

CANopen Slave Device Digital Inputs and Outputs

DAT 7130

FEATURES

- Field bus data acquisition
- CAN open protocol
- Baud rate and Node ID configurable by dip-switch
- 8 digital inputs
- 4 relay outputs (2 SPDT + 2 SPST)
- LEDs of signalling for inputs and outputs status
- LEDs of signalling for power supply and error status
- 3 ways Galvanic Isolation
- Connection by removable screw terminals
- CE/UKCA mark
- DIN rail mounting in compliance with EN-50022



GENERAL DESCRIPTION

The device DAT 7130 is able to acquire up to 8 digital inputs and to drive up to 4 relay outputs. The data are transmitted by the CANopen protocol. The connection is made by removable screw-terminals. The device realizes a full electrical isolation between the lines, introducing a valid protection against the effects of all ground loops eventually existing in industrial applications. The device is housed in a self-extinguishing plastic enclosure which, thanks to its thin profile of 22.5 mm only, allows a high density mounting on EN-50022 standard DIN rail.

USER INSTRUCTIONS

Before to install the device, please read the "Installation Instruction" section. Connect power supply, serial bus, digital inputs and outputs as shown in the "Wiring" section. The LEDs state depends on the working condition of the device: see the "Light Signalling" section to verify the device working state. To simplify handling or replacing of the device, it is possible to remove the wired terminals even with the device powered.

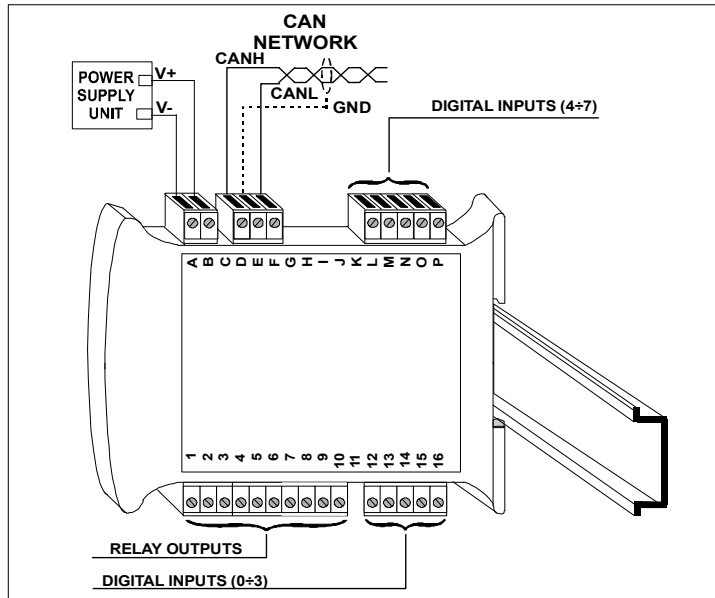
TECHNICAL SPECIFICATIONS (Typical @ 25 °C and in the nominal conditions)

DIGITAL INPUTS (WET CONTACTS)	CAN OPEN INTERFACE	GENERAL SPECIFICATIONS
Channels 8 Input voltage (bipolar) OFF State 0 ÷ 3 V ON State 10 ÷ 30 V N° of counters 8 @ 300 Hz (32 bits) Min. Pulse width 1 ms Impedance 4.7 KΩ Sample time 5 ms	Device profile in compliance with the CiA DS 301 and CiA DS 401 standards. Data Transmission Baud rate up to 1 Mbps Max. Distance in function of the Baud rate	Supply Voltage 18 .. 30 Vdc Polarity inversion protection 60 Vdc max Max. Consumption @24Vdc 70 mA Max Consumption 100 mA ISOLATION (test time 1 minute) Power Supply / CAN 2000 Vac, 50 Hz Outputs / Power supply 2000 Vac, 50 Hz Inputs / Power supply 2000 Vac, 50 Hz Outputs / CAN 2000 Vac, 50 Hz Input / Output 2000 Vac, 50 Hz Inputs / CAN 2000 Vac, 50 Hz
DIGITAL OUTPUTS		ENVIRONMENTAL CONDITIONS Operative Temperature -10°C .. +60°C Storage Temperature -40°C.. +85°C Humidity (not condensed) 0 .. 90 % Maximum Altitude 2000 m Installation Indoor Category of installation II Pollution Degree 2
Channels 4 Type n° 2 SPDT relays n° 2 SPST N.O. relays Max Switching power (resistive load) per contact 2 A @ 250 Vac 2 A @ 30 Vdc Max.voltage 250 Vac (50 / 60 Hz), 30 Vdc		CONNECTIONS CAN interface Removable screw-terminals Outputs/Inputs Removable screw-terminals Power Supply Removable screw-terminals MECHANICAL SPECIFICATIONS Material Self-extinguish plastic IP Code IP20 Wiring wires with diameter 0.8÷2.1 mm ² /AWG 14-18 Tightening Torque 0.8 N m Mounting in compliance with DIN rail standard EN-50022 Weight about 210 g.
		CERTIFICATIONS EMC (for the Industrial Environments) Immunity EN 61000-6-2 Emission EN 61000-6-4 UKCA (ref S.I. 2016 N°1091) Immunity BS EN 61000-6-2 Emission BS EN 61000-6-4

