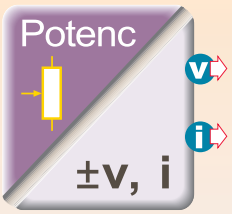
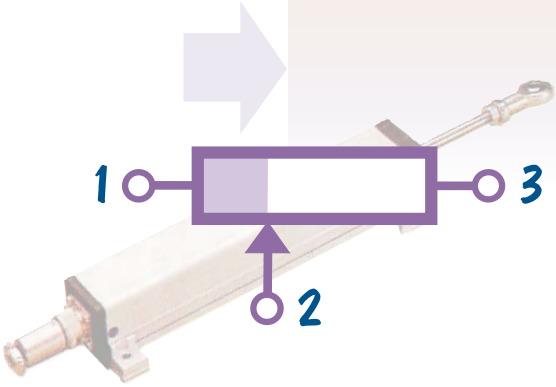
POSI Plus



UNIVERSAL POTENTIOMETER CONVERTER



Rëmberg®

CODED PLUG-IN TERMINALS
Reduces maintenance, repairs, ...
Protects against mistakes

INPUT POTENCIOMETER
0/100Ω .. 500K

FRONT ACCESS A CONFIGURATIONS AND SETTINGS
Protected by hinged lid

DOUBLE OUTPUT
0/20mA, 4/20mA, 0/5mA, ..
0/10V, 0/5V, -10/+10V, -5/+5V, ..

EXTENDED UNIVERSAL POWER SUPPLY
20.. 250VAC-DC

AC DC

CONFIGURABLE POSITION RANGES
with high steps (precision and stability)
MULTI-SCALE

TECHNICAL CHARACTERISTICS

INPUT

3 Poles Potenciometer

NORMAL	500Ω.. 500K	SW2
LOWS	100Ω.. 470Ω	
Excitation voltage ③	2,5V	
Max. current	25mA	

MULTIRANGE

Selectable, high stability.

3 Steps for Position and output range

1. MODE Sliding Microswitch 2 positions
2. THICK Rotary Microswitch 16 steps
3. FINE Multiturn Adjustable 15 turns

Minimum span of use of sensor position	30%
ZERO maximum absorption position	52%

POWER SUPPLY

Supply Voltage	24/230VAC-DC
Extended range	20.. 250VAC-DC
Maximum consumption	2,5W

UNIVERSAL

PRECISSION

Maximum global error	0,05%
Thermal drift	0,5µA/ºC 0,2mV/ºC

AMBIENTALS

Working temperature	- 10/+60ºC
Storage temperature	- 40/+80ºC
Heating time	5 minutes
Temperature coefficient	50 ppm/ºC

OUTPUT

Intensity: 4/20mA, 0/20mA, 0/5mA, ..
Maximum load capacity ≤700Ω
Protected against polarity reversal

Voltage: 0/10V, -10/+10V, 0/5V
Maximum load capacity ≥1K
Protected against short circuit

Response time (10.. 90%) 150msec
Cutoff frequency 11Hz

DOUBLE y MULTISCALE

Universal converter for potentiometric position sensors.

It supplies a multiple output signal of voltage and intensity proportional to the position of the potentiometer.

It allows to absorb with great precision and stability a wide range of potentiometer travel, both at the beginning and at the end.

All these parameters are configured easily and with great precision on the front, being protected by a hinged cover.

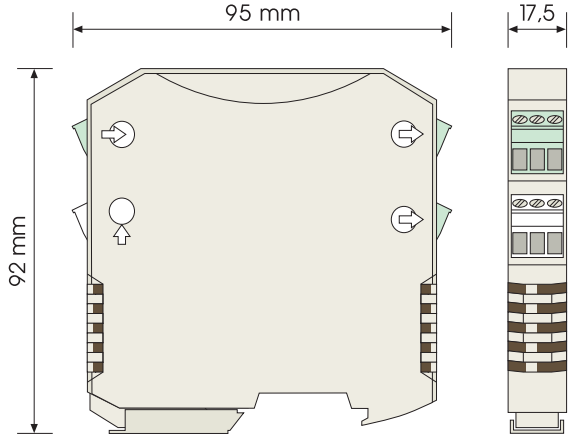
It is protected meeting EMC standards for industrial applications.

It has a universal power supply 24V-230V (20 .. 250VAC-DC) with wide margins.

