

FEATURES

- Input for current or voltage signals
- Zero and Span values adjustable by potentiometers
- Output in voltage or current
- Command SEL for enable / disable output
- High accuracy
- EMC compliant – CE mark
- Suitable for DIN rail mounting in compliance with EN 50022 and EN-50035



GENERAL DESCRIPTION

The converter DAT 207 3W is designed to provide on output a 4÷20 mA current loop signal proportional with the variation of the normalised current or voltage signal applied to its input.

In function of the input signal requested in phase of order, are available two versions of the converter:

DAT 207A 3W to measure voltage signals included between 0 ÷ 5 mV and 0 ÷ 200 mV;

DAT 207B 3W to measure voltage signals included between 0 ÷ 200 mV and 0 ÷ 20 V;

DAT 207C 3W to measure current signals between 0 ÷ 5 mA and 0 ÷ 50 mA.

The regulation of the zero and full-scale value are made using the ZERO and SPAN potentiometers; there is not influence between the regulations.

The command SEL must be used to enable or disable the output of the device in the case in which will be necessary to connect more than one DAT 207 3W to only one A/D input.

It is housed in a plastic enclosure of 17 mm thickness suitable for DIN rail mounting in compliance with EN-50022 and EN-50035 standards.

USER INSTRUCTIONS

The converter DAT 207 3W must be powered by a direct voltage between 18 to 30 V applied to the terminals G (+V) and H (GND).

The output connections must be made as shown in the section "Output connections".

The output signal is measurable between the terminals F (OUT V/I) and H (GND).

The command SEL operates connecting a voltage signal from 5 up to 30 Vdc between the terminals E (SEL) and H (GND); if the terminal E (SEL) is not connected or it is connected to the terminal H (GND), the device remains in the measure condition .

The input connections must be made as shown in the section "Input connections".

The input signal in voltage or current, must be applied between the terminals C (IN+) and A (IN-).

The calibration of the device must be made by the ZERO (calibration of the zero value) and SPAN (calibration of the full-scale value) regulations. Such operation can be made on field referring to the section "DAT 207 3W: CALIBRATION".

To install the converter refer to section "Installation Instructions".

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

Input	
Input type	Voltage: from 0 ÷ 5 mV up to 0 ÷ 200 mV (DAT207A 3W), from 0 ÷ 200 mV up to 0 ÷ 20 V (DAT207B 3W)
Input impedance	Current: from 0 ÷ 5 mA up to 0 ÷ 50 mA (DAT207C 3W). Voltage signals: 1 MΩ; Current signals: 100 Ω
Output	
Output type	4 ÷ 20 mA, 0÷20 mA or 0÷10 V
Maximum output signal	15 V or 25 mA
Load resistance (Rload)	Current output: ≤ 500 Ω; Voltage output: ≥ 2 KΩ
SEL command	
Disable output	5 ÷ 30 Vdc
Enable output	0 Vdc or not connected
Performances	
Calibration error	± 0.1 % of f.s.
Linearity error (*)	± 0.1 % of f.s.
Thermal drift	0.02 % of f.s./°C
Response time (from 10 to 90 % of f.s.)	500 ms
Power supply voltage (**)	18÷30 Vdc
Current consumption	Current output: 30 mA max; Voltage output: 10 mA max.
Electromagnetic Compatibility (EMC) (for industrial environment)	Immunity: EN 61000-6-2; Emission : EN 61000-6-4
Operating temperature	-20 ÷ 70 °C
Storage temperature	- 40 ÷ 85 °C
Relative humidity (non cond.)	0 ÷ 90%
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2
Weight	approx. 50 g
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

(*) inclusive of hysteresis and power supply variation.
(**) internally protected against polarity reversion.

INSTALLATION INSTRUCTIONS

The device DAT 207 3W is suitable for DIN rail mounting.

It is necessary to install the device in a place without vibrations; avoid to routing conductors near power signal cables .

DAT 207 3W: CALIBRATION

Calibration of the minimum scale value :

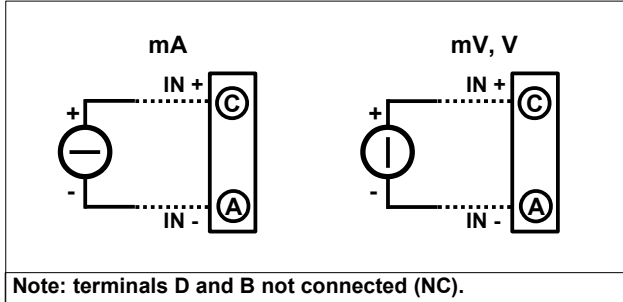
By a voltage or current simulator set the minimum input scale value and regulate the minimum output value by the ZERO potentiometer.

