

TECHNICAL SPECIFICATIONS

INPUT

Configuration Differential asymmetrical
Specifications range 23°C±5°C

RANGE	RESOLUTION	INPUT IMP.	ACCURACY
±10V	1mV	1MΩ	±(0.1%L+3mV)
±60V	3mV	1MΩ	±(0.1%L+18mV)
±100mV	10μV	100MΩ	±(0.1%L+30μV)
±20mA	1μA	12.1Ω	±(0.1%L+6μA)

Max. input signal (±10V / ±60V) ±12V / ±60V
Max. input signal (±20mA / ±100mV) ±24mA / ±120mV
Max. continuous overload (±10V / ±60V) 80V / 80V
Max. continuous overload (±20mA) 50mA
Max. continuous overload (±100mV) 50V
Excitation 20V±5V DC @ 30mA
Temperature coefficient 100 ppm/°C
Warm-up time 15 minutes

CONVERSION

Technique Sigma Delta
Resolution ±15bit
Conversion rate 25/s

DISPLAY

Range -1999 / +9999, 4 digits 8mm
Decimal point Programmable
LEDs 2 for functions and 2 for outputs
Display refresh rate 5/s
Display / input overrange indication "-Oue", "Oue"
Relays refresh, maximum and minimum value 10/s

RELAYS

2 Relays SPST (included) 5A@250V AC / 30V DC

ANALOG OUTPUT (0/4-20mA)

Resolution 5.5μA
Accuracy ±(0.3%L+40μA)
EMI max influence ±0.25mA
Temperature coefficient 3μA/°C
Maximum load ≤500Ω

POWER SUPPLY

PICA10X-P 85-265 V AC / 100-300 V DC
PICA10X-P6 21-53 V AC / 10,5-70 V DC
Consumption (all models) 5W

FUSES (DIN 41661) (Not included)

PICA10X-P F 0.2A / 250V
PICA10X-P6 F 1A / 250V

FILTER P

Cutoff frequency 0.4Hz to 0.004Hz
Slope 20dB/Dec.

ENVIRONMENTAL CONDITIONS

Operating temperature -10°C to +60°C
Storage temperature -25°C to +85°C
Relative humidity (non-condensing) <95% @ 40°C
Maximum altitude 2000m
Frontal protection degree IP65

DIMENSIONS

Dimensions 48x24x100mm
Panel cutout 45x22mm
Weight 100g
Case material Polycarbonate s/UL 94 V-0

MAINTENANCE

Instrument repairs should only be carried out by the manufacturer or by its authorized partners. For frontal device cleaning, just wipe it with a damp cloth and neutral soap product. **DO NOT USE SOLVENTS!**

WARRANTY

All products are warranted against defective material and workmanship for a period of 3 years from acquisition date. If a product appears to have a defect or fails during the normal use within warranty period, please contact the distributor from whom you purchased the product to be given proper instructions.

This warranty does not apply to defects resulting from action of the customer such as mishandling or improper interfacing. The liability under this warranty shall extend only to the repair of the instrument; no responsibility is assumed by the manufacturer for any damage which may result from its use.

CONFORMITY DECLARATION



Manufacturer: DITEL - Diseños y Tecnología S.A.
Address: Xarol, 8C P.I. Les Guixeres
08915 Badalona.
SPAIN

Declares, that the product:

Name: Digital panel indicator
Model: **PICA100-P/P6, PICA101-P/P6, PICA104-P/P6**

Conforms with Directives:

EMC 2004/108/CE
LVD 2006/95/CE

Applicable standards:

EN 61326-1	Electrical equipment for measurement, control and laboratory use (EMC)	
EN 61000-4-2	Electrostatic discharge (ESD)	Criterion B
EN 61000-4-3	Air discharge 8kV	Criterion A
EN 61000-4-4	Contact discharge 4kV	Criterion B
EN 61000-4-5	Electromagnetic fields 10 V/m	Criterion B
EN 61000-4-6	Fast transients (burst)	Criterion B
EN 61000-4-11	Power lines 2 kV Signal lines 1 kV	Criterion B
	Surge	Criterion B
	1 kV L to N 2 kV L, N to Earth 1 kV Signal lines to Earth	Criterion A
	RF conducted interference	Criterion A
	3 Vrms	
	Voltage dips:	
	0% V during 1 cycle	Criterion B
	40% V during 10/12 cycles	Criterion C
	70% V during 25/30 cycles	Criterion C
	Short interruptions:	
	0% V during 250/300 cycles	Criterion C
	Emission limits	
	Clase B	
CISPR11		