INSTALLATION INSTRUCTIONS

The device is suitable to be mounted on DIN rail, in vertical position. For a correct working and a long life of the device, read the following indications. In case of the devices are mounted side by side, please leave a spacing of about 5mm between them if the temperature in the cabinet is higher than 45 °C and supply voltage >27Vdc. Avoid to place raceways or other objects which could obstruct the ventilation slits. It is suggested to avoid that devices are mounted above appliances generating heat; their ideal place should be in the lower part of the panel. Avoid to install the devices in a site where vibrations are present. It is recommended to use shielded cable for connecting signals. The shield must be connected to an earth wire provided for this purpose. Moreover it is suggested to avoid routing conductors near power signal cables.

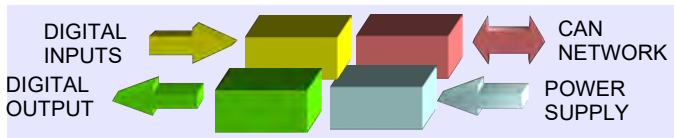
TERMINALS OVERVIEW



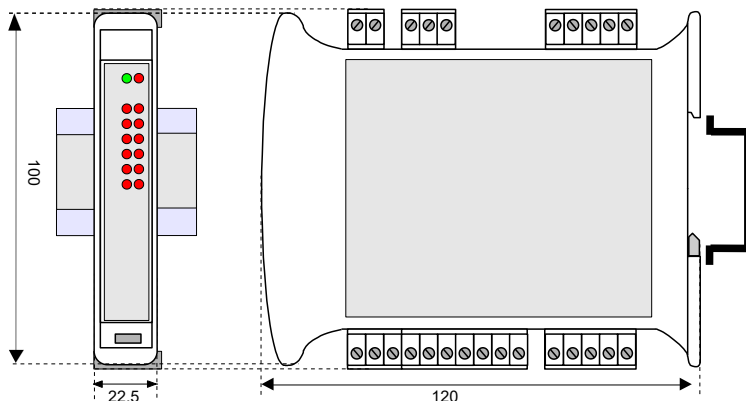
LIGHT SIGNALLING

LED	COLOUR	STATE	DESCRIPTION
RUN	GREEN	ON	Device in Operational mode
		BLINKING	Device in Pre-Operational mode
		SLOW BLINKING	Device stopped
ERR	RED	OFF	No error
		BLINKING	Communication error
In	RED	ON	State 1 Digital Inputs.
		OFF	State 0 Digital Inputs.
On	RED	ON	State 1 Digital Outputs.
		OFF	State 0 Digital Outputs.

ISOLATION STRUCTURE



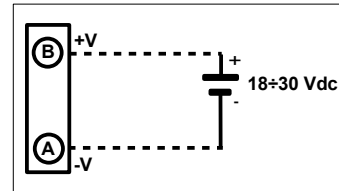
MECHANICAL DIMENSIONS (mm)



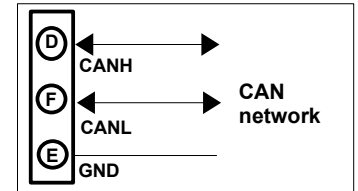
The symbol reported on the product indicates that the product itself must not be considered as a domestic waste. It must be brought to the authorized recycle plant for the recycling of electrical and electronic waste. For more information contact the proper office in the user's city, the service for the waste treatment or the supplier from which the product has been purchased.

