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CANopen Server 8 digital inputs + 4 relay 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)

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

DIGITAL OUTPUTS

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

CAN OPEN INTERFACE

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

GENERAL SPECIFICATIONS

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

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

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 mm² /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

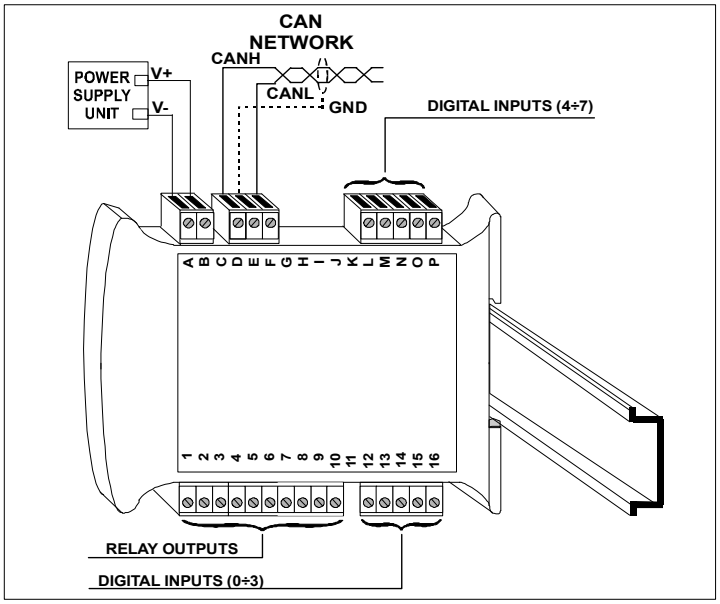
UKCA (ref S.I. 2016 N°1091)

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.

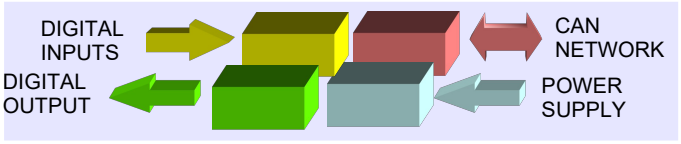
TERMINALS OVERVIEW



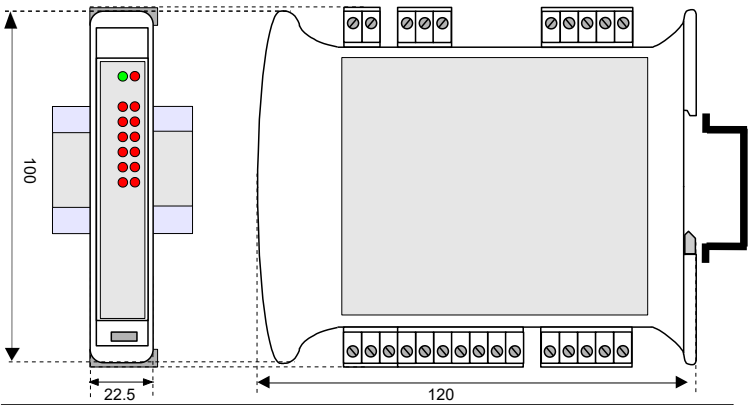
LIGHT SIGNALLING

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
I *n*	RED	ON	State 1Digital Inputs.
		OFF	State 0 Digital Inputs.
O *n*	RED	ON	State 1Digital Outputs.
		OFF	State 0 Digital Outputs.

