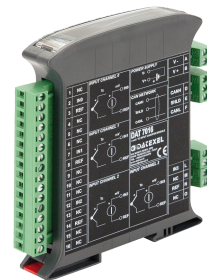


CANopen Server 4 isolated output channels for mA and Volt

DAT 7024

FEATURES

- Field bus data acquisition
- CAN open protocol
- Baud rate and Node ID configurable by dip-switch
- 4 isolated output channels
- Configurable Analogue Outputs for mA and Volt
- Isolated power source for each channel to power passive loads
- 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 DAT7024 device is a slave unit that can generate up to 4 analogue output signals. The data are transmitted by the CAN open protocol. To the outputs it is possible to connect active or passive current loop up to 20 mA or voltage signals up to 10 V.

The output channels are electrically isolated from each other.

For each channel it is provided an isolated power source for powering passive current loop.

The device guarantees high accuracy and a stable measure versus time and temperature.

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 and analogue 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)

OUTPUT			CAN OPEN INTERFACE		GENERAL SPECIFICATIONS		
Output Type	Min	Max					
Current mA	0 mA	+20 mA	Device profile in compliance with the CiA DS 301 and CiA DS 401 standards.		Supply Voltage	18 .. 30 Vdc	
Voltage Volt	0 V	+10 V			Data Transmission		Polarity inversion protection
			Baud rate	up to 1 Mbps	Consumption (Not Operative Aux)	@24Vdc 90 mA typ	
			Max. Distance	in function of the Baud rate	Max. Consumption @24Vdc(**)	110 mA max	
Output Accuracy (1)			ISOLATION (test time 1 minute)				
mA		± 10 uA	Power Supply / CAN				1500 Vac, 50 Hz
Volt		± 5 mV	Outputs / Power supply				1500 Vac, 50 Hz
Load Resistance			Outputs / CAN				1500 Vac, 50 Hz
mA		≤ 500 Ω	Output / Output				1500 Vac, 50 Hz
Volt		≥ 5 kΩ	ENVIRONMENTAL CONDITIONS				
Thermal drift (1)			Operative Temperature				-10°C .. +60°C
Full Scale		± 0,01 %/°C	Storage Temperature				-40°C.. +85°C
Auxiliary Supply (for each channel)			Humidity (not condensed)				0 .. 90 %
		≥ 12 Vdc @ 20 mA	Maximum Altitude				2000 m
Rise Time (from 10% to 90%)			Installation				Indoor
		15 ms	Category of installation				II
Sampling Time			Pollution Degree				2
		50 ms	CONNECTIONS				
			CAN interface				Removable screw-terminals
			Outputs				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 150 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

(1) Referred to output Span (difference between max. and min. values)

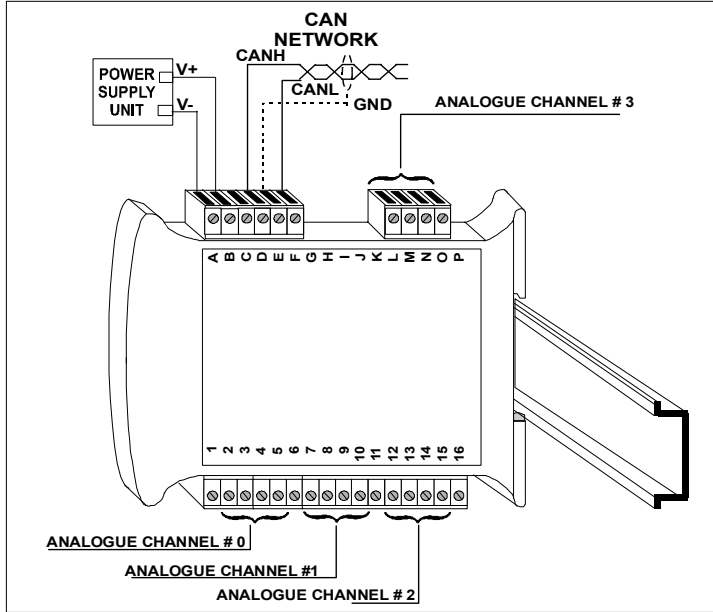
(**) 4 Operative Auxiliary Supply @20mA

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 about 5mm between in the following situations:

- Temperature in the cabinet higher than 45 °C and supply voltage 20 Vdc.
- 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.