WIRING

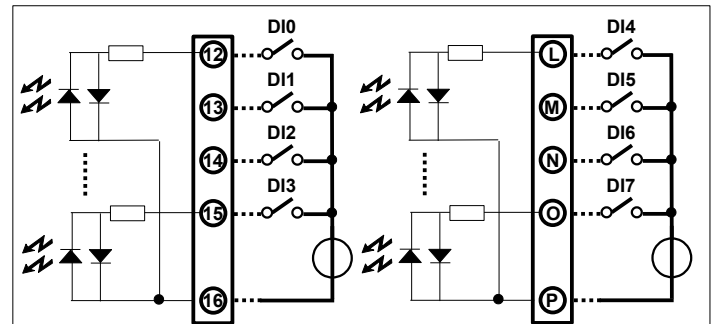
POWER SUPPLY



CAN NETWORK

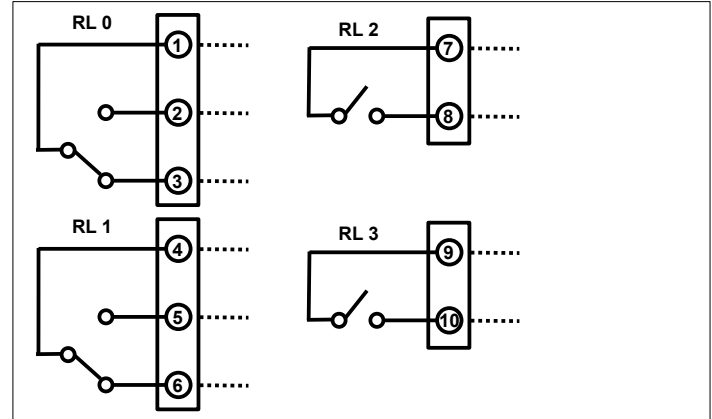


DIGITAL INPUTS



NOTE: Input channels are not insulated between them

RELAY OUTPUTS



DIP-SWITCH CONFIGURATION TABLE

TAB.1 Address setting 1÷127 (Pos.1 LSB; Pos.7 MSB)

SWA	1	2	3	4	5	6	7	Nodo ID
ON	ON	ON	ON	ON	ON	ON	ON	Nodo ID 1
ON	ON	ON	ON	ON	ON	ON	OFF	Nodo ID 2
ON	ON	ON	ON	ON	ON	OFF	ON	Nodo ID 3
ON	ON	ON	ON	ON	OFF	ON	ON	Nodo ID 4
ON	ON	ON	ON	OFF	ON	ON	ON	Nodo ID 5
ON	ON	ON	OFF	ON	ON	ON	ON	...
ON	ON	OFF	ON	ON	ON	ON	ON	...
ON	OFF	ON	ON	ON	ON	ON	ON	...
ON	ON	ON	ON	ON	ON	OFF	ON	Nodo ID 127

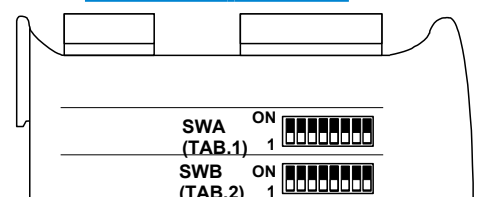
TAB.2 Bit rate setting (Pos.5 LSB; Pos.8 MSB)

SWB	5	6	7	8	Bit rate
ON	ON	ON	ON	ON	10 Kbps
ON	ON	ON	ON	OFF	20 Kbps
ON	ON	ON	OFF	ON	50 Kbps
ON	ON	ON	OFF	OFF	125 Kbps
ON	ON	OFF	ON	ON	250 Kbps
ON	ON	OFF	ON	OFF	500 Kbps
ON	ON	OFF	OFF	ON	800 Kbps
ON	ON	OFF	OFF	OFF	1 Mbps

TAB.3 Safe mode setting

SWB	1	Safe mode
ON	ON	Normal Safe Mode
ON	OFF	Fixed Safe Mode

DIP-SWITCH POSITION



HOW TO ORDER

“ DAT 7130 “