ISOLATION STRUCTURE



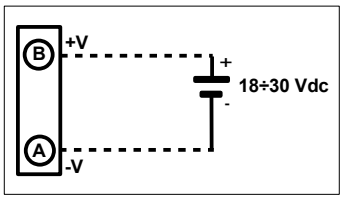
MECHANICAL DIMENSIONS (mm)



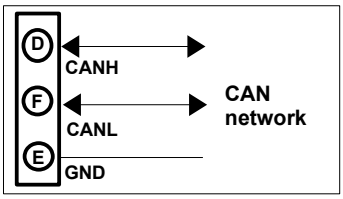
The symbol reported on the product indicates that the product itself must not be considered as a domestic waste. It must be brought to the authorized recycle plant for the recycling of electrical and electronic waste. For more information contact the proper office in the user's city, the service for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

WIRING

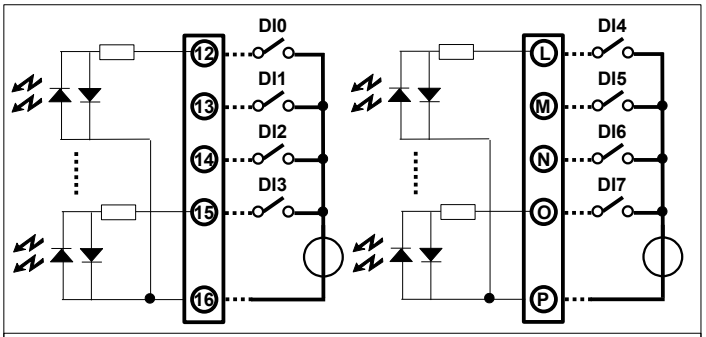
POWER SUPPLY



CAN NETWORK

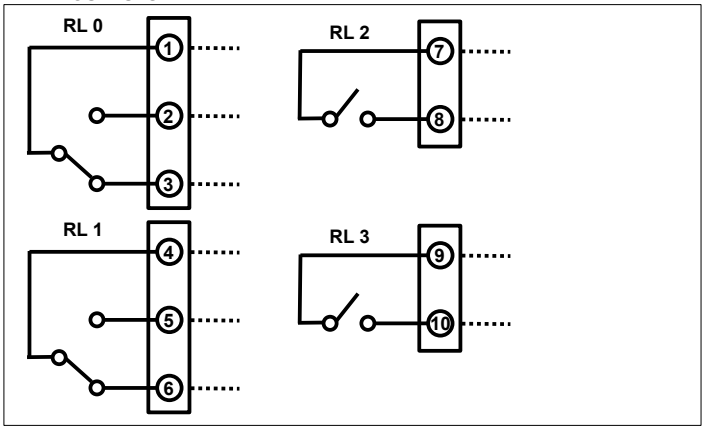


DIGITAL INPUTS



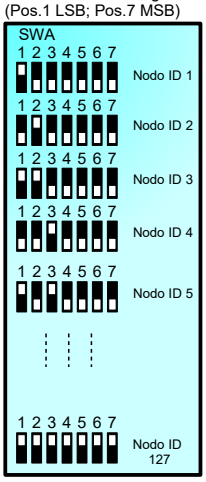
NOTE: Input channels are not insulated between them

RELAY OUTPUTS

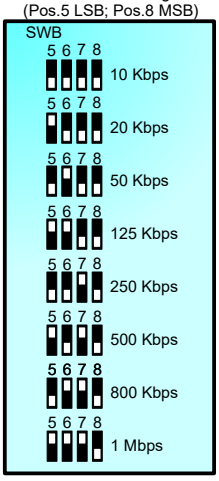


DIP-SWITCH CONFIGURATION TABLE

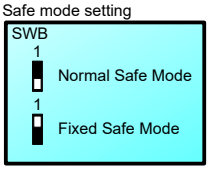
TAB.1 Address setting 1÷127 (Pos.1 LSB; Pos.7 MSB)



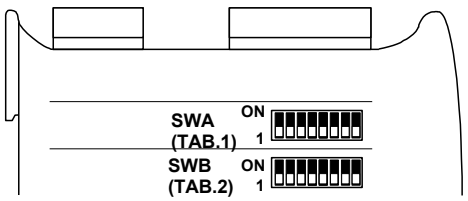
TAB.2 Bit rate setting (Pos.5 LSB; Pos.8 MSB)



TAB.3 Safe mode setting



DIP-SWITCH POSITION



HOW TO ORDER

“ DAT 7130 “