

Installation and Operating Instructions

XA100C - XA104C

Configurable digital indicator

1 GENERAL WARNINGS

Please read before using this manual

- ◆ This manual is part of the product and shall be kept near the device for easy and quick reference.
- ◆ The instrument shall not be used for purposes different from those described hereunder.
- ◆ Check the application limits before proceeding.

Safety Precautions

- ◆ Check the supply voltage is correct before connecting the instrument.
- ◆ Do not expose to water or moisture: use the instrument only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent condense formation.
- ◆ Warning: disconnect all electrical connections before any kind of maintenance.
- ◆ The instrument shall never be opened.
- ◆ In case of failure or faulty operation send the instrument back to the retailer or to "DIXELL s.r.l." (see address) with a detailed description of the fault.
- ◆ Assure that the wires for probes and for power supply are separated and far enough from each other, without crossings and spirals.
- ◆ In case of applications in critical industrial environments, the use of mains filters (our mod. FT1) in parallel with inductive loads could be useful.

2 GENERAL DESCRIPTION

Models **XA100C**, and **XA104C**, 32x74 mm format, are configurable digital indicators suitable for a wide range of applications. The XA100C has 3 digits display, while the XA104C has four digits. They can provide according to the order a PTC or Pt100 or thermocouple (J, K, S) or current (4÷20mA) voltage (0÷1V or 0÷10V) probe input. By means of the keyboard they can be configured. The keyboard can be locked. The offset of the probe can be adjusted, by means of parameter.

3 FRONT PANEL COMANDS

SET: in normal mode is not used. In programming mode is used to select parameters or confirm a value.

▲ **(UP)**: In programming mode or in "**Function Menu**" it browses the parameter codes or increases the value of the displayed variable. Hold pressed for a faster change.

▼ **(DOWN)**: in programming mode or in "**Function Menu**" it browses the parameter codes or decreases the value of the displayed variable. Hold pressed for a faster change.

KEY COMBINATIONS:

▲+▼ **TO UNLOCK THE KEYBOARD**: when held pressed for 3s the keyboard is unlocked (see "LOC" function).

SET+▼ **TO ENTER ON FUNCTION MENU**: when held pressed for 3s the Function Menu is entered.

SET + ▲ **TO RETURN TO THE NORMAL DISPLAY MODE**: programming end, return to the normal display mode.

4 PROGRAMMING MENU

Function menu

Includes all the main functions controlled by the instrument.

Access procedure:

- The menu is entered by holding the **SET** and **DOWN** keys pressed for 3 seconds. The "Pr1" label will be displayed.
- The **UP** and **DOWN** keys are used to cycle backwards or forward in the menu.
- By pressing the **SET** key the currently displayed function is enabled.

List of functions

"Pr1": not used.

"Pr2": includes all the instrument's parameters. It can be accessed through a security code. Hence it is possible to modify all parameters.

"LOC": keyboard lock. When enabled the "POF" flashing message is displayed for a few seconds then the keys are locked.

"Out": exits from menu.

Exit

If no key is pressed within 15 seconds the instrument reverts to normal display mode.

Accessing "Pr2" and SECURITY CODE input

To access parameters in "Pr2" a security code is required.

1. Enter Function Menu, select label "Pr2" and press the "**SET**" key. The "PAS" flashing message is displayed, shortly followed by "0 - -" with a flashing zero.
2. Use "**UP**" or "**DOWN**" to input the security code in the flashing digit;
3. Confirm the figure by pressing "**SET**".
4. Repeat operations 2 and 3 for the other digits
5. If the security code is correct the access to "Pr2" is enabled by pressing "**SET**" on the last digit, otherwise the security code input process restarts from the beginning.

If no key is pressed for more than 15 seconds the instrument reverts to normal display mode.

SECURITY CODE is **321**

Changing a parameter's value

Each parameter is identified by a special alphanumeric code. To change the parameter's value operate as follows:

1. Enter the Function Menu, select "Pr2" and input the Security Code.
2. Browse the parameters' list using "**UP**" or "**DOWN**" until the required parameter is displayed.
3. Press the "**SET**" key to display its value.
4. Use "**UP**" or "**DOWN**" to change its value.
5. Press "**SET**" to store the new value and move to the following parameter.

TO EXIT: Press "**SET**"+"**UP**" or wait 15s without pressing a key. **NOTE**: the set value is stored even when the procedure is exited by waiting the time out to expire.

