



id15t Universal Panel Meter for temperature and 4..20mA loops

- Several input types on same instrument.
- 1" LED displays.
- Configurable from PC computer.
- Low and high alarm.

General description

Inputs The id15t industrial panel meter accept tempreture signals from thermocouples and Pt100, also accepts 4..20ma loops and 0..50 mV.

Alarms Two set points for low and high alarm. Once alarm condition is set, display blinks continuously advising the operator.

Switching power supply
The instrument has a current mode switching power supply that allows a wide range of input voltages. Simultaneously makes the instrument resistant to voltage network fluctuations.

TECHNICAL SPECIFICATIONS

INPUTS	Resolution 16 bit a/d, CMRR 100 dB min., 400 VAC. Min. Thermocouples (100 ohm max.): Centigrade Degrees or Fahrenheit
J	(-60, 760) °C
k	(-100, 1372) °C.
T	(-86, 400) °C.
R	-1 mV, 1767 °C.
S	-1 mV, 1764 °C.
B	-1 mV, 1815 °C.
N	(-139, 1298) °C.
E	(-176, 750) °C.
Platinel	(0, 1394) °C.
C	(0, 2314) °C.
D	(0, 2314) °C.
G	(0, 2313) °C.
PT100 (-136, 450) °C	DIN43760, alpha=0.0385
	4...20 mA, 0...20 mA, 0..50 mV, scalable for engineering units.
READINGS:	Allows engineering units with decimal places. 3 1/2 digits LED display (26mm), range -1999... 1999
ALARMS:	High and low alarm set points, display blinks on alarm condition. .
POWER SUPPLY:	Current mode switching power supply. Versions: 85...260 Vac, 6 W, 45...65 Hz. 20...60 VDC, 6 W
CONSTRUCTION:	Aluminum and y Polycarbonate; IP65 Use with a 92 x 45 mm. panel cut (Format DIN 1/8). Total Dimension: DIN 1/8; 96 x 48 x 135 mm. Panel cut: 92 x 45 mm. Weight: 300 grams. Operation temperature: 0 ... 50 °C.
CE DIRECTIVES:	2006/95/EC (LVD) Low Voltage Directive 2004/108/EC (EMC) Electromagnetic compatibility directive
STANDARDS:	Safety: IEC61010-1:2010 EMC immunity: EN61326-1:2006 Industrial locations. EMC emissions: EN61326-1:2006 Class B.

PART CODES:

ID15T-AC	power supply 85...260 Vac, 6 W, 45...65 Hz.
ID15T-DC	power supply 18....60 Vdc, 6 W

INSTALLATION

Depending on the input or sensor type, connections in the terminals should be done as indicated in the drawing.

Terminal #3

GND is the common ground for all voltage and current inputs.

Terminal #1

Used only for 3-wire type Pt100.

Terminal #2

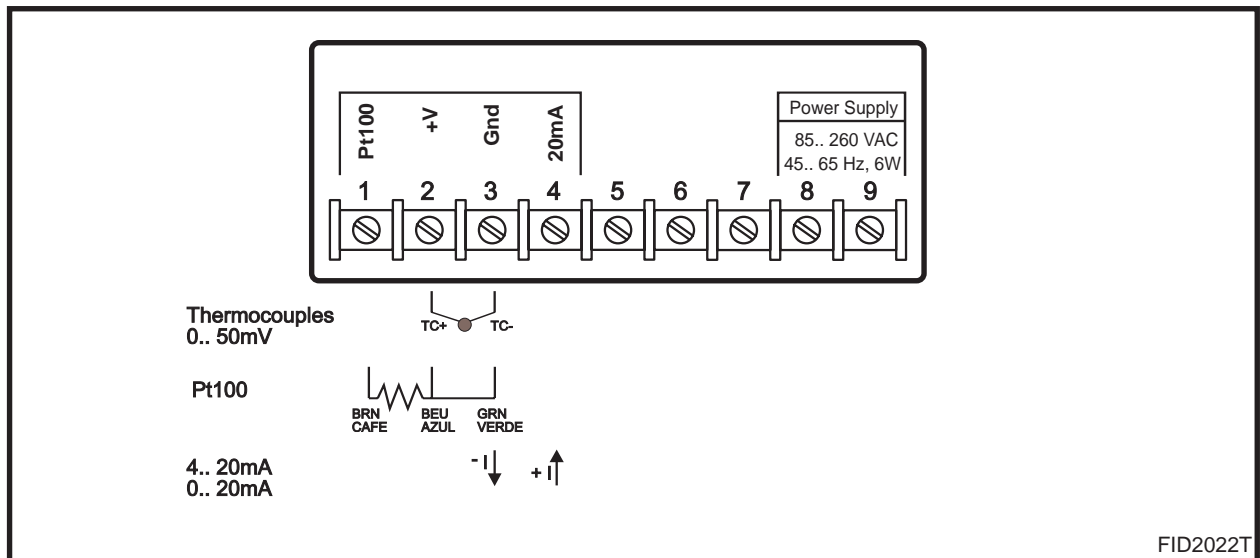
Used on Pt100, thermocouples and 0..50mV input

