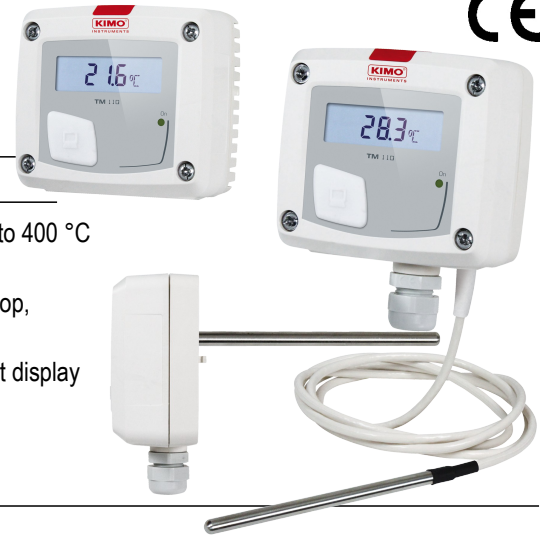


Temperature transmitter

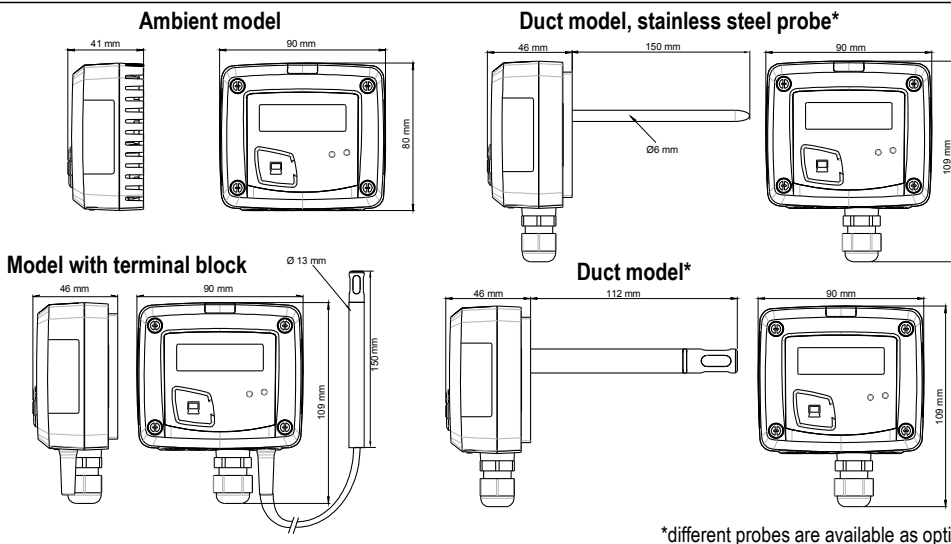
TM 110

KEY POINTS

- Range from 0 to 50 °C (ambient model), from -20 to +80 °C (duct model) 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 and duct models) or IP20 (ambient model), with or without display
- "¼ turn" system mounting with wall-mount plate
- Housing with simplified mounting system



FEATURES OF THE HOUSING



Material : ABS V0 as per UL94

Protection :

- duct model and model with terminal block : IP65
- 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

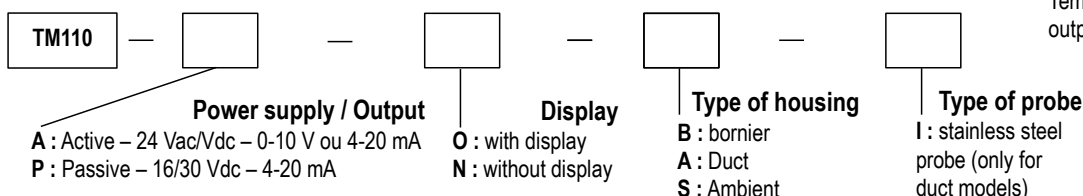
TECHNICAL FEATURES

Unit of measurement	°C, °F
Measuring range	From 0 to 50 °C (ambient model), from -20 to +80 °C (duct model) 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 or NTC (model with terminal block and stainless steel duct model) 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
Operating temperature	From 0 to +50 °C
Storage temperature	From -10 to +70 °C

*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.

