

# **Technical Data Sheet**

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

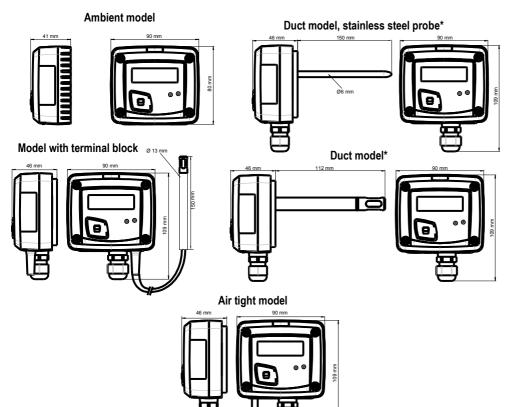
# Temperature transmitter

# TM 110

# **KEY POINTS**

- Range from 0 to 50 °C (ambient model), from -20 to +80 °C (duct and air tight models) and from
- -100 to 400 °C (model with Pt100 or NTC terminal block)
- 0-10 V output, active, power supply 24 Vac/Vdc (3-4 wires) or 4-20 mA output, passive loop, power supply from 16 to 30 Vdc (2 wires)
- ABS V0 housing, IP65 (remote, air tight and duct models) or IP20 (ambient model), with or without display
- "1/4 turn" system mounting with wall-mount plate
- Housing with simplified mounting system

#### FEATURES OF THE HOUSING



Material: ABS V0 as per UL94

#### Protection:

2 15.

- duct and air tight models and model with terminal block : IP65

28.3

- ambient model : IP20

Display: LCD 10 digits. Size: 50 x 17 mm

Height of digits: Values: 10 mm; Units:

5 mm

Cable gland (duct model and model with terminal block):

For cables Ø 8 mm maximum

Weight: 162 g

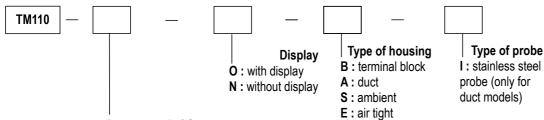
Cable of remote probes: length 2 m and

Ø 4.8 mm in PVC

\*different probes are available as option

## PART NUMBER

To order, just add the codes to complete the part number :



Power supply / Output

**A**: Active – 24 Vac/Vdc – 0-10 V **P**: Passive – 16/30 Vdc – 4-20 mA Example: TM110-POB

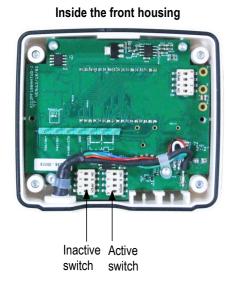
Temperature transmitter, passive 4-20 mA output, with display and with terminal block.

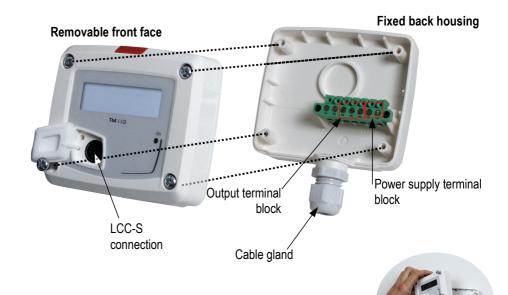
#### **TECHNICAL FEATURES** °C, °F Unit of measurement Measuring range From 0 to 50 °C (ambient model), form -20 to +80 °C (duct and air tight models) and from -100 to +400 °C (model with terminal block) Accuracy\* Pt100: ±0.5 % of reading ±0.5 °C NTC: ±0.3°C (from -40°C to 70°C); ±0.5°C (outside the -40 to +70°C temperature range) Type of sensor Pt100 (model with terminal block and stainless steel duct and air tight models) NTC (ambient model and duct model) Response time 1/e (63%) 5 sec. (ambient) 1/e (63%) 20 sec. (airtight) Resolution 0.1 °C Type of fluid Air and neutral gases From 0 to +50 °C Operating temperature Storage temperature From -10 to +70 °C

# TECHNICAL SPECIFICATIONS

Output / Power supply	- active sensor 0-10 V (power supply 24 Vac/Vdc ± 10%), 3-4 wires - passive loop sensor 4-20 mA (power supply 16/30 Vdc), 2 wires - maximum load : 500 Ohms (4-20 mA) - minimum load : 1 K Ohms (0-10 V)	
Consumption	2 VA (0-10 V) or max. 22 mA (4-20 mA)	
Electromagnetical compatibility	compatibility EN61326	
Electrical connection	Screw terminal block for cables Ø0.05 to 2.5 mm <sup>2</sup>	
PC communication	Kimo USB-mini Din cable	
Environment	Air and neutral gases	