EN 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use.	
	General safety	
	Overvoltage category II	
	Pollution degree 2	
	Conductive pollution excluded	
	Insulation type:	
	Enclosure: Double	
	Power/signal/relays: Basic	

Date: 21 October 2013
Signed: Alicia Alarcia
Charge: Technical Director



WARNING

To guarantee electromagnetic compatibility, the following guidelines should be kept in mind:
Power supply wires should be separatedly routed from signal wires and **never runned** in the same conduit.
Use shielded cable for signal wiring.
Cables section should be ≥0.25mm²

INSTALLATION

To meet the requirements of EN 61010-1 standard, where the unit is permanently connected to main supply, its is obligatory to install a circuit breaking device easy reachable to the operator and clearly marked as the disconnecting device.
In the same way, a protective external fuse against overcurrents must be installed.



According to 2002/96/CE Directive, You cannot dispose of it at the end of its lifetime as unsorted municipal waste. You can give it back, without any cost, to the place where it was acquired to proceed to its controlled treatment and recycling.



You can extend this period up to **5 years** from the product commissioning, only by fulfilling the corresponding form.
Fill up the form in our website:
<http://www.ditel.es/warranty>



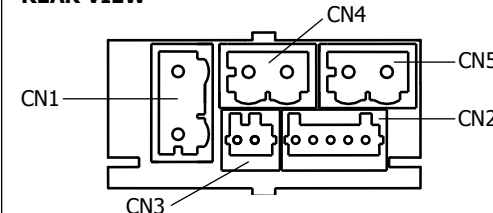
DITEL PICA100-P

INSTRUCTIONS MANUAL

Valid for P2.00 version or higher.



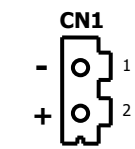
REAR VIEW



CONNECTORS DESCRIPTION

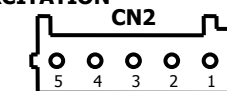
AC SUPPLY

PIN 1 Phase
PIN 2 Neutral
DC SUPPLY
PIN 1 Negative
PIN 2 Positive



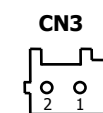
SIGNAL INPUT AND EXCITATION

PIN 1: +60V/+10V DC
PIN 2: +20mA DC
PIN 3: +mV (Shunt)
PIN 4: Common
PIN 5: + Excitation (20V±5V DC @ 30mA)



RS485 OUTPUT

PIN 1: B = TxD+ / RxD+
PIN 2: A = TxD- / RxD-



ANA OUTPUT

PIN 1: -
PIN 2: +

RELAY 1 OUTPUT

PIN 1: } N.O. Contact
PIN 2: }

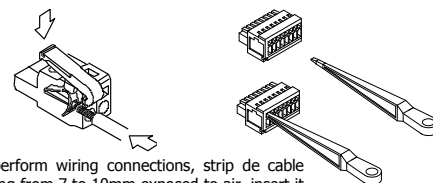


RELAY 2 OUTPUT

PIN 1: } N.O. Contact
PIN 2: }



KEY TOOLS FOR CABLE INSERTION



To perform wiring connections, strip de cable leaving from 7 to 10mm exposed to air, insert it in the proper terminal while pushing the key insertion tool to open the clip inside the connector. Release the key to fix the wire.

KEYBOARD

Keys detail (bottom view)



- ENTER**: Enters configuration and validates data and parameters.
- SHIFT**: Selects mode or shifts blinking digit in configuration.
- UP**: Increases value of blinking digit in configuration mode. In RUN mode sets TARE or clears it.

DESCRIPTION

48x24mm (1/32 DIN) fully programmable panel meter, easy to scale into desired engineering units directly by frontal keys or rear input signal value in teach mode (tEAc), with 4 x 8mm-high red LED digits, **supply excitation for the transducer** and **TARE** function incorporated, it is designed for measuring **±10V** and **±20mA** process signals. It also provides an up to **±60V DC** voltage input and up to **±100mV DC shunt** input which allows high current signals measurement. A multi-point scaling is also possible to define a linearisation by segments to control the volume of irregularly shaped tanks.