PART NUMBER

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



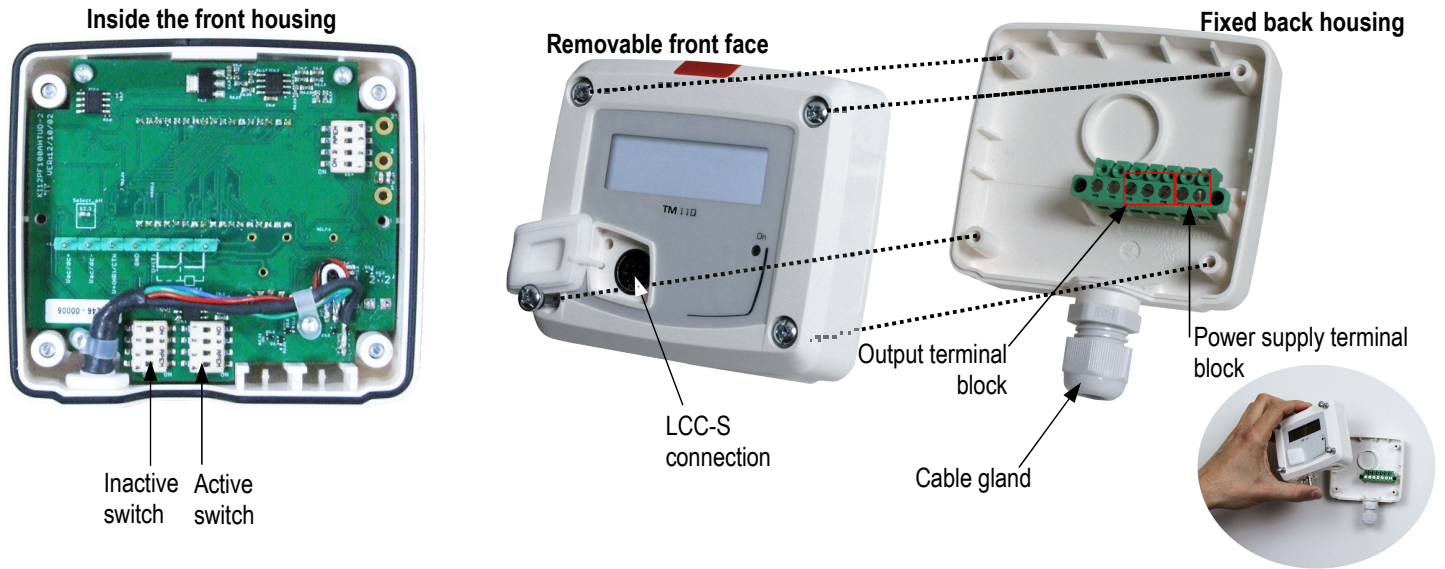
Example : TM110-POB

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

TECHNICAL SPECIFICATIONS

Output / Power supply	- active sensor 0-10 V or 4-20 mA (power supply 24 Vac/Vdc \pm 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	EN61326
Electrical connection	Screw terminal block for cables \varnothing 0.05 to 2.5 mm ²
PC communication	Kimo USB-mini Din cable
Environment	Air and neutral gases

