

DAT 207 2W



FEATURES

- Input for current or voltage signals
- Zero and Span values adjustable by potentiometers
- 4÷20 mA current loop output
- High accuracy
- EMC compliant – CE mark
- Suitable for DIN rail mounting in compliance with EN 50022 and EN-50035

GENERAL DESCRIPTION

The transmitter DAT 207 2W 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 transmitter:

DAT 207A 2 W to measure voltage signals included between 0 ÷ 5 mV and 0 ÷ 200 mV;

DAT 207B 2 W to measure voltage signals included between 0 ÷ 200 mV and 0 ÷ 20 V;

DAT 207C 2 W 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 DAT 207 2W is in compliance with the Directive 2004/108/EC on the Electromagnetic Compatibility.

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 transmitter DAT 207 2W must be powered by a direct voltage between 10 to 32 V applied to the terminals G (+V) and H (-V).

The 4÷20 mA output signal is measurable in the power loop as shown in the section "Power supply /Output connections"; Rload is the input impedance of instruments on the current loop; to obtain a correct measure, the value of Rload will be calculated as function of the power supply value (see section " Load characteristic").

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 2W: CALIBRATION".

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

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

Input	
Input type	Voltage: from 0 ÷ 5 mV up to 0 ÷ 200 mV (DAT207A 2W), from 0 ÷ 200 mV up to 0 ÷ 20 V (DAT207B 2W)
Input impedance	Current: from 0 ÷ 5 mA up to 0 ÷ 50 mA (DAT207C 2W). Voltage signals: 1 MΩ; Current signals: 100 Ω.
Output	
Output type	4 ÷ 20 mA on current loop
Maximum output signal	25 mA
Load resistance (Rload)	see section "Load characteristic"
Response time (from 10 to 90 % of f.s.)	500 ms
Performances	
Calibration error	± 0.1 % of f.s.
Linearity error (*)	± 0.1 % of f.s.
Thermal drift	0.02 % of f.s./°C
Power supply voltage (**)	10÷32 Vdc
Electromagnetic Compatibility (EMC) (for industrial environments)	Immunity: EN 61000-6-2; Emission : EN 61000-6-4.
Operating Temperature	-20 ÷ 70 °C
Storage Temperature	-40 ÷ 85 °C
Humidity (not condensed)	0 ÷ 90%
Weight	about 50 g.
(*)inclusive of hysteresis, linearisation error and power supply voltage variation	
(**)internally protected against reverse polarity.	

INSTALLATION INSTRUCTIONS

The device DAT 207 2W 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 2W: CALIBRATION

Calibration of the minimum scale value :

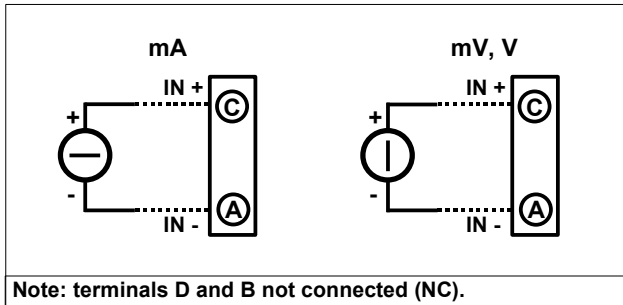
By a voltage or current simulator set the minimum input scale value and regulate the value of 4 mA by the ZERO potentiometer.

Calibration of the maximum scale value

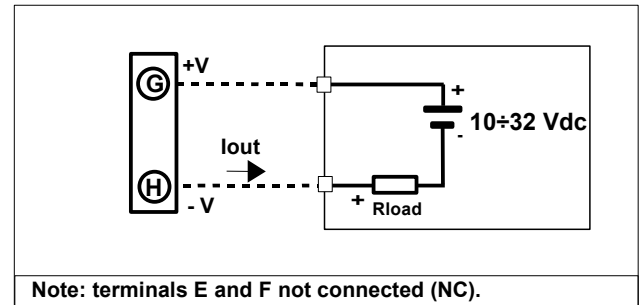
By a voltage or current simulator set the maximum input scale value and regulate the value of 20 mA by the SPAN potentiometer.

DAT 207 2W CONNECTIONS

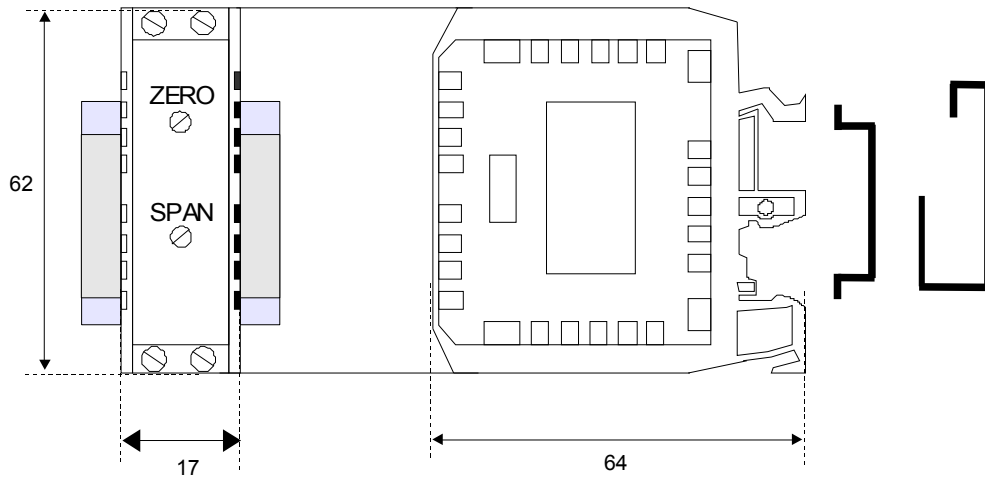
INPUT CONNECTIONS



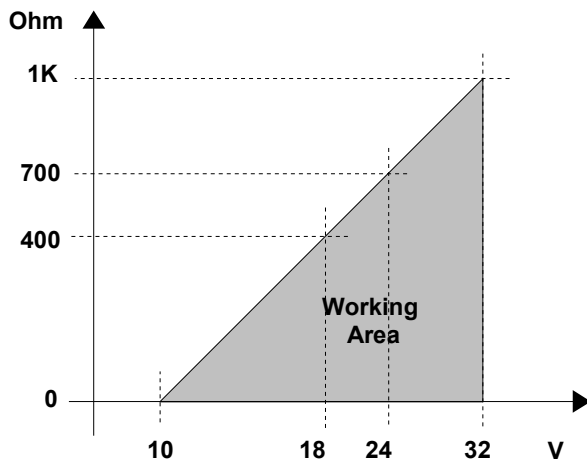
POWER SUPPLY/OUTPUT CONNECTIONS



DIMENSIONS (mm) & REGULATIONS



LOAD CHARACTERISTIC



HOW TO ORDER

The DAT 207 2W is supplied as requested from the customer in phase of order.

ORDER CODE: DAT 207 **A** 2W **0 ÷ 100 mV**

Version "A", "B" or "C"

Input range