Terminal #4

Input for 4..20ma current loops, returns goes by terminal #3. It is protected with a 30ma self-reseteable fuse.

Power supply terminals #8 and #9

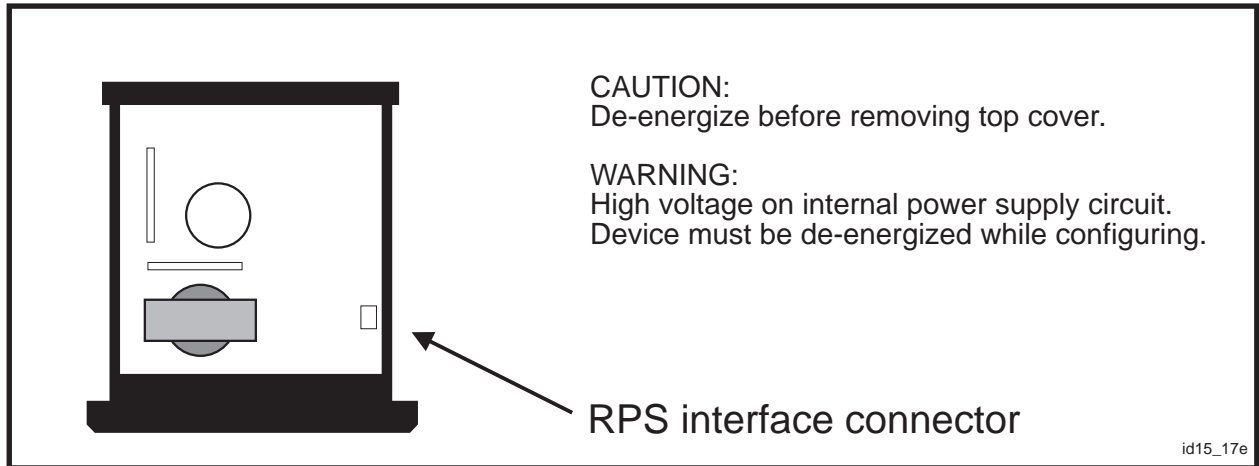
The instrument power supply is designed to operate with any voltage between 85 and 260 volts without need of adjustment. (20VDC to 60VDC for the DC power supply option). Once start up will continue operating unless the network fall under 50 VAC.



CONFIGURATION

The RPS interface and software must be used for configuring instrument parameters.

Removing top cover gives you access to the RPS connector as pointed in the drawing.



The following is needed:

- PC compatible computer with USB port.
- RPS software, download latest version from:
<http://www.arian.cl/downloads/arianrps.zip>
- RPS Isolating interface. Part# RPS-USB-V3

With de-energized instrument, the interface cable must be connected by one side to the internal connector and other side to the PC USB port.

Once done the connection the RPS software is executed in the PC, there is no need to energize the instrument while it is configured.

The interface optically isolates PC from instrument for safety.

Concluded the programming unplug the interface from the device.

Parameters to be programmed:

I n t Y

Input type.

t c thermocouple input

P100 RTD type Pt100 DIN43760 (-136, 450) C.

PrcS processes input 4-20mA, 0-10Volts and others.

