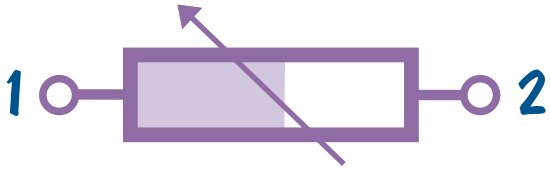
RESIS/vi

UNIVERSAL CONVERTER VARIABLE RESISTANCE

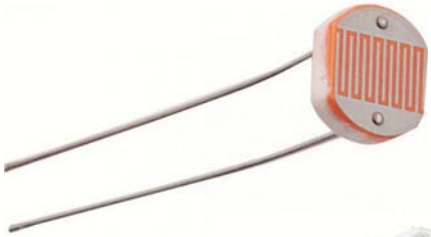
VARIABLE RESISTANCE

0/200Ω
0/10MΩ

valor de resistencia
configurable en el frontal



LDR, RTD, ..



Front access
to settings and
adjustments
Protected by
cover folding

Coded plug-in terminals
Reduces maintenance,
repairs, ...
Protects
against
mistakes

POWER SUPPLY
DC 24VDC

Double output
4/20mA, 0/5mA, ..
0/10V, 0/5V, ..

Rmberg®

TECHNICAL CHARACTERISTICS

INPUT

2-pole variable resistor **0,2K.. 10MΩ**
configurable by scales by **front rotary**
Maximum sensor excitation current **0,25mA**

MULTIRANGE

Selectable, high stability.
3 Steps for Resistance scale and output
1. 2 Position Slide Microswitch **MODE**
2. **THICK** Rotary Microswitch 16 Steps
3. **FINE** Multiturn Adjustable 15 Turns

DESCRIPTION

Universal converter for 2-pole variable resistance sensors (LDR, PTC, NTC, ..), in a proportional signal of multiple voltage and current output (Active / Passive).

The resistance and output signal variation ranges are easily and precisely configured on the front, being protected by a hinged cover.

It is protected meeting EMC standards for industrial applications.

It has DC power supply (20 .. 30VDC) 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.

AMBIENTALS

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

MARGIN

CONTINUOUS 24VDC (wide range) **20 .. 30VDC**
Maximum consumption **1W**

POWER

OUTPUT DOUBLE & MULTIECALE

Current: 4/20mA, 0/20mA, 0/5mA, ..
Maximum load capacity **≤700Ω**
Protected against reverse polarity

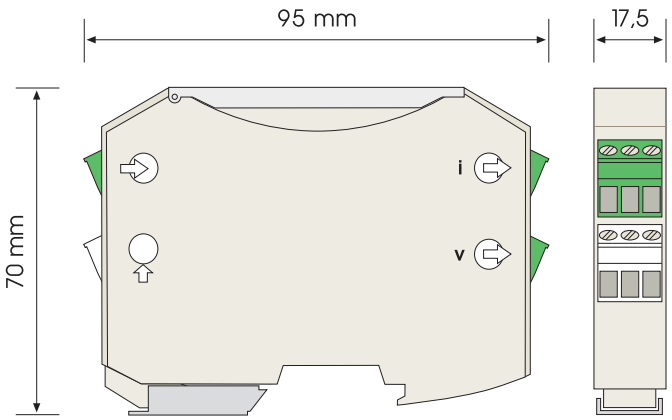
Voltage: 0/10V, 0/5V, ..
Maximum load capacity **≥1K**
Short circuit protected

ALARM: Probe break detection
~ 23mA **- 12V**
Response time (10.. 90%) **25msec**

PRECISSION

Maximum global error **0,1%**
Linearity error **0,08%**
Thermal drift **0,5µA/ºC** **0,2mV/ºC**

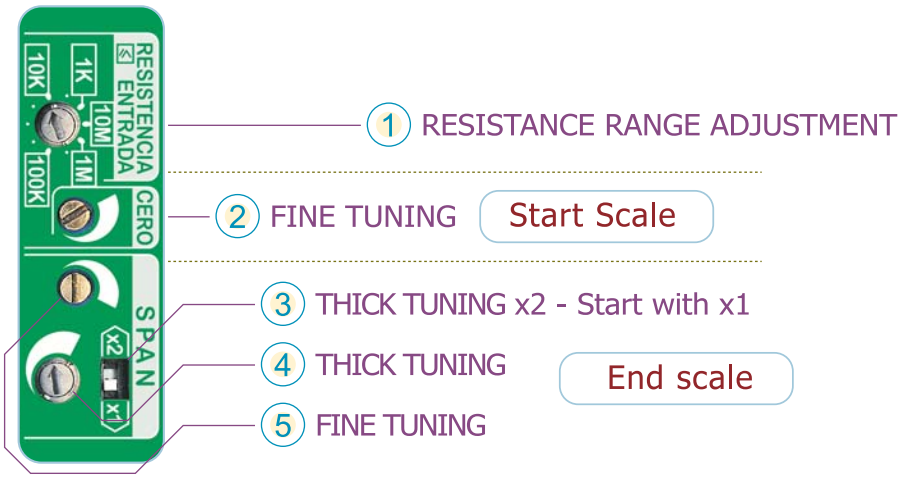
EMC 2014/30 / EU (electromagnetic compatibility)
DBT 2014/35 / EU (low voltage directive) for industrial environments.
Immunity to interference according to EN 61000-6-2.
Emission of disturbances according to EN 61000-6-3.
Installation category II. Pollution degree 2 EN 61010-1.