CONNECTIONS



ELECTRICAL CONNECTIONS – as per **TRISOSTAR**

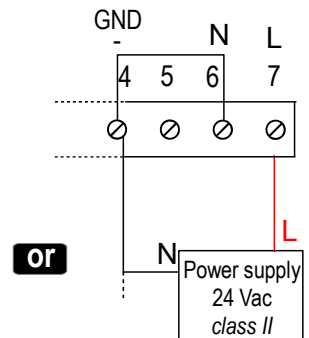
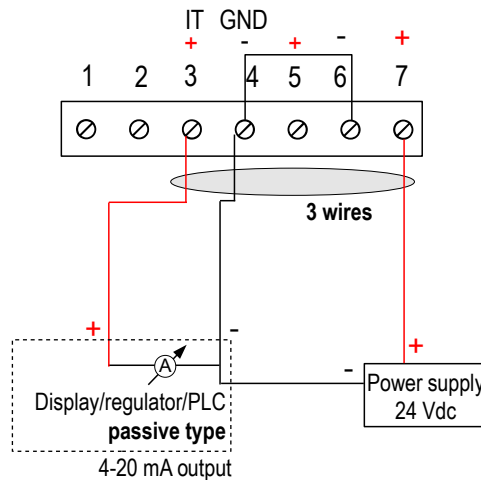
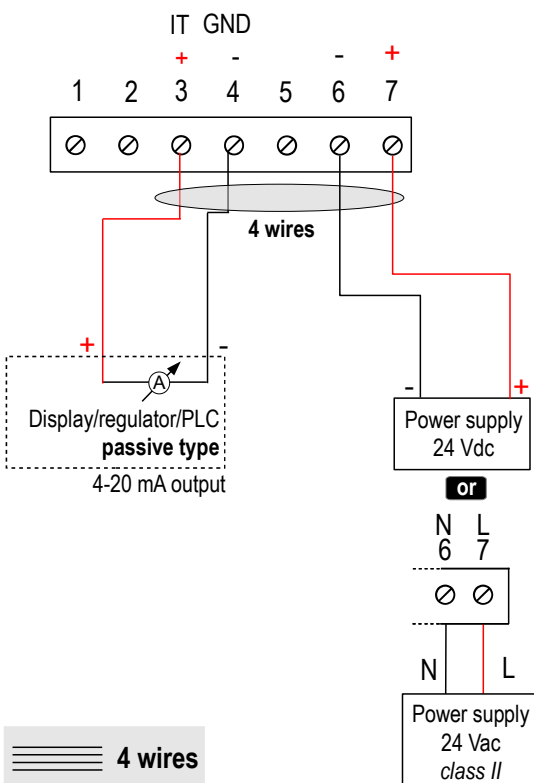


This connection must be made by a qualified technician. **To make the connection, the transmitter must not be energized.**

For **TM110 – AO** and **TM110 – AN** models with 0-10 V or 4-20 mA output – **active**, **4 wires** :



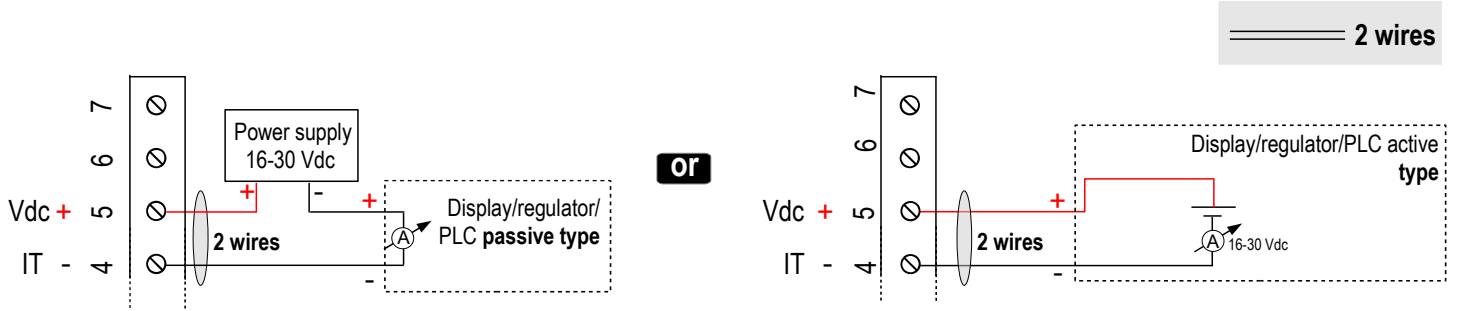
To make a 3-wire connection, before powering up the transmitter, please connect the output ground to the input ground. See drawing below.