The connection is made by means of coded plug-in terminals, which facilitate the rapid exchange of modules without the need to rewire, and protect against mistakes.

DESCRIPTION

EMC 2014/30 / EU (electromagnetic compatibility)
DBT 2014/35 / EU (low voltage directive) for industrial environments.
Immunity to interference according to EN 61000-6-2.
Emission of disturbances according to EN 61000-6-3.
Installation category II. Pollution degree 2 EN 61010-1.



FORMAT

protection	IP20
Flammability class Vo according to UL94	
Ergonomic box. Quick mounting rail EN50022	
Material Polyamide	PA6.6
Connection: pluggable screw terminals	
bolt tightening torque (M3)	0,5Nm
Connection cable: ≤ 2,5mm², 12AWG	250V/12A
Weight	100grs

CONFIGURATIONS

SCALE settings and OUTPUT RANGE

INICIO DE ESCALA

ZERO

SPAN adjustment is done in 3 steps:

1. RANGE selection
2. THICK setting
3. FINE adjustment

The one of ZERO only with the last 2.

SPAN

FINAL DE ESCALA

1 ADJUSTMENT THICK

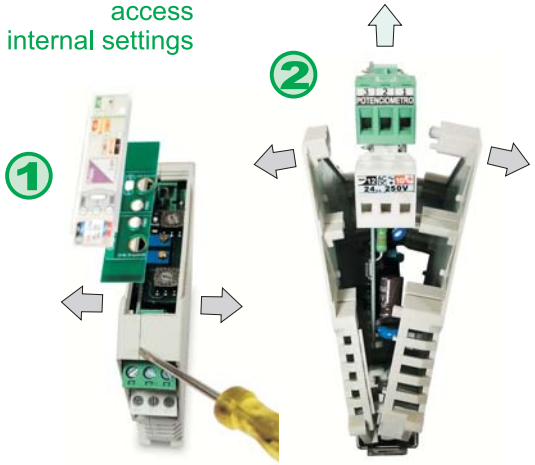
2 ADJUSTMENT FINE

3 ADJUSTMENT FINE

2 ADJUSTMENT THICK

1 SPECTRUM

access internal settings



SW2 SELECTION POTENTIOMETER VALUE

SW1 OUTPUT SELECTION i

0/20mA, 0/5mA, 0/XmA

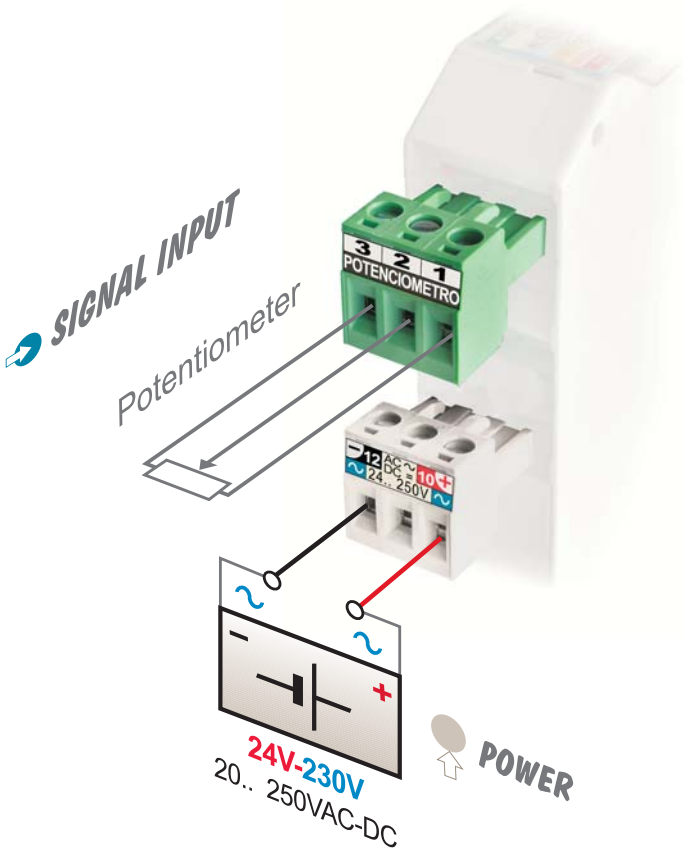
4/20mA

CALIBRATION

eXAMPLE:
potentiometer 10K
Position 0/100%
Output 4/20mA

1. Connect the desired power supply (DC or AC).
2. Apply a potentiometer to the input to position it at the start and end of scale values. Connect a measuring instrument to the desired v or i output.
3. Before proceeding with the adjustment, hold it for at least 15 minutes, so that the converter and the measuring instrument are thermally stabilized. **15 min.**
4. Place the Coarse ZERO rotary microswitch in the initial position, indicated by point O.