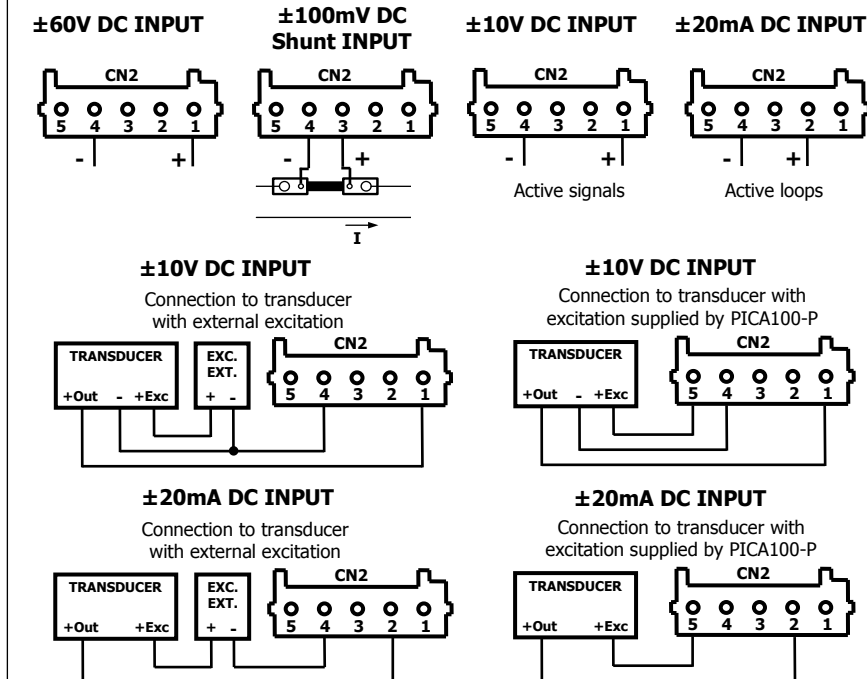
It provides two relays that allow this instrument not only to measure but also to be capable of controlling, regulating and detecting alarms for the mentioned signals.

Thanks to its RS4P (RS485) communication and analog ANAP options, it can be integrated to a measurement system providing information via MODBUS-RTU protocol or generating a 0/4-20mA signal respectively.

The indicator incorporates three keys located on the bottom of the frontal display to set all configuration parameters. It is also configurable by a PC using a specific software available on our website.

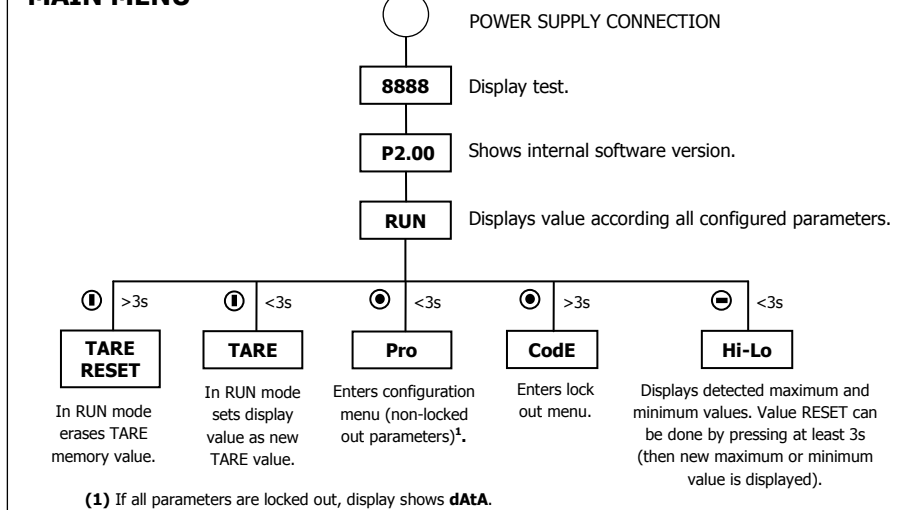
4-level brightness configuration is possible to adapt it to the light working conditions. Registers the minimum and maximum process values since its starting up or a resetting.

