DAT 2105 3W

Fixed range converter for potentiometer input

FEATURES

- **Fixed range input for Potentiometer up to 50 kΩ**
- **Voltage or current output**
- **High accuracy**
- **Burn-out Alarm**
- **Potentiometers for the adjustment of the output signal (Option - POT)**
- **CE mark**
- **Suitable for DIN rail mounting in compliance with EN-50022 and EN50035**

GENERAL DESCRIPTION

The DAT2105 3W converter is able to convert a voltage signal coming from a potentiometer connected to its input.
The measured values are converted into normalized signals in current or voltage.
When ordering, it is necessary to specify the output range (0-20mA, 4-20mA, 0-10V, 0-5V).
The device guarantees high precision and a very stable measurement both over time and in temperature.
On the front side of the device there is the PWR led to indicate the correct power supply status
It is also available the option of sensor interrupted alarm with setting of the output value as high over range or low over range to be requested when ordering. If not specified in the order, the sensor interrupted alarm will be set as high overrange (high break).
When ordering, the **"- POT"** option is available: if requested, the device is supplied with potentiometers on the front side for adjusting the output signal to be used in the event that a manual adjustment of the signal itself is required in the system .
It is housed in a 12.5 mm thick plastic case suitable for mounting on a DIN rail conforming to EN-50022 and EN-50035 standards.

USER INSTRUCTION

The power supply / output and input connections must be made according to the "Connections" section.

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

INPUT

Input Type	Min	Max
Potentiometer (nominal value < 50 KΩ)	0 %	100 %

Input Accuracy
Potentiometer ± 0,05 % f.s.

Thermal Drift
Full Scale ± 0,01% / °C

OUTPUT

Output Type	Min	Max
Current	0 mA	20 mA
Current	4 mA	20 mA
Voltage	0 V	10 V
Voltage	0 V	5 V

Output Resolution
Current ± 7 uA
Voltage ± 4 mV

Burn-out values
Max. output value 22 mA or 11V
Min. output value 0 mA or -0,8V

Output Load Resistance - Rload
Current output < 500 Ω
Voltage output > 5 kΩ
Voltage output short circuit current 30 mA max

Response Time (10÷ 90%) about 220 ms

Potentiometer Adjustment (Option "- POT")
Zero ± 5 %
Span ± 5 %

GENERAL SPECIFICATION

Supply voltage	18 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption	
Current output	45 mA max.
Voltage output	15 mA max.

ENVIRONMENTAL CONDITIONS

Operative Temperature	-20°C .. +70°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

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 and EN-50035
Weight	about 90 g

CERTIFICATIONS
EMC (for industrial environments)

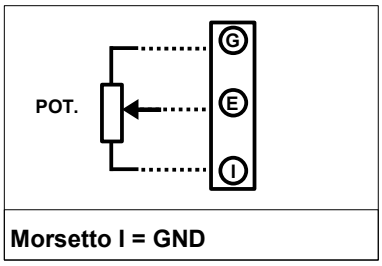
Immunity	EN 61000-6-2
Emission	EN 61000-6-4

INSTALLATION INSTRUCTIONS

The device is suitable for mounting on a DIN rail in a vertical position.
The device must be installed in a place that is not subject to vibrations.
It is also recommended not to route the wiring near power signal cables.

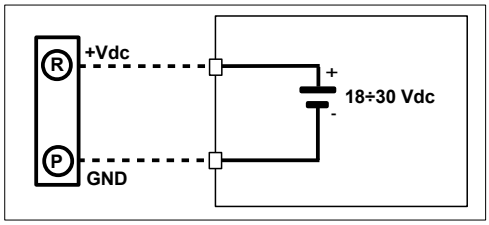
WIRING

INPUT CONNECTION

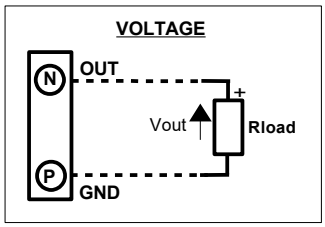


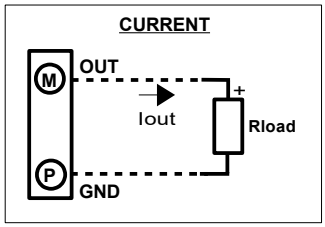
Morsetto I = GND

POWER SUPPLY CONNECTION

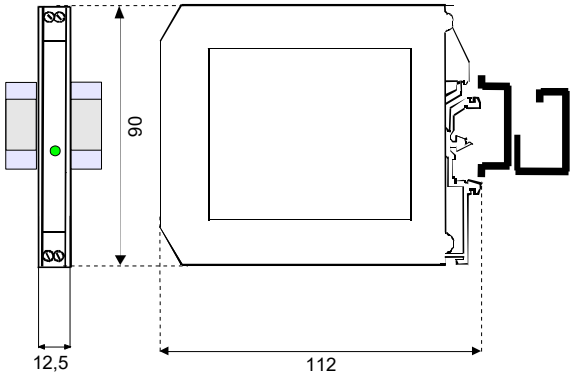


OUTPUT CONNECTION





DIMENSIONS (mm)



LIGHT SIGNALLING

LED	COLOR	STATE	DESCRIPTION
PWR	GREEN	ON	Device powered
		OFF	Device not powered

HOW TO ORDER

The device is provided as requested on the Customer's order.
Refer to the section “Technical specification” to determine output ranges.

ORDER CODE EXAMPLE:

DAT2105 3W / 4 ÷ 20 mA / High / - POT

- Output Range
- High / Low Out of scale
- Option Potentiometers for output adjustment

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.