



FEATURES

- Field Bus data acquisition
- CAN open protocol
- Baud rate and ID Node programmable by dip-switch
- 8 digital inputs
- 8 digital outputs, PNP type
- Led of signalling for inputs and outputs status
- Over-temperature and over-current protection
- Four ways 2000 Vac galvanic isolation
- EMC compliance – CE Mark
- In compliance to EN-50022 DIN rail mounting

GENERAL DESCRIPTION

The device DAT 7188 is able to acquire up to 8 digital inputs and to drive up to 8 transistor outputs. The data are transmitted by the CANopen protocol. The 2000 Vac galvanic isolation between inputs, outputs, power supply and data line eliminates the effects of all ground loops eventually existing and allows the use of the device in heavy environmental conditions found in industrial applications. The DAT 7188 is housed in a rough self-extinguishing plastic enclosure of 22.5 mm thickness, suitable for DIN rail mounting in compliance with the EN 50022 standard.

COMMUNICATION PROTOCOLS

On the DAT7000 modules the following communication protocol is implemented:

CANopen Protocol: one of the most used standard communication protocol; it allows to interface the modules of DAT7000 series directly to the CAN Controllers that accept devices in compliance with the **CiA DS 301** and **CiA DS 401** standards. For communication setting, refer to the User manual.

OPERATING INSTRUCTIONS

Before to install the device, please read carefully the "Installation instructions" section.

Connect the power supply, the data line and the I/O signals as shown in the "Wiring" section.

Refer to the "Led signalling" section to verify the correct working of the device.

To make easy the maintenance or the substitution of the device, it is possible the "hot swap" of the terminals.

INSTALLATION INSTRUCTIONS

The device DAT 7188 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 about 5mm between in the following situations:

- Temperature in the cabinet higher than 45 °C and high 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.

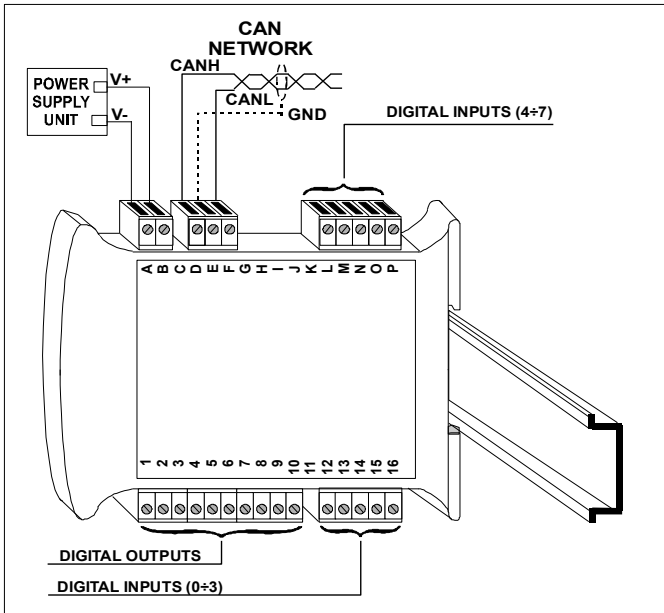
Avoid to install the devices in a site where vibrations are present.

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.

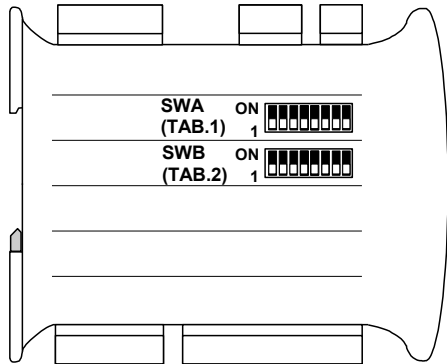
TECHNICAL SPECIFICATIONS (Typical @ 25 °C and under nominal conditions)

Device profile In compliance with the CiA DS 301 and CiA DS 401 standard.	Digital Inputs Channels 8 Input voltage (bipolar) OFF State 0 ÷ 3 V ON State 10 ÷ 30 V N° of counters 8 @ 300 Hz Min. Pulse width 1 ms Impedance 4.7 KΩ	Power supply Supply Voltage 10 .. 30 Vdc Current consumption 45 mA @ 24 Vdc Reverse Polarity protection 60 Vdc max Isolation Voltage 2000 Vac 50 Hz, 1 min. (Inputs/Outputs/Can Network/Power supply)
	Digital Outputs Channels 8 Type PNP Voltage 10.5÷30 Vdc Max. Load 500 mA per channel(*) 1 A per module Inductive Load 48 Ω – 2H max (*) Protection against over-current and over-temperature Short circuit current 1.7 A max.	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
	Sample time 5 ms Data Transmission Baud rate up to 1 Mbps Max. Distance in function of the Baud rate	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 150 g.
		EMC (for industrial environments) Immunity EN 61000-6-2 Emission EN 61000-6-4

