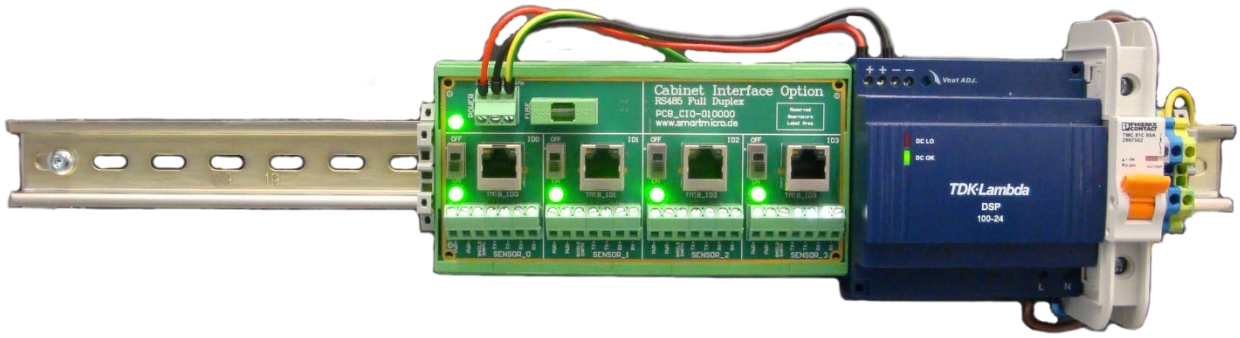
DATASHEET

TRAFFIC MANAGEMENT ACCESSORY

Cabinet Interface Option (CIO)
RS485 Full Duplex



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CONTENT

1 USER SAFETY WARNING

Please read the entire document carefully before using the device.

INSTALLATION

Please pay attention to the details below before installing and connecting the device:

- Only use provided or approved equipment for the operation.
- Only skilled and instructed persons shall install and connect the device.
- All connectors are pin-coded and fit in only one position.
- Be cautious when using the device on or around active roadways and pay attention to moving traffic.
- Make sure that test procedures are in accordance with local safety policies and procedures as well as company practices.

OPERATION

Using a Cabinet Interface Option (CIO) does not influence the sensor performance.

Please note that the device is not waterproof. Take care of proper rain coverage when working outside. Do not operate the device if the device itself or any cables are damaged.

Do not dispose electrical and electronic equipment in household trash.

TECHNICAL SERVICE

Only use provided or approved equipment for operation.

Do not attempt to service or repair this device:

- No user-maintainable parts are contained in the device.
- To avoid electrical shock, do not remove or open the cover.
- Unauthorized opening will void all warranties.
- smartmicro is not liable for any damages or harms caused by unauthorized attempts to open or repair the device.

2 PRODUCT SPECIFICATIONS

The smartmicro Cabinet Interface Option (CIO) is an interface panel that provides power surge protection for up to four radar sensors and a Traffic Management Interface Board (TMIB).

The typical installation of a Cabinet Interface Option (CIO) includes a Traffic Management Interface Board (TMIB) that provides RS485 connectivity to the radar sensors.

The interface panel has individual power on/off switches and LED indicators for each radar sensor to simplify the installation. The Cabinet Interface Option (CIO) provides both electrical connectors for the cables coming in from the four sensors outside the cabinet and multiple stages of electrical surge suppression to protect the cabinet equipment from external surges and noise. This surge protection includes Gas Discharge Tubes (GDTs), Transient Voltage Suppression diodes (TVSs), high-speed resettable electronic fuses (TBUs) and a replaceable fuse. Power is 110 or 220V AC to the replaceable power supply on the interface panel, typically wired from the protected side of the cabinet power distribution. No supplemental surge suppression is required.

The surge protection for power and data signals is designed to be compliant to IEC 61000-4-2 (ESD) and IEC 61000-4-4 (fast transients).