5. Set the potentiometer to the desired scale start position. 0%
6. Set the output scale START v or i. 0% ⇨ 4mA
   1. Turn the coarse ZERO rotary microswitch, selecting the closest value. 4,3mA
   2. Adjust to the exact value with the fine ZERO potentiometer. 4,000mA
7. Set the potentiometer to the desired full scale position. 100%
8. Set the END of output scale v or i. 100% ⇨ 20mA
   1. Start by selecting the end of scale range with the SPAN microswitch in position x1 GAMA X1 / X2
   2. Rotate the coarse SPAN rotary microswitch, selecting the closest value. 19,7mA
   3. Adjust to the exact value with the fine SPAN potentiometer. 20,000mA
   4. If the desired SPAN is not reached, place the SPAN microswitch in position x2 and repeat steps 2 and 3. 19,950mA
9. Readjust the start and end of the scale, adjusting only the fine adjustments, until the desired scale is obtained at the output.

CONNECTION

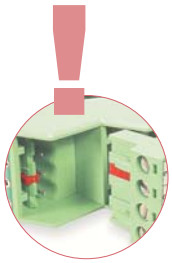


INPUT

3-pole potentiometer
(terminals 1-2-3).

The converter is proportional to the position of the potentiometer, regardless of the ohmic value.

This allows you to replace potentiometers of different ohmic value.



Security in connections.
Coded plug-in terminals.

By means of encoders in the terminals, the equipment is protected against any errors when plugging in by inverting the inputs and outputs.

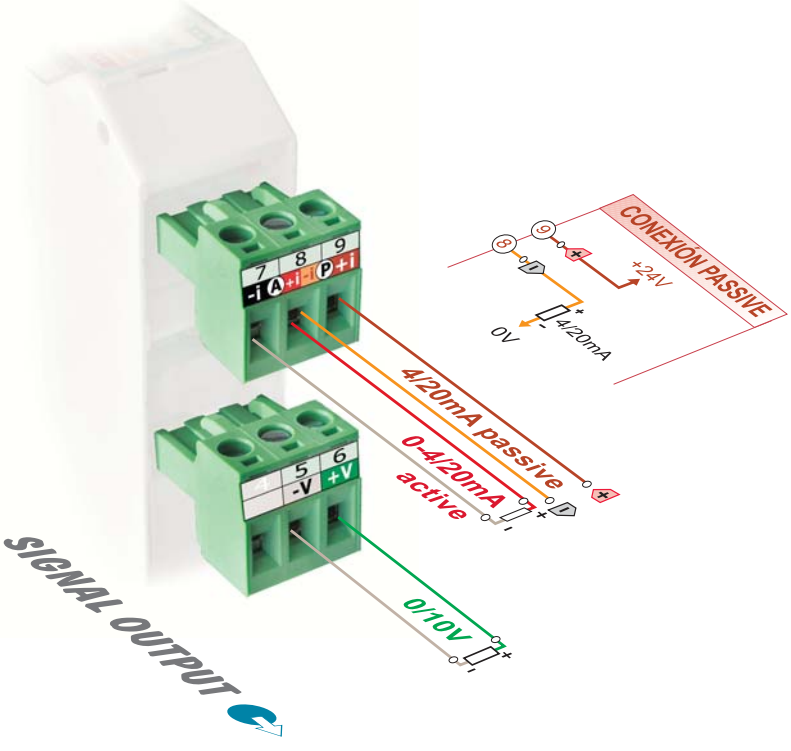
They facilitate wiring and fast module exchange.

White power terminal for easy identification.

POWER SUPPLY

24
230

Universal power
continuous and alternating
24 / 230VAC-DC
(20 .. 250VAC-DC)



Double outlet,
intensity (0-4 / 20mA) and
voltage (0 / 10V and -10 / + 10V)
and intermediate ranges
easily adjustable.

OUTPUTS