WIRING DIAGRAMS ACCORDING TO INPUT TYPE



For other transducer connection types, do not forget to also join indicator common (CN2, pin 4) to the negative terminal from the external excitation if it is needed.

MAIN MENU



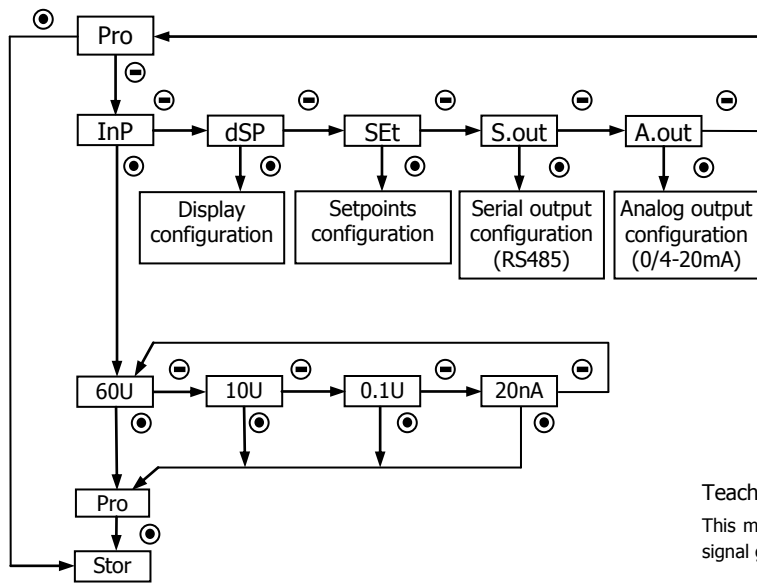
DISEÑOS Y TECNOLOGÍA, S.A.
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30727258 05.12.2013

INPUT TYPE CONFIGURATION

INPUT TYPES	
60U	±60 V DC
10U	±10 V DC
0.1U	Shunt ±100mV DC
20nA	±20mA DC



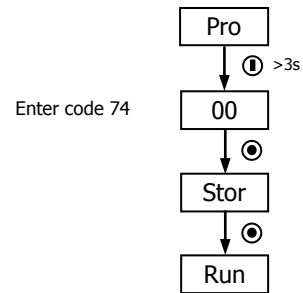
Analog output configuration menu only appears if ANAP is installed. Only in this case serial output menu does not appear.

Teach mode ('tEAc') in display configuration:

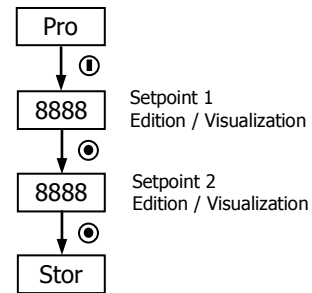
This mode allows for each point the visualization of the real value of an electric signal generated by a sensor and then, its validation by pressing ENTER key.

Make sure that the two defined points have different values and are not placed very close, being the most convenient one as far from each other as possible in each configured segment.