Calibration of the maximum scale value

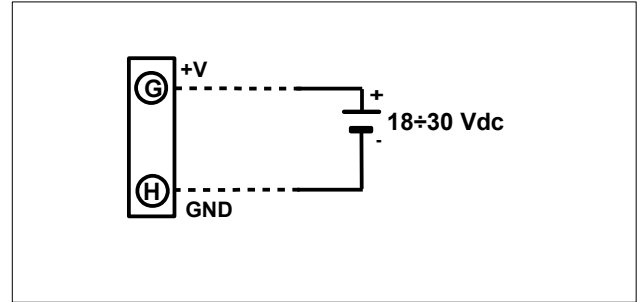
By a voltage or current simulator set the maximum input scale value and regulate the maximum output value by the SPAN potentiometer.

DAT 207 3W CONNECTIONS

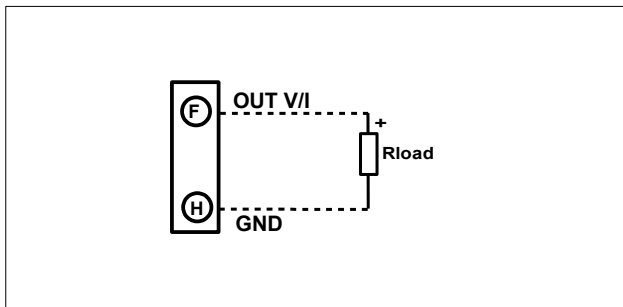
INPUT CONNECTIONS



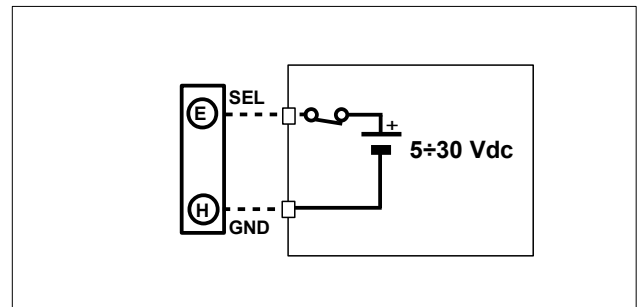
POWER SUPPLY CONNECTIONS



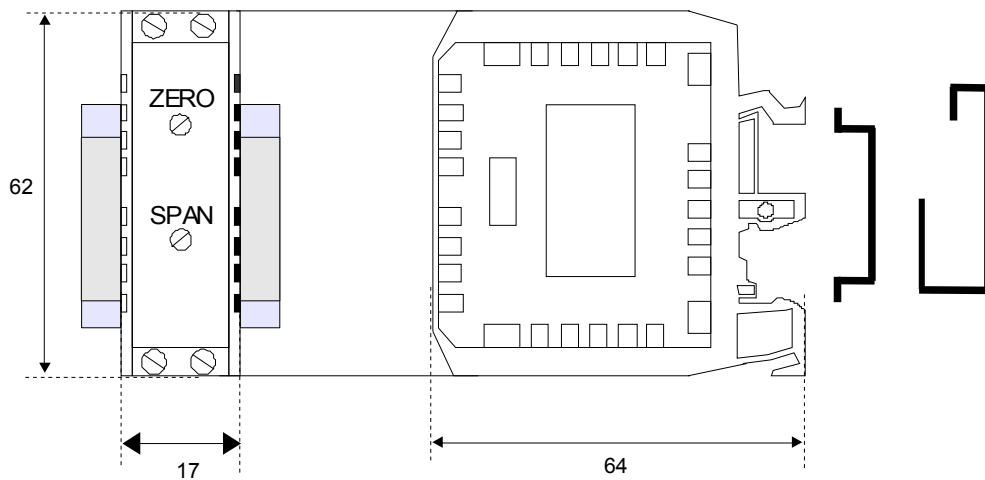
OUTPUT CONNECTIONS



SEL CONNECTIONS



DIMENSIONS (mm) & REGULATIONS



HOW TO ORDER

The DAT 207 3W is supplied as requested from the customer in phase of order.

ORDER CODE: DAT 207 **A** 3W **0 ÷ 100 mV** **0 ÷ 10 V**

Version "A", "B" or "C" — Input range — Output range