Selecting input as thermocouple or pt100, the instrument will pass to ask for temperature units. While, if selected process variable input (0-20mA, 4-20mA, ..., 0-50 millivolts), the instrument will ask for the limits or input calibration.

t Y P E

Thermocouple type.

If select thermocouple input, now is set the type and temperature units.

	Type	Range
<u>t c J</u>	J	(-60, 760) C.
<u>t c k</u>	k	(-100, 1372) C.
<u>t c t</u>	T	(-86, 400) C.
<u>t c r</u>	R	-1 mV, 1767 C.
<u>t c s</u>	S	-1 mV, 1764 C.
<u>t c b</u>	B	-1 mV, 1815 C.
<u>t c n</u>	N	(-139, 1298) C.
<u>t c E</u>	E	(-176, 750) C.
<u>t c PL</u>	Platinel	(0, 1394) C.
<u>t c C</u>	C	(0, 2314) C.
<u>t c d</u>	D	(0, 2314) C.
<u>t c G</u>	G	(0, 2313) C.

t Y P E

Processes input Type

	Type	Range
<u>0 - 20.</u>	0- 20 milliamperes.	-24 mA, 24 mA.
<u>4 - 20.</u>	4- 20 milliamperes.	2 mA, 24 mA.
<u>0 - 50</u>	0- 50 millivolts.	-10 mV, +60 mV

U n i t

= °C. , °F.

Select Centigrade or Fahrenheit degrees.

O F S t

= -19.9° ..., 19.9°

Input sensor off set adjustment. The programmed number will be added to measured temperature in order to compensate known errors.

Normally must be set in cero.

L . i n F

= -999... 9999 (only for processes input type)

Introduce reading value for input at the lower limit of selected input type.

For example the input is 4-20mA originated in a temperature transducer that delivers 4 mA at 0 degrees and 20 mA at 1000 degrees.

In this case is being asked for the reading at 4 mA, that is LinF = 0.

L . S u P

= -999... 9999 (only for processes input type)

Introduce reading value for input at the higher limit for selected input type.

For the same previous example, it is asking for reading at 20mA input, that is LSuP = 1000.

P . d i S

Places a fixed decimal point in the display for engineering units.

- - - - no decimal point.

- - . - e.g. 123.4

- . - - e.g. 12.34

F I L t

= 1 ... 16

Corresponds to a time constant for filtering or conditioning noisy inputs. Internally the instrument carries out a first order low pass filter calculation with time constant "FILt". Can be set between 1 and 16 seconds. Better you should leave this value set to 1 second, increasing it only if its required by having noisy readings.

A L L o

= -1999... 9999

Reading low alarm, display will blink when reading is lower than this preset value. If you don't need this function, set it to a very low value (e.g.. -999)

A L H i

= -1999... 9999

Reading high alarm, display will blink when reading is higher than this preset value. If you don't need this function, set it to a very high value (e.g.. 9999)

P r o g

= No, Si

Set "Si" for programming new data. Otherwise data will be lost when quitting this menu.

S A L i

= No, Si

Set "Si" for quitting this menu. Otherwise return back to its starting point.

Example 1

You have a signal coming from a J type thermocouple. Alarms are not used so values in excess are set for the alarms.

I n t Y = tc
t y P E = tc J
U n i t = C
O F S t = 0
P . d i S = - - - -
F I L t = 1
A L L o = -100
A L H i = 1000

Example 2

A process value 0..100% is transmitted as 4..20mA current loop. The display must indicate this process variable with one decimal point and blink if input is greater than 22mA (pv = 112.5%) or lower than 2mA (pv = -12.5%), indicating a possible open current loop.

I n t Y = P r c S
t y P E = 4 - 20.
L . i n F = 0

L. S u P = 1000
P. d i S = - - - . . -
F I L t = 1
A L. L o = -125
A L. H i = 1125

Note that reading is set 0..1000 with a fixed decimal point in order to be read as 100.0

CONTACT INFORMATION:

ARIAN S. A.

El comendador 2340, Providencia
Santiago, Chile
Phone/Fax 56-2-24218333
arian@arian.cl
www.arian.cl