RETURN TO DEFAULT CONFIGURATION

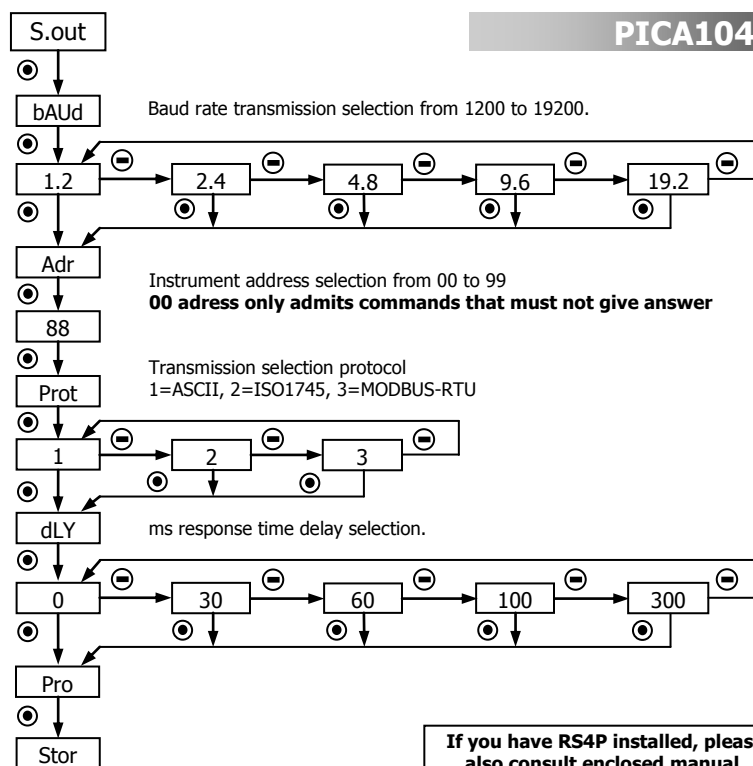


DIRECT ACCESS TO SETPOINTS VALUE



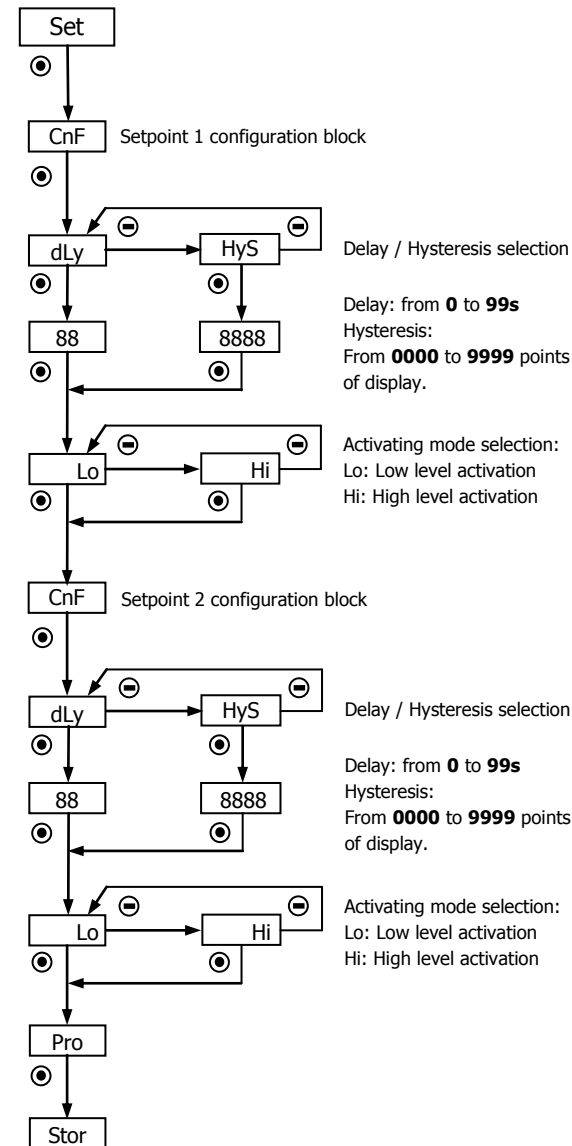
SERIAL OUTPUT (RS4P) CONFIGURATION

PICA104-P

