OI 22 -NTC, PT, J / K / S, mA, V,

DIGITAL INDICATOR 4 digits

USER MANUAL

INTRODUCTION:
This manual contains the information necessary for correct installation and instructions for the use and maintenance of the product, therefore it is recommended that you carefully read the following instructions.
The same is said for each person or company involved in the creation of this manual.
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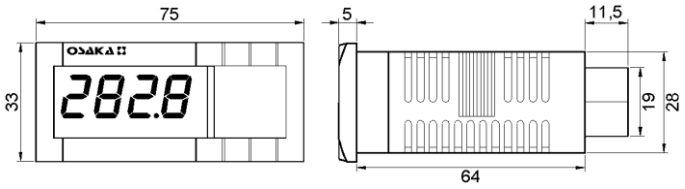
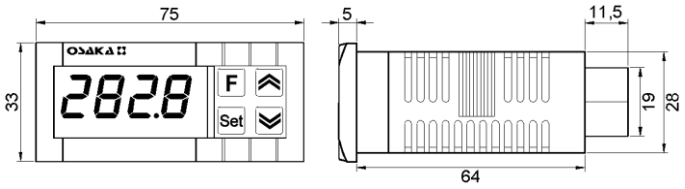
1 - GENERAL DESCRIPTION

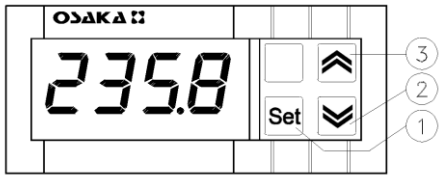
The OI 22 model is a digital indicator equipped with 1 input for NTC, PT100, J / K / S type probes, and mA and V signals. The process value is displayed on a 4-digit red display. *The front of the OI 22 mA or V has keys that are used to configure and modify the range*.

Dimensions and front OI 22



Dimensions and front





1-Set key: To enter the parameters menu and allows to modify them.
2-Key: Decreases the programming value of the parameters.

3-Key : Increases the programming value of the parameters meters.

Note: The "F" key is displayed neutral because it does not have any function.

2 - TECHNICAL DATA

ELECTRICAL CHARACTERISTICS
Feeding: 230 VAC +/- 10%. AC frequency: 50/60 Hz. Consumption: 3 VA approx.
Tickets: 1 input for NTC, PT100 and J / K / S type probes and 0 / 4..20mA and 0..10V signal.
Protection class against electric shock: Class III. Isolation: no isolation between supply and input.

MECHANICAL CHARACTERISTICS Case: Self-extinguishing plastic UL 94 V0. Dimensions: 33 x 75 mm, depth 64 mm. Weight : 180 g approx.

Installation: Recessed in 29 x 71 mm gap panel.
Connections: Terminal strip for 2.5 mm cable$_{two}$
Frontal protection degree: IP 65.
Ambient operating temperature: 0 ... 55 ° C. Operating ambient humidity: 30 ... 95 RH% non-condensing.

Transport and storage temperature: -10 ... +60 ° C.

FUNCTIONAL FEATURES
Measurement range: depending on the probe used: NTC = -50..100 °C; PT100 = -200..850 ° C; J = 0..1000 ° C; K = 0..1370 ° C; S = 0..1760 ° C; 0 / 4..mA, 0..10V.
Display resolution: 1 / 0.1 / 0.01 / 0.001.
Total precision: +/- 0.5% fs. Sampling frequency: 130 ms.
Accordance: EEC EMC Directive 89/336 (EN 50081-1, EN 50082-1), EEC Directive BT 73/23 and 93/68 (Device that operates with a nominal voltage lower than 50 VAC and 75 VDC).

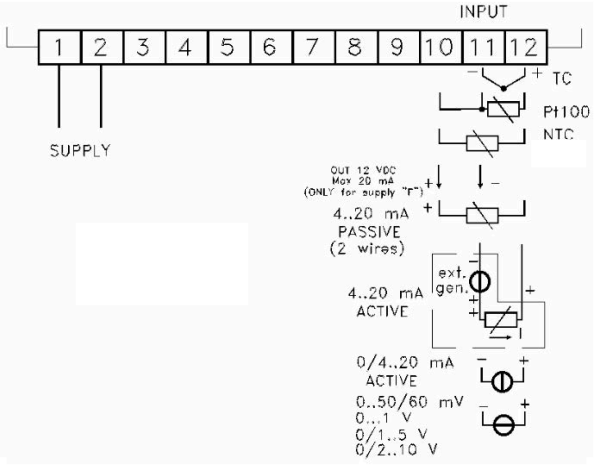
3 - INSTALLATION

MECHANICAL ASSEMBLY: The instrument, in 33 x 75 mm housing, is designed for panel mounting inside a housing.

Make a 29 x 71 mm hole and insert the instrument, fixing it with the appropriate bracket provided.
It is recommended to mount the appropriate gasket to obtain the declared degree of frontal protection.
Avoid placing the internal part of the instrument in places subject to high humidity or dirt that may cause condensation or introduce conductive parts or substances into the instrument.

Install the instrument as far as possible from sources that generate electromagnetic interference such as motors, relays, solenoid valves, etc.

ELECTRICAL CONNECTION: Make the connections by connecting a single conductor per terminal and following the indicated diagram, checking that the supply voltage is that indicated for the instrument and that the load on the actuators connected to the instrument does not exceed the maximum admissible current. The instrument, designed to be permanently connected inside a panel, is not equipped with a switch or internal devices to protect against excess current, it is recommended to adequately protect all the circuits connected to the instrument with devices (eg fuses) suitable for the circulating current. It is recommended to use cables with appropriate insulation for the running voltages and temperatures and to position so that the input cable of the probe is distant from the power cable and other power cables.