5 LIST OF PARAMETERS

LCI Start of scale with current or voltage input :
(3 digits: -999÷999; 4 digits: -999÷7000). Adjustment of read out corresponding to 4mA or 0V input signal.

UCI End of scale with current or voltage input
(3 digits: -999÷999; 4 digits: -999 ÷7000). Adjustment of read out corresponding to 20mA or 0V or 10V input signal.

OPb Probe calibration: (-999÷999) allows to adjust possible offset of the probe.

Ptb Parameters table: (read only) Shows the factory default settings.

PbC Probe selection: input type. For RTD or Thermocouples only: 0=Tc J; 1=Tc K (Ni100); 2=Tc S (Pt100).

rES Decimal point ON/OFF: (rES=0 OFF; rES=1 ON) select the resolution of the controller: with decimal point or without decimal point.

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rES Decimal point ON/OFF: (rES=0 OFF; rES=1 ON) select the resolution of the controller: with decimal point or without decimal point.

NOTE1: on models with current or voltage inputs if a unit is changed from without decimal point to with decimal point, the: **the current value of parameters "LCI" and "UCI" must be multiplied by 10.**

NOTE2: on all models, if a unit is changed from without decimal point to with decimal point, the value of the parameters **OPb must be multiplied by 10.**

NOTE3: the decimal point selection is not available on models with thermocouple input.

CF Temperature measurement unit

0 = Celsius; 1 = Fahrenheit.

6 INSTALLATION AND MOUNTING

Instrument **XA100C** shall be mounted on panel, in a 29x71 mm hole, and fixed using the special bracket supplied.

The ambient temperature range allowed for correct operation is 0 - 60 °C (32÷140°F). Avoid places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes. Let air circulate by the cooling holes.

7 ELECTRICAL CONNECTIONS

The instrument is provided with screw terminal block to connect cables with a cross section up to 2,5 mm². Before connecting cables make sure the power supply complies with the instrument's requirements. Separate the probe cables from the power supply cables

8 TECHNICAL DATA

HOUSING: self extinguishing ABS.

CASE: frontal 32x74 mm; depth 60mm;

MOUNTING: panel mounting in a 71x29 mm panel cut-out

FRONTAL PROTECTION: IP65

CONNECTIONS: screw terminal block ≤ 2,5 mm² wiring.

POWER SUPPLY: 12Vac/dc, -10% +15%

POWER ABSORPTION: 3VA max.

DISPLAY

XA100C: 3 digits, red LED, 14,2 mm high.

XA104C: 4 digits, red LED, 12,5 mm high.

INPUTS: PTC or Pt100 or a thermocouple (J, K, S) or current (4÷20mA) voltage (0÷1V or 0÷10V) probe according to the order.

DATA STORING: on the non-volatile memory (EEPROM).

OPERATING TEMPERATURE: 0÷60 °C (32÷140°F).

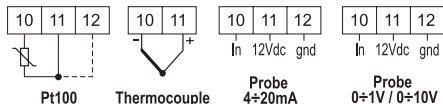
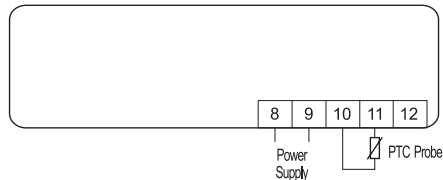
RELATIVE HUMIDITY: 20÷85% (no condensing)

STORAGE TEMPERATURE: -30÷85 °C.

ACCURACY AT 25°C: better than 0,5% of full scale

9 CONNECTIONS

Power supply 12Vac/dc or 24Vac/dc



Pt100 with 2 wires: the terminals 11 and 12 must be shorted circuit.

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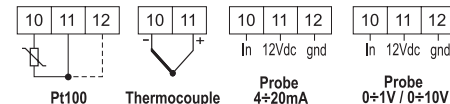
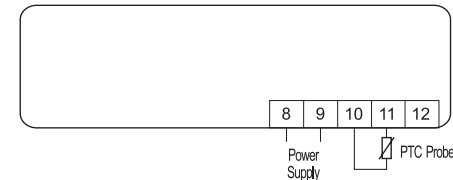
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dixell®

Dixell srl

Z.I. via dell'Industria, 27- 32010 Pieve d'Alpago (BL)

tel +39-0437-98 33 - fax +39-0437-989 313

WEB: www.dixell.com - E-mail: dixell@dixell.com

cod.1592002100 rel.4.0 30/03/99

dixell®

Dixell srl

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