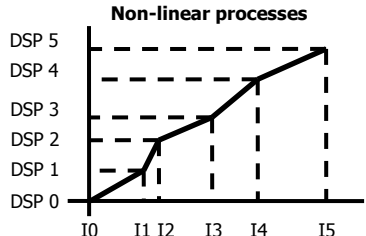
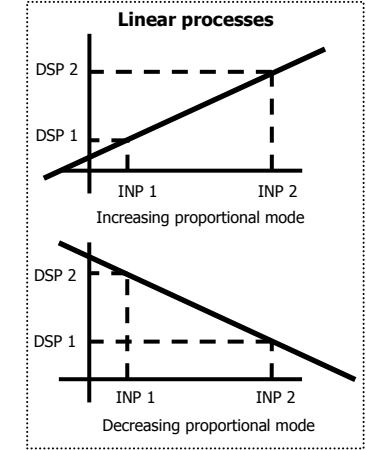
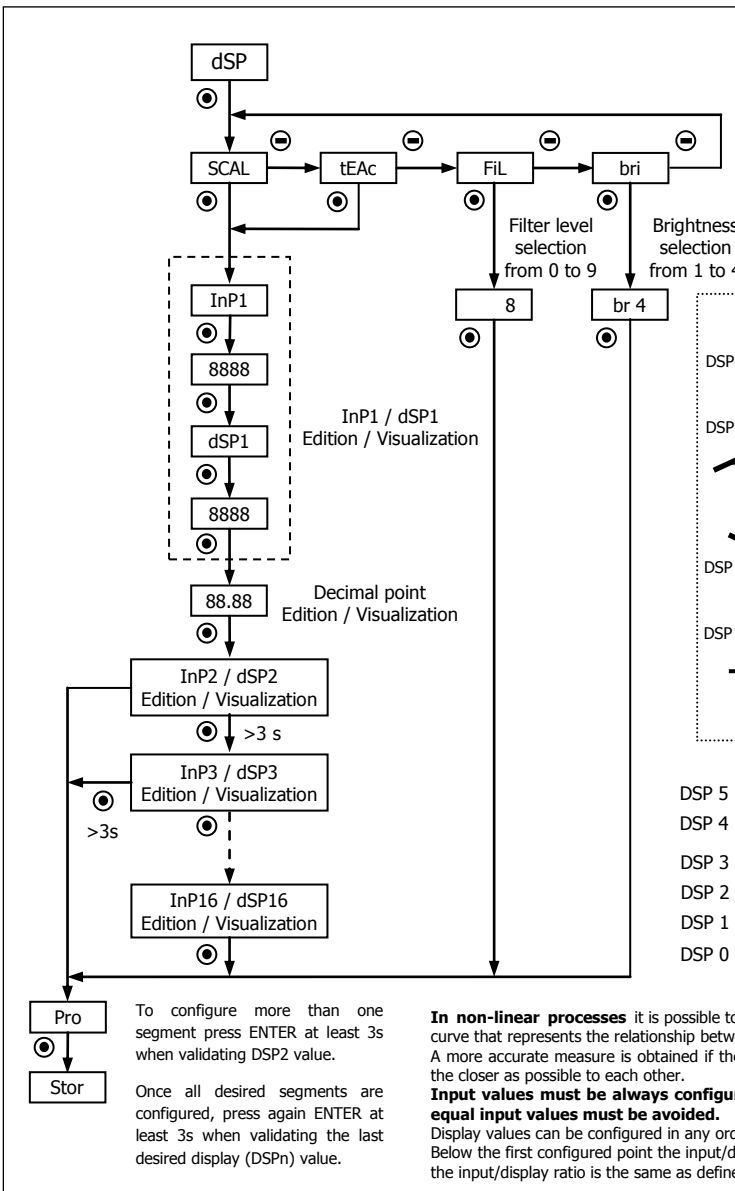
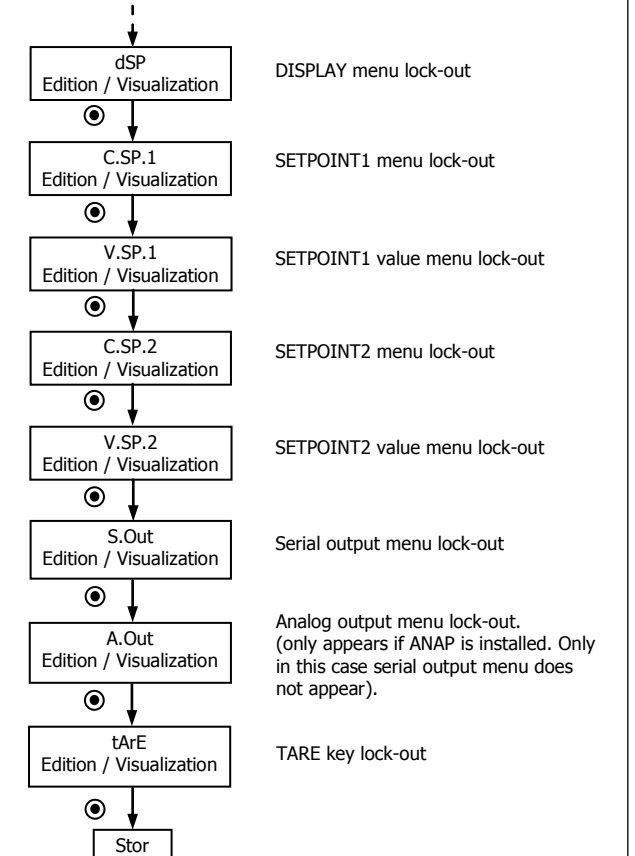
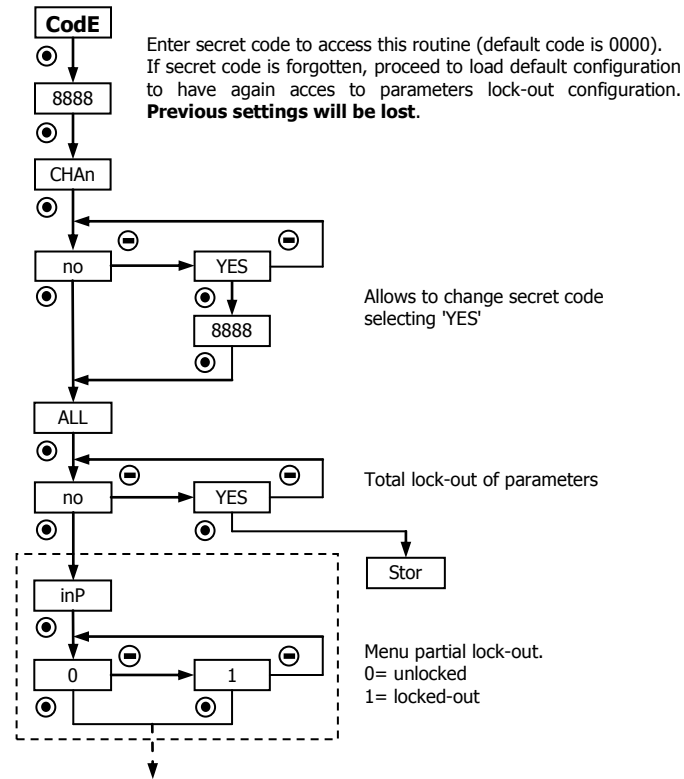


