

## I/O-08B-24V-2A-SAFETY

### General

The I/O-08B-24V SAFETY I/O module allows you to connect 8 circuits with up to 24V/2A.

There are 8 optical coupler inputs 12-48V available (4 inputs each on a common counter potential).

The functions of all the inputs and outputs can be freely programmed using the software. The module is designed for use in motor control units with the Totmann function. It is equipped with self-monitoring safety functions. The free-running watchdog timer in the microcontroller switches off the outputs safely in the following situations:

- The module's operating voltage fails.
- Deviation below or above the permitted operating voltage range.

### Inputs/outputs

- 8 relay outputs, each 24V/2A
- 8 optical coupler inputs

### Function displays

- 1 red LED indicates the operating voltage
- 1 yellow flashing LED indicates the communication with the Master.
- 8 green LED indicates the output states

### Connections

- 1 connection for the subnet (BUS A and B, RS-485)
- 1 connection for the operating voltage (U<sub>b</sub>, 0V)
- 8 outputs (two each on a common connection)
- 8 inputs (4 each on a common reference terminal)
- 2 P-COM connections (subnet and operating voltage)

### Design

- Light grey plastic casing, can be snapped onto 35 mm DIN rail mounting 4 separating units

### Special function DIP switch 1 = emergency mode

- Switch at "OFF" = BUS mode
- Switch at "ON" = emergency mode (8x surge switching function: input E1 switches output A1, input E2 switches output A2, etc.)



- The permitted module operating current is exceeded.
- Errors in the microcontroller's program sequence.
- Failure of the cyclical safety polling by the system's master (over 500 ms).
- Bus signal failure or fault (over 500 ms).
- If faulty data is received via the bus.

The inputs and outputs are galvanically separated from the operating voltage.

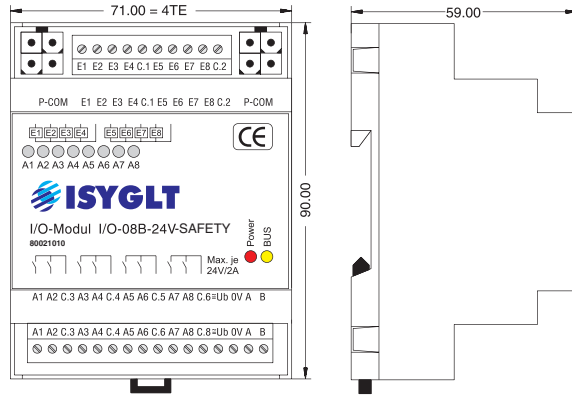
## Technical data

<b>Type</b>	<b>I/O-08B-24V-2A-SAFETY</b>
Art. Nr.	80021010
Operating voltage	12V to 35V DC or 12V to 27V AC
Input current	12V DC = 180mA, 24V DC = 80mA, 35V DC = 55mA 12V AC = 105mA, 24V AC = 70mA, 27V AC = 65mA (respectively all relays attracted)
Inputs	12-48V AC/DC, input current per input 5mA at 24V
Outputs	max. 48V/2A per output
Subnet (RS-485)	max. 5,6V limited by Z-diodes
Dimensions	BxHxT 71x90x59mm (4 separating units)
Weight	179g
Connection	Screw terminals 1,5mm <sup>2</sup> , plug-in
Operating voltage	-10...+50°C
Storage temperature	-25...+70°C
Humidity	0 ...85 % r.F. non condensing
Protection class	IP30
ESD immunity	Category 3 according to IEC-1000-4-2
EMC immunity	Use in typical industrial enviroment. Category 3 according to IEC-1000-4-4 (Test was carried out within a whole system)
CE mark	yes

## Terminal assignment

E1	Input 1	A1	Output 1	A7	Output 7
E2	Input 2	A2	Output 2	A8	Output 8
E3	Input 3	C.3	Common f. A1/A2	C.6	Common f. A7/A8
E4	Input 4	A3	Output 3	Ub	Operating voltage
C.1	Common f. E1-E4	A4	Output 4	0V	Operating voltage
E5	Input 5	C.4	Common f. A3/A4	A	Subnet (BUS A, RS-485)
E6	Input 6	A5	Output 5	B	Subnet (BUS B, RS-485)
E7	Input 7	A6	Output 6		
E8	Input 8	C.5	Common f. A5/A6		
C.2	Common f. E5-E8				

**View**



**Wiring diagram**