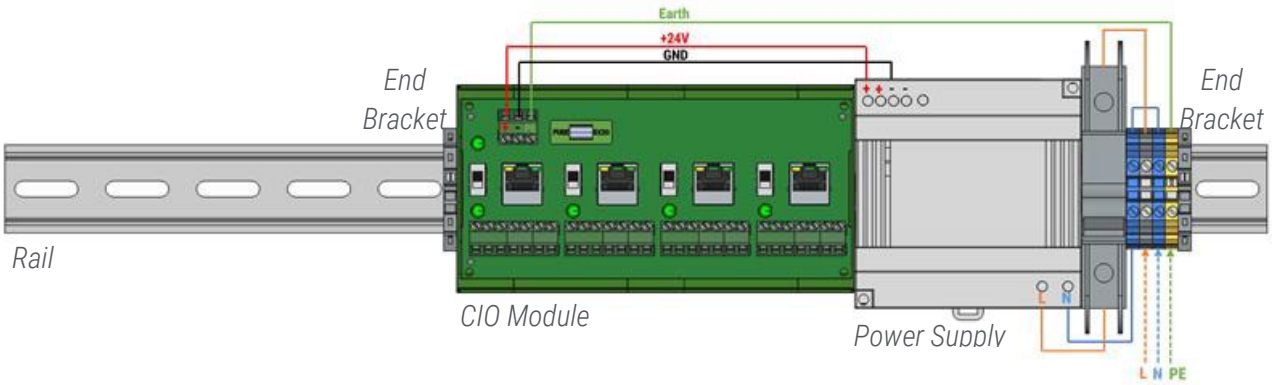
2.1 FEATURES AND APPLICATIONS

The Cabinet Interface Option (CIO) has the following features:

- Inbuilt surge and power protection
- Four LEDs indicate the power status of each sensor/channel
- One LED indicates the status of the main power supply
- Two LEDs per sensor to indicate RS485 communication link and activity

2.2 SYSTEM LAYOUT

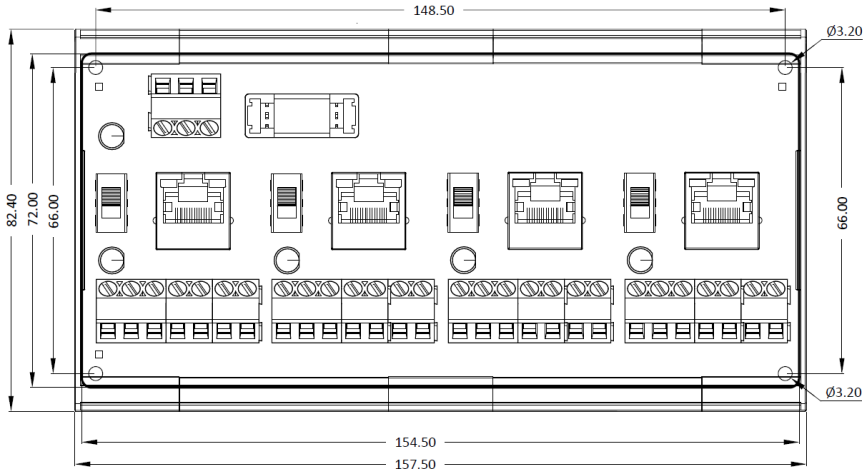
The CIO (IDX: 05.1018.0000) consists of a Rail, one CIO Module, power supply, circuit breaker, terminal blocks and end brackets. It comes with power signals pre-wired from the factory.



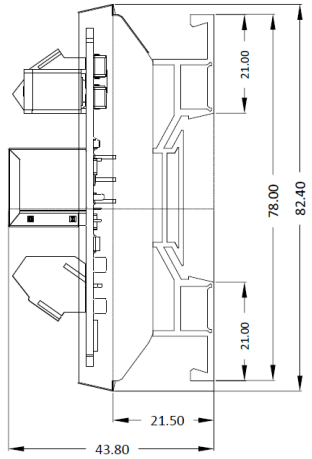
Circuit Breaker & Terminal Blocks

2.3 PRODUCT DIMENSIONS

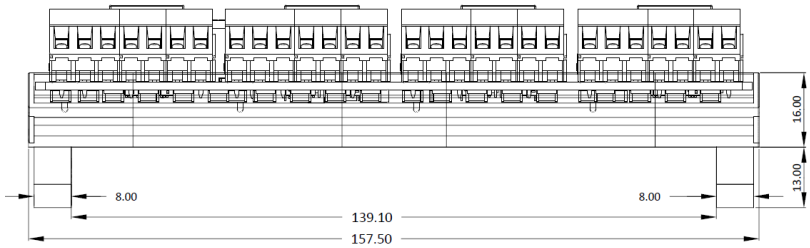
All values are given in mm.