CABLING

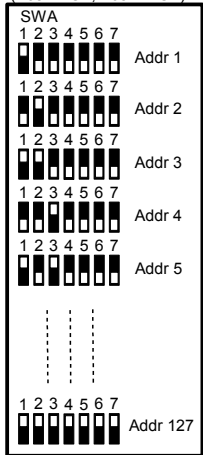


DIP SWITCH POSITION

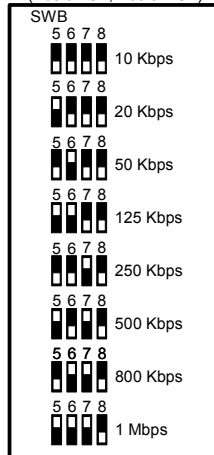


DIP-SWITCH CONFIGURATION TABLES

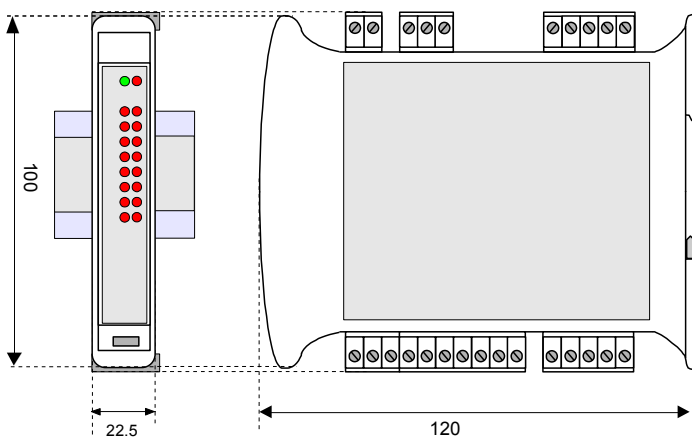
TAB.1 Address setting 1+127
(Pos.1 LSB; Pos.7 MSB)



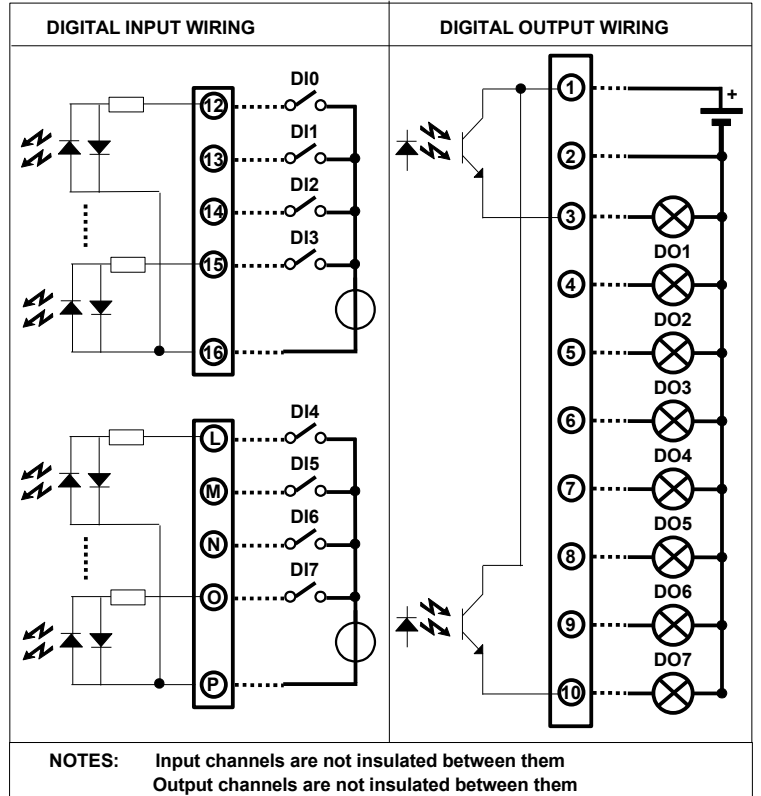
TAB.2 Bit rate setting
(Pos.5 LSB; Pos.8 MSB)



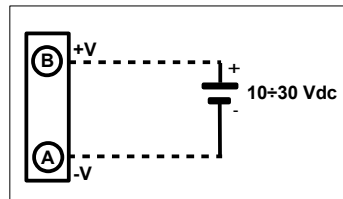
MECHANICAL DIMENSIONS (mm)



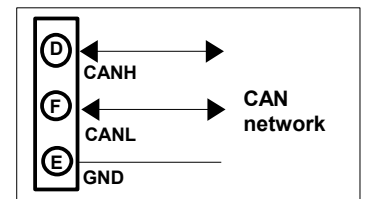
WIRING



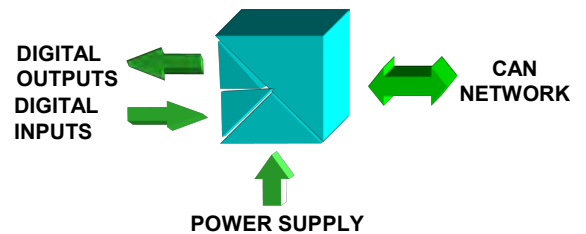
POWER SUPPLY WIRING



CAN NETWORK WIRING



ISOLATION STRUCTURE



LED SIGNALLING

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

HOW TO ORDER
DAT 7188