IO8

module with 8x3-line input, 4-line transistor output and 4-line normally-open contact relay, on EtherCAT bus

Electrical characteristics

Supply voltage: +5 V +/- 5% 110 mA without encoder
MTBF: 70 000 h 50 °C

Mechanical characteristics

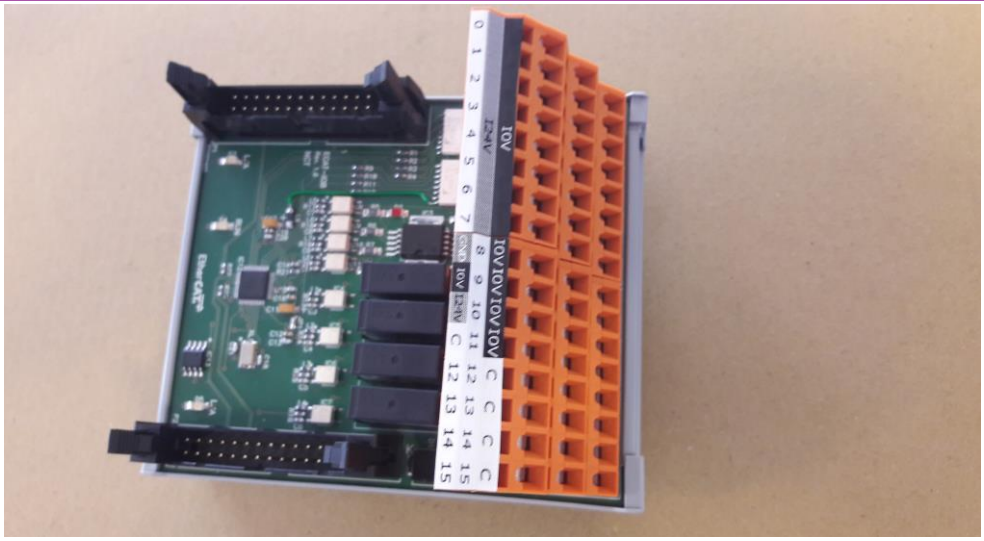
Dimensions: 88×108×56 mm
Weight: kg

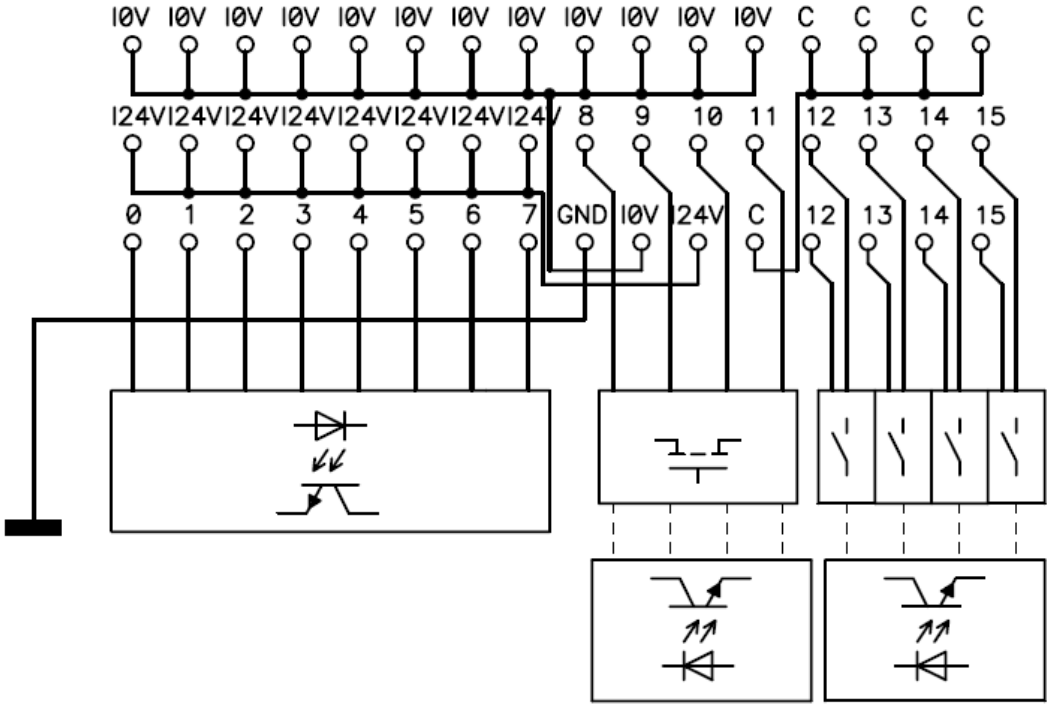
Environmental characteristics

Operating temperature: +0 °C … +50 °C
Storage temperature: -24 °C … +85 °C
Operating relative humidity: max. 95% (no condensation)
Storage relative humidity: max. 95% (no condensation)
Sea-level altitude: -300 m … +3000 m
Shock resistance: 15 g / 0,33 ms
Vibration: 1 g / 5 … 2000 Hz

EMC

EN 61000-4-2 (ESD)
EN 61000-4-4 (burst)
EN 61000-4-10 (voltage drop, interruption, change)





I0V	I0V	I0V	I0V	I0V	I0V	I0V	I0V	I0V	I0V	I0V	I0V	C	C	C	C
I24V	I24V	I24V	I24V	I24V	I24V	I24V	I24V	8	9	10	11	12	13	14	15
0	1	2	3	4	5	6	7	GND	I0V	I24V	C	12	13	14	15

Description

1. Digital inputs

The IO8 is able to receive 8 input signals (I0 … I7) of nominal 24 VDC. Each line has galvanic isolation.

The values of the digital inputs can be read out via EtherCAT (LVDS) bus.

Low (0): 0 … 10 VDC

High (1): 15 VDC … 30 VDC

The common negative potential of the inputs must be connected to the I0V.

The unit can be connected (grounded) to the frame at the GND point.

2. Digital transistor outputs

The IO8 module can issue 4 output signals (O0 … O3) of nominal 24 VDC. Each line has galvanic isolation.

The function of the red LED on the module is to indicate overload.

The unit is rated for a maximum current of 0.5 A per line. The lines are overload protected.