IP20 protection
Flammability class **Vo** according to **UL94**
Ergonomic box. Quick mounting rail EN50022
Material Polyamide **PA6.6**
Connection: pluggable screw terminals
error protection of encoder terminals
screw tightening torque (M3) **0,5Nm**
Connection cable: **≤ 2,5mm², 12AWG 250V/12A**
Weight **85grs**

SCALE and OUTPUT RANGE settings

The adjustment of ZERO (start of scale) and SPAN (end of scale, scale increase) is carried out in 3 steps:
1. RANGE selection ⇨ 2. COARSE adjustment ⇨ 3. FINE adjustment



Input Resistance Values

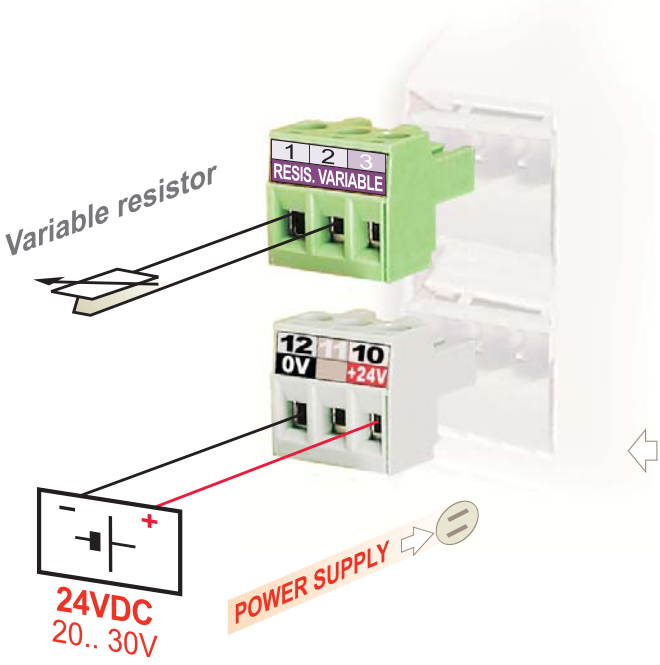
1K	0, 2.. 1K
10K	1K1.. 10K
100K	11K.. 100K
1M	110K.. 1M
10M	1,1.. 10M

CALIBRATION

Example:
calibration 0 / 2K
output 0 / 10V

1. Connect the 24VDC power supply.
2. Apply a resistance simulator to the input, or a resistive sensor generating the calibration resistors, and a measuring instrument to the output v. — 0 / 10K
3. Before proceeding with the adjustment, hold it for at least 15 minutes, so that the transmitter and the measuring instrument are thermally stabilized. — **15 min.**
4. Select, with the resistance range selector, the closest position, greater than or equal to the resistance to be measured. — 10K
5. Select, with the resistance simulator, the desired start-of-scale resistance value. — 0K
6. Set the START of output scale v. — 0K ⇨ 0V
   1. Turn the rotary microswitch to ZERO, selecting the closest value. — 0,6V
   2. Adjust to the exact value with the fine ZERO potentiometer. — 0,000V
7. Select the desired end-of-scale resistance value with the resistance simulator. — 2K
8. Set the END of output scale v. — 2K ⇨ 10V
   1. With the SPAN selector at x1, turn the rotary microswitch, selecting the closest value. — x1, 0,6V
   2. Adjust to the exact value with the fine SPAN potentiometer. — 0,000V
   3. If the value is not reached, set the SPAN selector to x2 and repeat the adjustment.
9. Readjust the start and end of the scale, adjusting only the fine adjustments, until the desired scale is obtained at the output.

CONNECTION



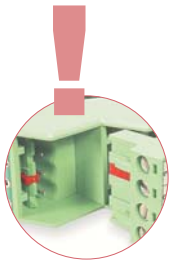
INPUT CONNECTION

2-pole Variable Resistance Input.

POWER SUPPLY

DC power.
With wide automatic input range
continuous 24VDC (20 .. 30VDC)

DC CONTINUOUS POWER SUPPLY 24VDC



Security in connections.
Coded plug-in terminals.

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

They facilitate wiring and fast module exchange.

White power terminal for easy identification.

Double outlput,
current (0-4 / 20mA)
and voltage (0 / 10V)
and intermediate ranges
easily adjustable.

OUTPUT CONNECTION