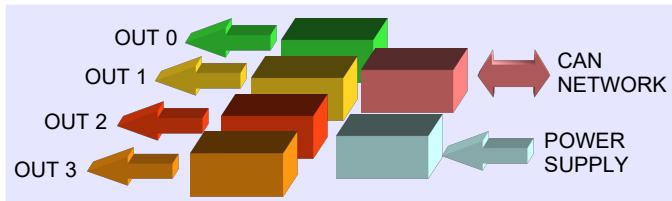
TERMINALS OVERVIEW



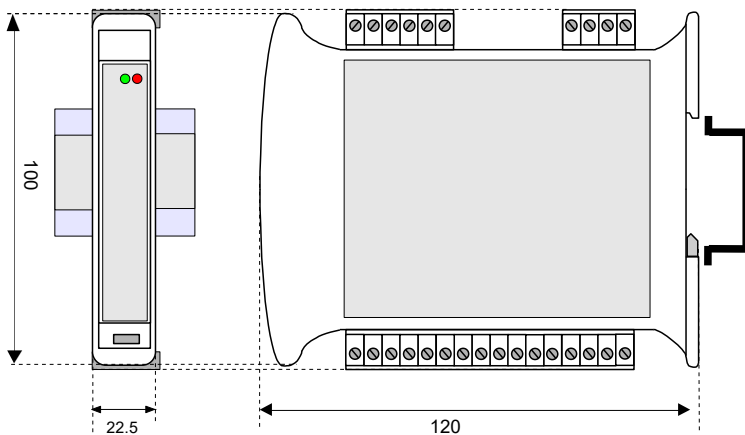
LIGHT SIGNALLING

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

ISOLATION STRUCTURE



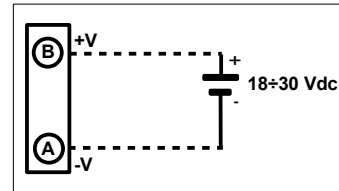
MECHANICAL DIMENSIONS (mm)



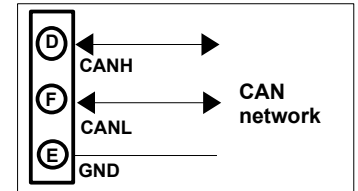
The symbol reported on the product indicates that the product itself must not be considered as a domestic waste. It must be brought to the authorized recycle plant for the recycling of electrical and electronic waste. For more information contact the proper office in the user's city, the service for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

WIRING

POWER SUPPLY

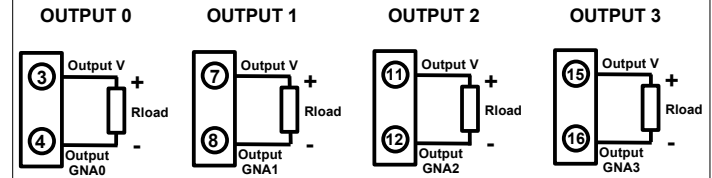


CAN NETWORK

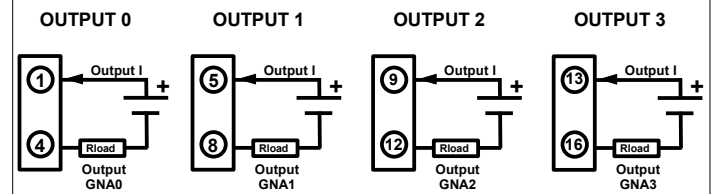


ANALOGUE OUTPUTS

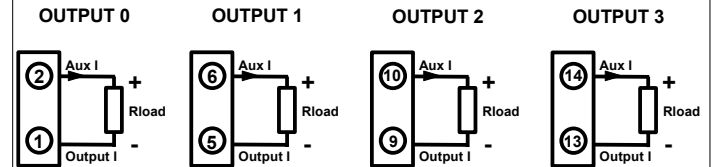
VOLTAGE



PASSIVE mA OUTPUT



ACTIVE mA OUTPUT



NOTES:

"GNA0", "GNA1", "GNA2" and "GNA3" are isolated between them.

DIP-SWITCH CONFIGURATION TABLE

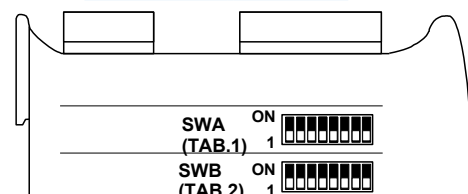
TAB.1 Address setting 1÷127 (Pos.1 LSB; Pos.7 MSB)

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

DIP-SWITCH POSITION



HOW TO ORDER

" DAT 7024 "