



FEATURES

- Field Bus data acquisition
- CAN open protocol
- Baud rate and ID Node programmable by dip-switch
- Configurable input for V and mA
- Four ways 2000 Vac galvanic isolation
- EMC compliance – CE Mark
- In compliance with EN-50022 DIN rail mounting

GENERAL DESCRIPTION

The device DAT 7015 is able to acquire up to 4 voltage signals up to ± 10 V or current signals up to ± 20 mA. The data are transmitted by the CANopen protocol.

By means of 16 bit converters, the device guarantees high accuracy and a stable measures both versus time and temperature.

The 2000 Vac galvanic isolation between inputs, 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 7015 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 Input 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 7015 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.

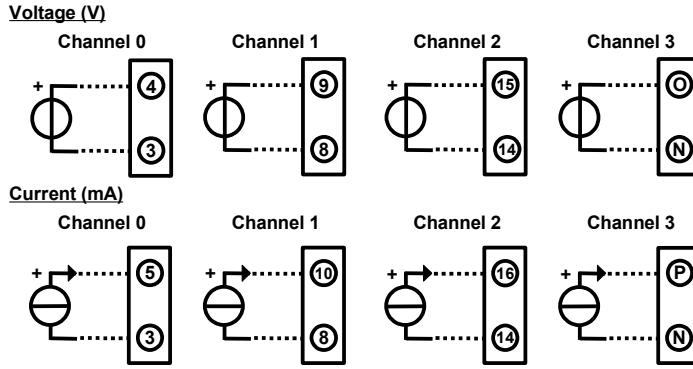
It is recommended to use shielded cable for connecting signals. The shield must be connected to an earth wire provided for this purpose. Moreover it is suggested to avoid routing conductors near power signal cables.

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

Input type	Min	Max	Input Calibration		Power Supply		
Voltage Volt	- 10 V	+10 V	Volt	±0.05 % f.s.	Supply Voltage	10 .. 30 Vdc	
			mA	±0.05 % f.s.	Current consumption	45 mA @ 24 Vdc	
Current mA	-20 mA	+20 mA	Input impedance		Polarity inversion protection	60 Vdc max	
			Volt	>= 1 MΩ	Isolation Voltage		2000 Vac 50 Hz, 1 min. (Inputs/Can Network/Power supply)
			Current	~ 22 Ω	Environmental Conditions		
			Thermal drift		Operative Temperature	-10°C .. +60°C	
			Full scale	± 0.01 % / °C	Storage Temperature	-40°C.. +85°C	
			Sample time		Humidity (not condensed)	0 .. 90 %	
			40 ms	Data Transmission		Maximum Altitude	2000 m
			Data Transmission		Installation	Indoor	
			Baud rate	up to 1 Mbps	Category of installation	II	
			Max. Distance	in function of the Baud rate	Pollution Degree	2	
					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.	
Device profile					EMC (for industrial environments)		
In compliance with the CiA DS 301 and CiA DS 401 standard.					Immunity	EN 61000-6-2	
					Emission	EN 61000-6-4	

WIRING

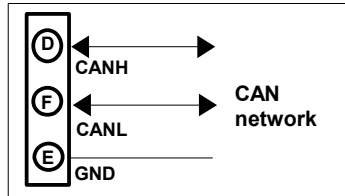
INPUT WIRING



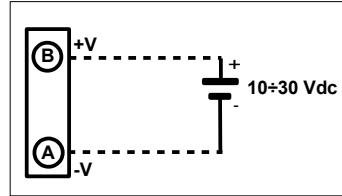
Terminals 3,8,14, and N = input negative reference