The values of the digital outputs can be written in via EtherCAT (LVDS) bus.

Low (0): 0 VDC

High (1): 24 VDC

The common negative potential of the inputs must be connected to the I0V.

3. Relay outputs

The IO8 module actuates 4 normally-open contact relays (Output Relay 0 … 3). The drive of each relay is galvanically isolated.

A separate power supply of 24 VDC must be provided for pulling the relay coils (I24V and I0V).

The relays can be switched via EtherCAT (LVDS).

Low (0): the relay switched off

High (1): the relay switched on

Loadability of the contacts:

in the case of 24 VDC:	5 A at ohmic load
	1,2 A at inductive load
in the case of 230 VAC:	5A at ohmic load
	1,2A at inductive load

The unit can be connected (grounded) to the frame at the GND point.

In the case of inductive load, protective elements (diode, resistance-capacity filter, etc.) must be used!!!

2. EtherCAT electronics

It is the EtherCAT-LVDS bus via which the module communicates with the control system. The module must be connected to the EPU unit or to a module connected to the EPU unit already, via the LVDS input. The LDSS output connector can be used to connect a subsequent module.

The LEDs on the card and their functions

Link/Act In: the EtherCAT input port works

Link/Act Out: the EtherCAT output port works

Run: when the LED light is off: the unit is in INIT status

when the LED light is blinking: the unit is in PRE-OPERATIONAL status

when the LED light flashes: the unit is in SAFE-OPERATIONAL status

when the LED light is on: the unit is in OPERATIONAL status