# CONNECTIONS



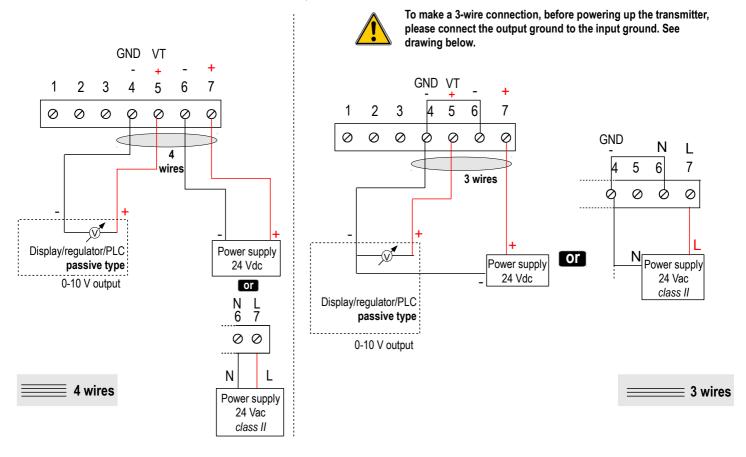


<sup>&#</sup>x27;All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

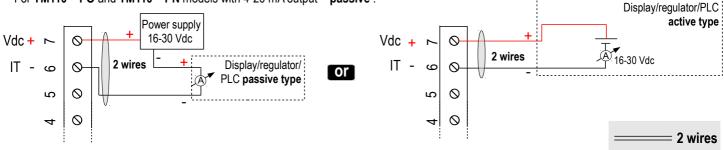


This connection must be made by a qualified technician. To make the connection, the transmitter must not be energized.

For TM110 - AO and TM110 - AN models with 0-10 V output - active, 4 wires :



## For TM110 - PO and TM110 - PN models with 4-20 mA output - passive :

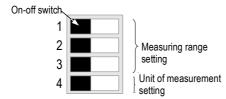


## SETTINGS AND USE OF THE TRANSMITTER

#### > Configuration



To configure the transmitter, it must not be energized. Then, you can make the settings required, with the DIP switches (as shown on the drawing below). When the transmitter is configured, you can power it up.



#### > Measuring range setting - Active switch

To set a measuring range, put the on-switches 1, 2 and 3 of the measuring ranges as shown below.

Configurations	From 0 to 50 °C	From -20 to +80 °C	From -50 to +50 °C	From 0 to 100 °C	From 0 to 200 °C	From 0 to 400 °C
Combinations	1	1 2 3 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 2 3 4 4 1	1	1 2 3 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6

To set the unit of measurement, put the on-off switch 4 as show beside.

Configurations	°C	°F
Combinations	1 2 3 3 4 <b>1</b>	1 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

# CONFIGURATION VIA LCC-S SOFTWARE (option)

#### An easy and friendly configuration with the software!

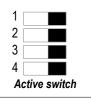
It is possible to configure intermediate ranges.



Caution: the minimum difference between the high range and the low range is 20.

Example : for a 0-100 $^{\circ}$ C transmitter, the minimum delta of the range is 20 $^{\circ}$ C. It is then possible to configure the transmitter from 0 to +100 $^{\circ}$ C, or from 0 to +20 $^{\circ}$ C...

- To access the configuration via software :
  - Set the DIP switches as shown beside.
  - Connect the cable of the LCC-S to the connection of the transmitter.
- Please refer to the user manual of the LCC 100 to make the configuration.





The configuration of the parameters can be done either with the DIP switch or via software (you can not combine both solutions).

#### MOUNTING

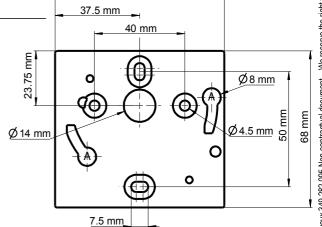
To install the transmitter, mount the ABS plate on the wall (drilling :  $\emptyset$ 6 mm, screws and pins are supplied).

Insert the transmitter on the fixing plate (see A on the drawing beside). Rotate the housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.



Ambient model does not have any mounting plate.

4 fixing holes are present inside the back housing. Use them to install the transmitter on the required location.



75 mm

#### **MAINTENANCE**

Please avoid any aggressive solvent. Please protect the transmitter and its probes from any cleaning product containing formalin, that may be used for cleaning rooms or ducts.

## OPTIONS AND ACCESSORIES

- KIAL-100A: Power supply class 2, 230 Vac input, 24 Vac output
- LCC-S: configuration software with USB cable
- Pt100 2 or 3 wires or NTC stainless steel probe for duct and remote models

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