

GENERAL DESCRIPTION

The converter DAT 205 3W is designed to provide on output a linearised voltage or current signal proportional with the variation of resistance introduced from the potentiometer connected to its input; to make the measure, a 1 Vdc voltage reference is provided at the ends of the potentiometer .

The regulations 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 205 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 205 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 ends of the potentiometer must be connected to the terminals B and A, while the central terminal must be connected to the terminal C. 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 205 3W: CALIBRATION". To install the converter refer to section "Installation Instructions".

TECHNICAL SPECIFICATIONS (Typical @ 25 °C and in nominal conditions)		
Potentiometer's resistance	Minimum nominal value = 1 K Ω ;	
	Maximum nominal value = 10 K Ω .	
Voltage reference	1Vdc	
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: \leq 500 Ω ; Voltage output: \geq 2 K Ω	
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	ll	
Pollution Degree	2	
Weight	approx. 50 g	
Mechanical Specifications	0	
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 205 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 205 3W: CALIBRATION

With the ends of the potentiometer connected:

Calibration of the minimum scale value :

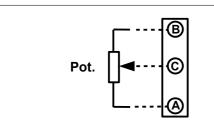
Connect the terminal C to the terminal A and regulate the minimum output value by the ZERO potentiometer.

Calibration of the maximum scale value

Connect the terminal C to the terminal B and regulate the maximum output value by the SPAN potentiometer.

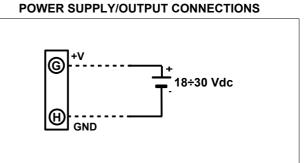
DAT205 3W CONNECTIONS

INPUT CONNECTIONS

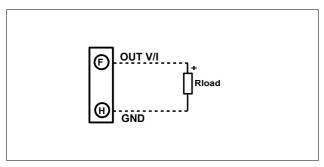


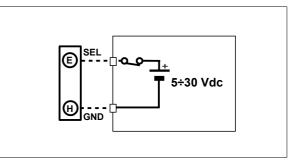
OUTPUT CONNECTIONS

Note: terminal D not connected (NC).

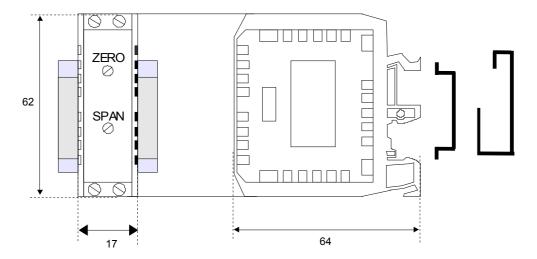


SEL CONNECTIONS





DIMENSIONS (mm) & REGULATIONS



HOW TO ORDER The DAT 205 3W is supplied to connect potentiometers with nor value included between 1 and 10 K Ω .	ninal
ORDER CODE: DAT205 3W 0+10 V	
Output value	