4 - PARAMETER PROGRAMMING (OI 22)

To access the operating parameters menu, hold down the “Set” key for approximately 2 seconds until “OPEr” appears on the display. Press the "Set" key and the "InP" parameter folder will appear. Press the "Set" key again to enter the folder and use the keys ⩛ ⩓ to scroll through the parameters. For modify a parameter press the "Set" key and use the keys ⩛ ⩓ to increase or decrease the value of said parameter. Press the "Set" key again to confirm. If you want to modify another parameter, proceed in the same way. If you want to exit, keep one of the keys ⩛ ⩓ pressed until you exit completely (the measurement value will be displayed).

5 - TABLE OF PARAMETERS (RO 22)

Pair.	Description	Rank	Def.
SEnS	Signal selection input (Probe)	PT input: J / CrAL / S / Ir.J / Ir.CA / Pt1 / 0.50 / 0.60 / 12.60 Input 0: J / CrAL / S / Ir.J / Ir.CA / ntc / 0.50 / 0.60 / 12.60 MA input: 0.20 / 4.20 Input V: 0.1 / 0.5 / 1.5 / 0.10 / 2.10	
OFSt	Measure deviation	- 1999 ÷ 9999	0
dP	Number of digits - summits	Pt1 / Ptc / ntc: 0..1 normal signal: 0..3	one
SSC	Lower limit scale mA / V signal input	- 1999 ÷ FSC	0
FSC	Upper limit scale the input signal mA / V	SSC ÷ 9999	0

6 - DESCRIPTION OF PARAMETERS (OI 22 mA, V)

The parameters presented in the table above are described below. Some of them are not displayed on the instrument since the equipment is not equipped to have them or because the instrument automatically disables them, if they are not used.

SEnS - Ticket type: Depending on the model we have, we can select the following probe inputs:

- Thermoresistances: Pt100 IEC (Pt1)
- Thermistors: PTC KTY81-121 (Ptc) or NTC 103AT-2 (ntc)
- Signals in mV: 0..50 mV (0.50), 0..60 mV (0.60), 12..60 mV (12.60)
- Current signals: 0..20 mA (0.20) or 4..20 mA (4.20)
- Voltage signals: 0..1 V (0.1), 0..5 V (0.5), 1..5 V (1.5), 0..10 V (0.10) or 2..10 V (2.10).
- Thermocouple: J (J), K (CrAL), S (S) or for infrared sensors OSAKA IRS series J (Ir.J) or K (Ir.CA)

OFSt - Measure compensation : positive or negative compensation that we will use to correct small deviations of the input probe.
SSC - Lower limit of input range for analog signals (mA, mV, V): Value that the instrument must show on the display when the signal at the input coincides with the minimum value of the ranges (0/4 mA, 0/12 mV, 0/1 V or 0/2 V).

FSC - Upper limit of input range for analog signals: Value that the instrument must show on the display when the signal at the input coincides with the maximum value of the ranges (20 mA, 50 mV, 60 mV, 1V, 5 V or 10 V). Examples of SSC and FSC: If we have a 4..20 mA signal, we can establish a display range of 0..100, where the value "0" will coincide with a signal of 4 mA (SSC) and where the value "100" will coincide with a 20 mA signal (FSC).

dP - **Number of decimal places:** Allows you to set the resolution of the measurement, 1 (0), 0.1 (1), 0.01 (2), 0.001 (3). For Pt100, PTC and NTC temperature probes the maximum resolution is 0.1 ° (1).

7 - PROBLEMS, MAINTENANCE AND WARRANTY

ERROR SIGNALS
The instrument display is used to view instrument error conditions by displaying the following messages: **"E1"** - Tr probe error (E1) interrupted or short-circuited. **"o1" - "u1"** - Tr (1) probe input in overrange (o) or in underrange (u). In these cases, verify the correct connection of the probes with the instrument and then proceed to verify them.

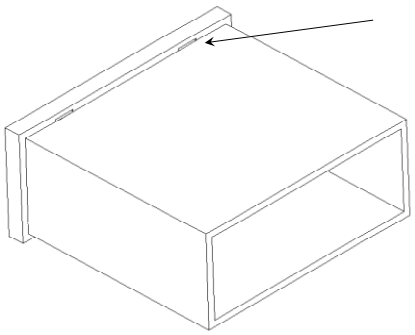
"EE" - Memory error, in this case check, and if necessary, reprogram the operating parameters.

MAINTENANCE
It is recommended to avoid using abrasive detergents or solvents that can damage the instrument.

WARRANTY AND REPAIR
The instrument is warranted for 12 months against construction faults or material defects. The warranty is limited to the repair or replacement of the product. The eventual opening of the casing, the manipulation of the instrument or the use and installation not in accordance with the instructions will automatically void the warranty. In the event that the product is defective within or outside the warranty period, contact OSAKA to obtain authorization for the shipment. Send the defective product, accompanied by the indications of the defect found, to the OSAKA establishment, except for different agreements.

8 - HOW TO MODIFY THE DECIMAL POINT IN THE (OI 12 NTC, PT100, J / K / S, mA and V)

To change the decimal point, first remove the front of the equipment by inserting a screwdriver and making a slight turn in the small slots shown in the figure of the equipment casing:



Press the key "**1**"For about 2 seconds until" OPEr "appears on the display. Press the key "**1**"And" InP "will appear. Press the key "**1**"To enter the folder and use the keys "**2**" Y "**3**"To scroll through the parameters. To modify the decimal point, go to the parameter "dP" and press the key "**1**". Use the keys " **2**" Y "**3**"To increase or decrease the value of said parameter (**on =** decimal point on) and (**oF =** decimal point off). Press the key "**1**" to confirm. To exit, press and hold the "**2**" Y "**3** Until leaving.