≡≡≡ **4 wires**

≡≡≡ **3 wires**

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

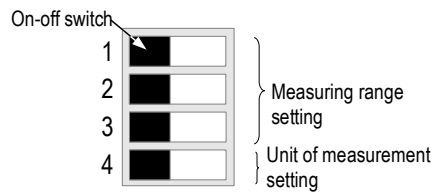


SETTINGS AND USE OF THE TRANSMITTER

> 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 <input checked="" type="checkbox"/> <input type="checkbox"/>	1 <input type="checkbox"/> <input checked="" type="checkbox"/>	1 <input checked="" type="checkbox"/> <input type="checkbox"/>	1 <input type="checkbox"/> <input checked="" type="checkbox"/>	1 <input checked="" type="checkbox"/> <input type="checkbox"/>	1 <input type="checkbox"/> <input checked="" type="checkbox"/>
	2 <input type="checkbox"/> <input checked="" type="checkbox"/>	2 <input checked="" type="checkbox"/> <input type="checkbox"/>	2 <input checked="" type="checkbox"/> <input type="checkbox"/>	2 <input type="checkbox"/> <input checked="" type="checkbox"/>	2 <input type="checkbox"/> <input checked="" type="checkbox"/>	2 <input checked="" type="checkbox"/> <input type="checkbox"/>
	3 <input type="checkbox"/> <input checked="" type="checkbox"/>	3 <input type="checkbox"/> <input checked="" type="checkbox"/>	3 <input type="checkbox"/> <input checked="" type="checkbox"/>	3 <input checked="" type="checkbox"/> <input type="checkbox"/>	3 <input checked="" type="checkbox"/> <input type="checkbox"/>	3 <input checked="" type="checkbox"/> <input type="checkbox"/>
	4 <input type="checkbox"/> <input checked="" type="checkbox"/>	4 <input type="checkbox"/> <input checked="" type="checkbox"/>	4 <input type="checkbox"/> <input checked="" type="checkbox"/>	4 <input type="checkbox"/> <input checked="" type="checkbox"/>	4 <input type="checkbox"/> <input checked="" type="checkbox"/>	4 <input type="checkbox"/> <input checked="" type="checkbox"/>

> Unit of measurement setting – Active switch

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

Configurations	°C	°F
Combinations	1 <input type="checkbox"/> <input type="checkbox"/>	1 <input type="checkbox"/> <input type="checkbox"/>
	2 <input type="checkbox"/> <input checked="" type="checkbox"/>	2 <input type="checkbox"/> <input checked="" type="checkbox"/>
	3 <input type="checkbox"/> <input checked="" type="checkbox"/>	3 <input type="checkbox"/> <input checked="" type="checkbox"/>
	4 <input type="checkbox"/> <input checked="" type="checkbox"/>	4 <input checked="" type="checkbox"/> <input type="checkbox"/>

CONFIGURATION VIA LCC-S

SOFTWARE (option)

An easy and friendly configuration with the software !

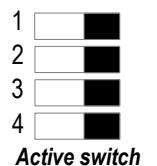
It is possible to configure intermediate ranges.



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

Example : for a 0-100°C transmitter, the minimum delta of the range is 20°C. It is then possible to configure the transmitter from 0 to +100°C, or from 0 to +20°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.



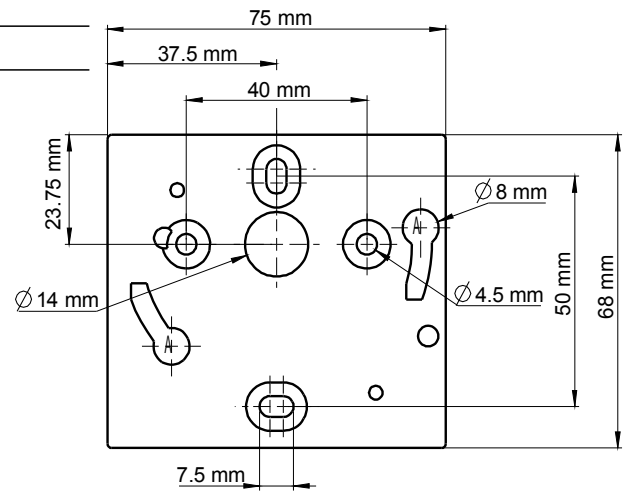
The configuration of the parameters can be done either with the DIP switch or via software (you can not combine both solutions).

MOUNTING

To install the transmitter, mount the ABS plate on the wall (drilling : $\varnothing 6$ 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.



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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