If you have RS4P installed, please also consult enclosed manual.

SETPOINTS CONFIGURATION

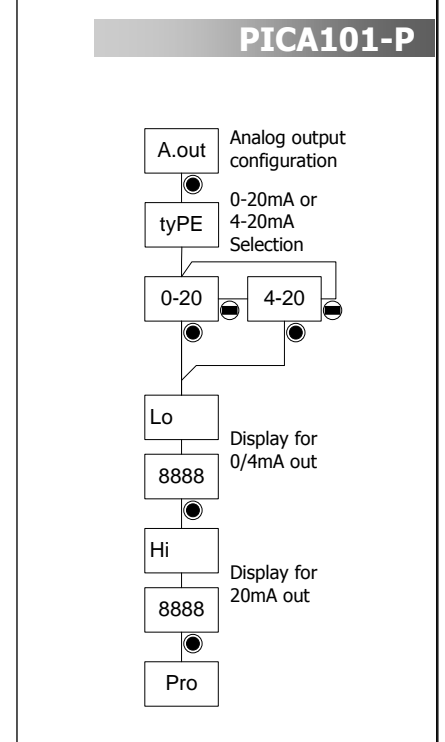


CONFIGURATION LOCK-OUT MENU



DISPLAY CONFIGURATION

ANALOG OUTPUT (ANAP) CONFIGURATION



To configure more than one segment press ENTER at least 3s when validating the last desired display (DSPn) value.

Once all desired segments are configured, press again ENTER at least 3s when validating the last desired display (DSPn) value.

In non-linear processes it is possible to configure up to 16 points INP-DSP. Defined points are then connected by segments and, as a result, a curve that represents the relationship between input value and its corresponding display is obtained. A more accurate measure is obtained if the first and last point are defined in the extremes of the process with maximum configured points and the closer as possible to each other.

Input values must be always configured in an increasing or a decreasing order. Assigning two different display values to two equal input values must be avoided.

Display values can be configured in any order or even be repeated for different inputs. Below the first configured point the input/display ratio is the same as defined for the first two points of the curve. Above the last configured point the input/display ratio is the same as defined for the last two points of the curve.