NOTES: the input channels are not insulated between them

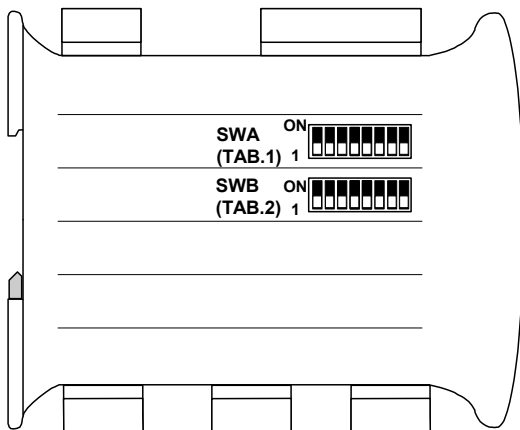
CAN NETWORK WIRING



POWER SUPPLY WIRING



DIP SWITCH POSITION



DIP-SWITCH CONFIGURATION TABLES

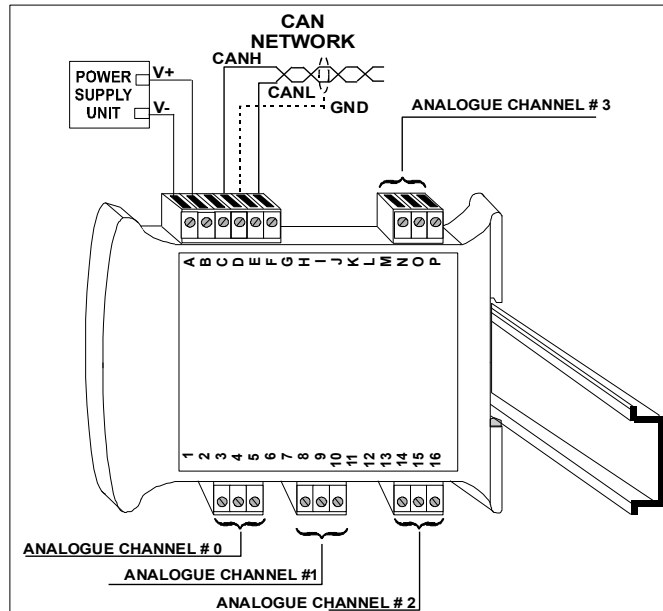
TAB.1 Address setting 1-127
(Pos.1 LSB; Pos.7 MSB)

SWA	1	2	3	4	5	6	7	Addr
1	0	0	0	0	0	0	0	Addr 1
1	0	0	0	0	0	0	1	Addr 2
1	0	0	0	0	0	1	0	Addr 3
1	0	0	0	0	1	0	0	Addr 4
1	0	0	0	1	0	0	0	Addr 5
1	0	0	1	0	0	0	0	...
1	0	1	0	0	0	0	0	...
1	1	0	0	0	0	0	0	Addr 127

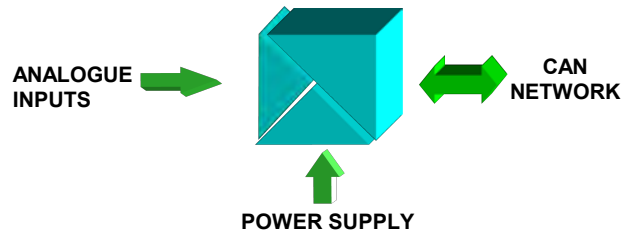
TAB.2 Bit rate setting
(Pos.5 LSB; Pos.8 MSB)

SWB	5	6	7	8	Bit rate
0	0	0	0	0	10 Kbps
0	0	0	1	0	20 Kbps
0	0	1	0	0	50 Kbps
0	1	0	0	0	125 Kbps
0	1	0	1	0	250 Kbps
0	1	1	0	0	500 Kbps
1	0	0	0	0	800 Kbps
1	0	0	1	0	1 Mbps

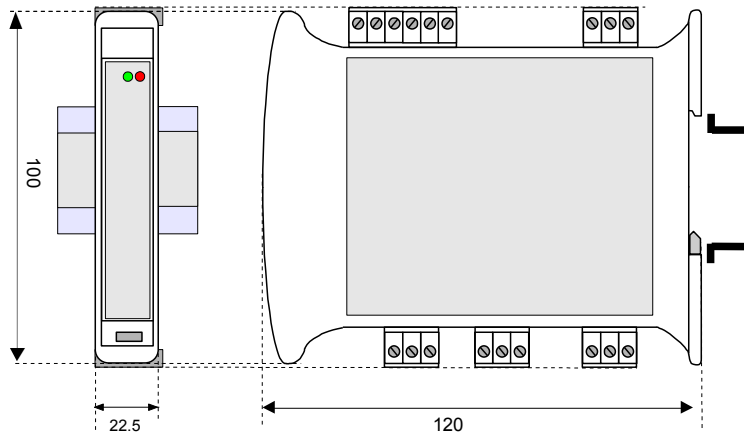
CABLING



ISOLATION STRUCTURE



MECHANICAL DIMENSIONS (mm)



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
		BLINKING	Invalid configuration

HOW TO ORDER

DAT 7015