Product Front Side



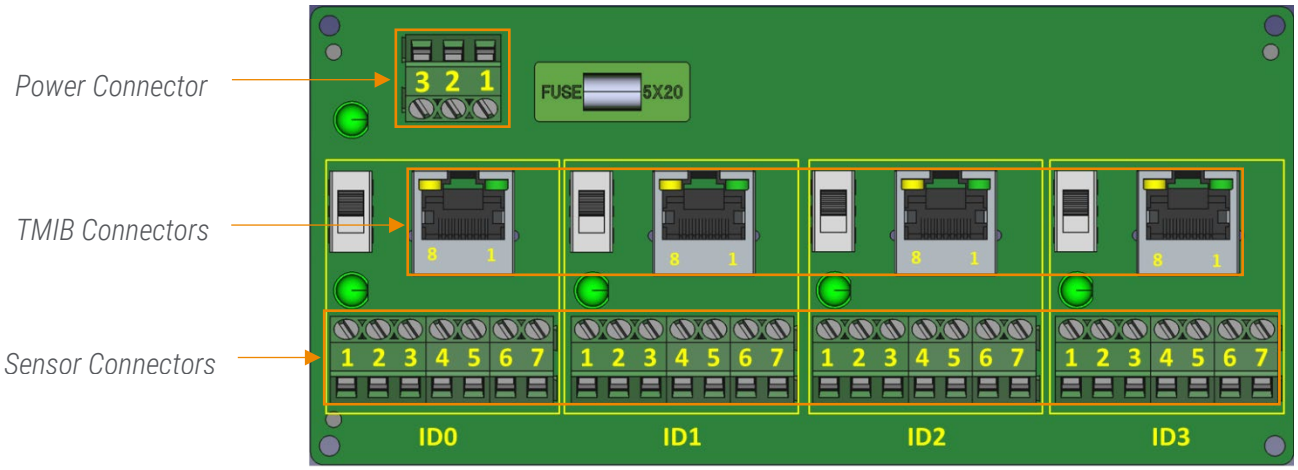
Product Right Side



Product Top Side

2.4 PRODUCT CONNECTORS

The Cabinet Interface Option (CIO) Module has connectors (1x screw terminal block) for input power, a sensor (4x screw terminal block) and to a TMIB (4x RJ45).



Sensor connector pin out model giving pin descriptions:

Connector	Pin No.	Function
Input Power Connector	1	Cabinet Earth
	2	Negative Power Supply (GND)
	3	Positive Power Supply (VCC)
TMIB Connectors	1	Sensor RS485 TX L
	2	Sensor RS485 TX H
	3	
	4	
	5	TMIB GND
	6	
	7	Sensor RS485 RX H
	8	Sensor RS485 RX L
Sensor Connetors	1	Sensor VCC
	2	Sensor GND
	3	Shield of the cable
	4	Sensor RS485 TX H
	5	Sensor RS485 TX L
	6	Sensor RS485 RX H
	7	Sensor RS485 RX L

3 CHARACTERISTICS

Parameter		Typical Values (min… max.)
Temperature		(-40…+85°C) | (-40…+185°F)
Line Voltage		110 or 220V
Supply Voltage		24V
Input Current		(max. 5A)
Outline Dimensions	Height	82.4mm | 32.4in
	Width	157.5mm | 6.2in
	Depth	43.8mm | 17.2in
Weight		181g | 6.4oz
Supported Cables		AWG 24-12
Surge Protection of Power Lines, Data Lines & Relay Channels		Compliant to IEC 61000-4-2 (ESD) and IEC 61000-4-4 (fast transients)

4 COMPLIANCES

The Cabinet Interface Option (CIO) complies with the following regulations:

- IEC 61000-4-2 (ESD)
- IEC 61000-4-4 (fast transients)
- NEMA TS 2-2003[1]

[1] Not available yet.

5 LEGAL DISCLAIMER NOTICE

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