panel to PWM mode (pulse width modulation). The amplitude and frequency of switching may be set in the program.
- Module is also a sensor on CIB bus and has two universal inputs.

- Each input may be set as digital for reading voltage-free contact or as balanced input for security sensors.
- Each input may be set as analog for resistance sensors metering, e.g. temperature.
- Module firmware linearizes characteristics of selected types of resistance sensors, optimizes accuracy of metering and recalculates the resistance to temperature in Celsius degrees, which is transferred via CIB to central module.
- Status is indicated by LED on module (RUN).



C-IR-0203R

Connection example



Connection

- Inputs, outputs and CIB bus are connected via screw terminals.

Use

- Module is universal and is designated for connection of various types and combinations of inputs and loads.
- By relay contacts features, the module is designated for switching of power loads, where we may expect transients with high current surge - up to 80A.
- Module is by its PWM output designated for control of revolutions of modern circulation pumps.

Relay outputs

Number of outputs	2× NO/NC 16 A/AC1
Galvanic isolation	yes (even outputs each other)
Switching voltage	min. 5 V DC; max. 300 V AC/DC
Switching power	4000 VA/AC1, 384 W/DC
Switching current	max.16 A (NO) max.10 A (NC), min. 100 mA
Peak current	80 A / <20ms (switching contact)
Time of switching on/off	typ. 15 ms/ 5 ms
Frequency of switching without load	max. 1200 min ⁻¹
Frequency of switching with load	max. 6 min ⁻¹
Mechanical life cycle	2×10 ⁷
Electrical life cycle	0,5×10 ⁵
Protection against short circuit	No
Inductive load treatment	Outside. (RC element, varistor, diode)
Isolation voltage between contacts each other/groups/ outputs and CIB bus	1000V AC/ 4000V AC/ 4000V AC

Operating conditions

Operating temperature	-10 .. +70 °C
Storage temperature	-25 .. +85 °C
Electric strength	according EN 60730
Class of electric device protection according EN 61140:2003	I
IP Degree of protection IEC 529	IP10B
Overvoltage category	II
Degree of pollution according EN60664-1:2008	1
Operating position	Vertical
Installation	On DIN rail
Connection input, output, CIB	Terminals, wire diameter max. 4mm ² .

Order number

TXN 133 59 C-IR-0203M, CIB, 2DI/AI, 2RO NO/NC contacts 230 V AC, 1AO/PWM

Universal inputs

Number of universal inputs	2× DI/AI (DI/AI1, DI/AI2)
Galvanic isolation of CIB bus	No

Measured ranges

Sensor type	Range	Basic accuracy
Voltage-free contact	0/1	0 if >1.5 kΩ 1 if <0.5 kΩ
Balanced input (security system)	Interrupted wire /0/1/tamper	for 2× 1k1 balanced resistance
Pt1000	-90 .. 320°C	0,5%
Ni1000	-60 .. 200°C	0,5%
NTC 12 k	-40 .. 125°C	0,5%
KTZ81-121	-55 .. 125°C	0,5%
Resistance	0-160 kΩ	0,5%

Analog outputs

Number of outputs	1x
Galvanic isolation	No
Output mode	Analog PWM
Nominal input voltage/amplitude	10 V 10-24 V
Frequency of switching	100-2 000 Hz
Adjustable range of outputs	0..130% U _n 0..100%
Min. resolution/load resistance	Min. 1% / > 1kΩ
Output current/load capacity	Max. 3 mA/ Max. 50 nF

Dimensions and weight

Dimensions	105 × 90 × 22 mm
Weight	93 g

Power supply

Power supply and communication	24 V (27 V) from CIB bus
Nominal/max. load	30 mA/60 mA
Typ./Max. input power	0.8 W/1.5 W
Internal protection	No