

# PRA-IM16C8 Control interface module, 16x8

## PRAESENSA



The PRA-IM16C8 Control interface module adds configurable and supervised control inputs, voltage-free control outputs and supervised trigger outputs to the PRAESENSA system. These contact inputs and outputs provide the easy logic connectivity of a PRAESENSA system to auxiliary equipment such as fire alarm systems, strobes, indicators, or speaker relays.

The PRA-IM16C8 enclosure allows for DIN rail installation near to the auxiliary equipment for short interconnections. The module only requires a connection to an OMNEO IP-network with Power over Ethernet (PoE) for communication and for power supply combined.

### Functions

#### IP-network connection

- Direct connection to the IP-network. One shielded CAT5e cable is sufficient for Power over Ethernet and for data exchange.
- Connect a second shielded CAT5e cable for dual redundancy of network and of power connection.
- Integrated network switch with two OMNEO ports allows for loop-through connections to adjacent devices that provide PoE. Rapid Spanning Tree Protocol (RSTP) is supported to enable recovery from failing network links.

#### General-purpose control inputs and outputs

- Sixteen control inputs receive contact closure information from external systems with configurable connection supervision.
- Eight relay contacts, voltage-free and with single-pole and double-throw (SPDT), to activate external devices.

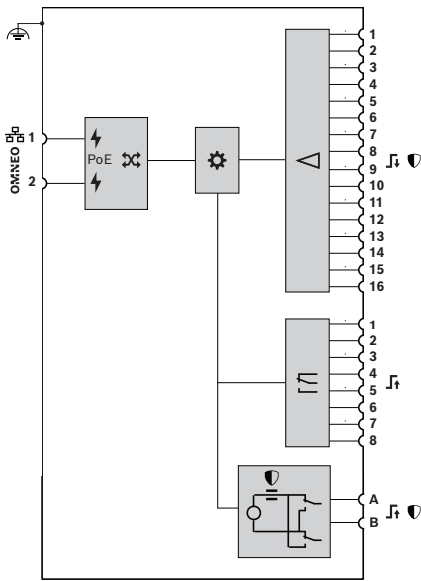
- ▶ Sixteen general purpose inputs for control actions from external switches
- ▶ Eight general purpose relay outputs to activate external control circuits
- ▶ Two supervised trigger outputs for NAC boosters
- ▶ PoE powered device with dual redundant Gigabit network interface
- ▶ LED status indicators for all inputs and outputs

- Two supervised 12 V trigger outputs to trigger a booster for Notification Appliance Circuits (NAC), such as strobes and horns. Supervision happens through polarity reversal in combination with an end-of-line resistor.
- Control input and output functions are configurable in the software.
- LEDs indicate the operational status and the fault status of all inputs and outputs.

#### Installation

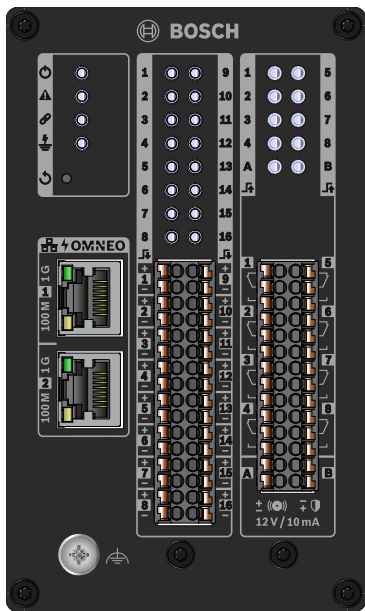
- The compact enclosure for DIN-rail mounting allows for easy installation in most applications and environments.
- Pluggable spring-cage terminal blocks for easy wire connection.
- Connection supervision of control inputs, trigger outputs and network connections, including ground short supervision.

**Connection and functional diagram**



	Power over Ethernet		Controller
	OMNEO network switch		Control input processor
	Supervision		Control output relay
	Supervision current detector		Current limited voltage source

**Front panel indicators and controls**



	Power on	Green
	Device fault present	Yellow

	Network link to system controller present Network link lost	Green Yellow
	Ground fault present	Yellow
	Device reset to factory default	Button
	100 Mbps network 1Gbps network	Yellow Green
	Input contact closed 1-16 Input connection fault 1-16	Green Yellow
	Output contact activated 1-8 Output contact activated A-B Output connection fault A-B	Green Green Yellow
	Identification mode / Indicator test	All LEDs blink

**Front panel connections**

	Network port 1-2 (PoE PD)	
	Control input 1-16	
	Functional ground	
	Control output 1-8	
	Trigger output A-B	

**Architects' and Engineers' Specifications**

The IP-networked control interface module shall be designed exclusively for use with Bosch PRAESENSA systems. The module shall provide an interface to receive control actions from external switches and to trigger external control circuits. The control data communication shall use OMNEO with dual Ethernet ports for redundant network connection, supporting RSTP and loop-through cabling. It shall be capable of receiving Power over Ethernet (PoE) through either one or both network connections. The DIN rail housing provides removable terminal blocks to connect 16 configurable general-purpose control inputs with connection supervision, 8 voltage-free, single-pole double-throw (SPDT) relay contacts and 2 trigger outputs for NAC boosters with reverse polarity



Control input connections	Open / short
Trigger output connections	Open / short
Ground fault	<50 kohm leakage
Controller continuity	Watchdog
Network interface	Link presence
PoE 1-2	Voltage

**Reliability**

Mean time between failures (MTBF) (h) (Telcordia SR-332 Issue 3)	2,200,000 h
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**Environmental**

Operating temperature (°C)	-5 °C – 50 °C
Operating temperature (°F)	23 °F – 122 °F
Storage temperature (°C)	-30 °C – 70 °C
Storage temperature (°F)	-22 °F – 158 °F
Operating relative humidity, non-condensing (%)	5% – 95%
Air pressure (hPa)	560 hPa – 1,070 hPa
Installation altitude (m)	-500 m – 5,000 m
Installation altitude (ft)	-1,640 ft – 16,404 ft
Operating vibration	
Amplitude (mm)	< 0.35 mm
Acceleration (G)	< 2 G
Bump (transport) (G)	< 10 G

**Mechanical**

Dimensions (H x W x D) (mm)	131 mm x 78 mm x 100 mm
Dimensions (H x W x D) (in)	5.2 in x 3.1 in x 4.0 in
IP rating	IP30
Material	Aluminum

Color in RAL	RAL 9017 Traffic black
Weight (kg)	0.57 kg
Weight (lb)	1.30 lb

**Ordering information**

**PRA-IM16C8 Control interface module, 16x8**

Network connected, PoE powered, general purpose control interface module.

Order number **PRA-IM16C8 | F.01U.378.929**

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