

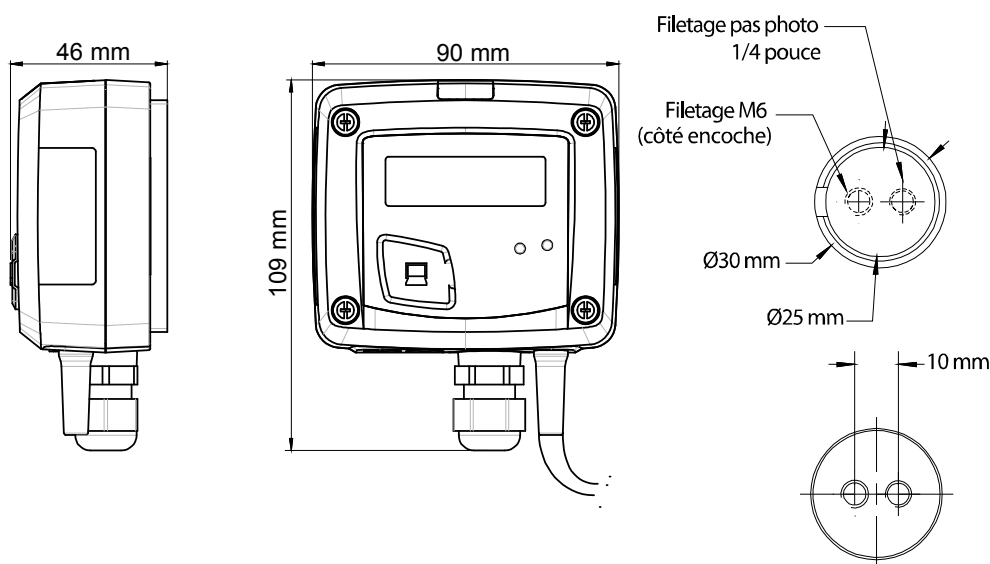
## Solar radiation transmitter CR 110

### KEY POINTS

- Range from 0 to 1500 W/m<sup>2</sup>
- 0-10 V active output, 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, with 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:** IP65

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

**Height of digits:** Values: 10 mm; Units: 5 mm

**Cable gland:** For cables Ø8 mm maximum

**Weight:** 140 g

**Remote probe:** cable of 5 m length in PVC

### TECHNICAL FEATURES

<b>Unit of measurement</b>	W/m <sup>2</sup>
<b>Measuring range</b>	From 0 to 1500 W/m <sup>2</sup>
<b>Accuracy*</b>	5% of reading
<b>Resolution</b>	1 W/m <sup>2</sup>
<b>Type of fluid</b>	Air and neutral gas
<b>Conditions of use (°C/%RH/m)</b>	From 0 to +50°C. In non-condensing condition. From 0 to 2000 m.
<b>Storage temperature</b>	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 :



**Power supply / Output**

**A:** Active – 24 Vac/Vdc – 0-10 V

**P:** Passive – 16/30 Vdc – 4-20 mA

**Example: CR110-PO**

Solar radiation transmitter with 4-20 mA passive output

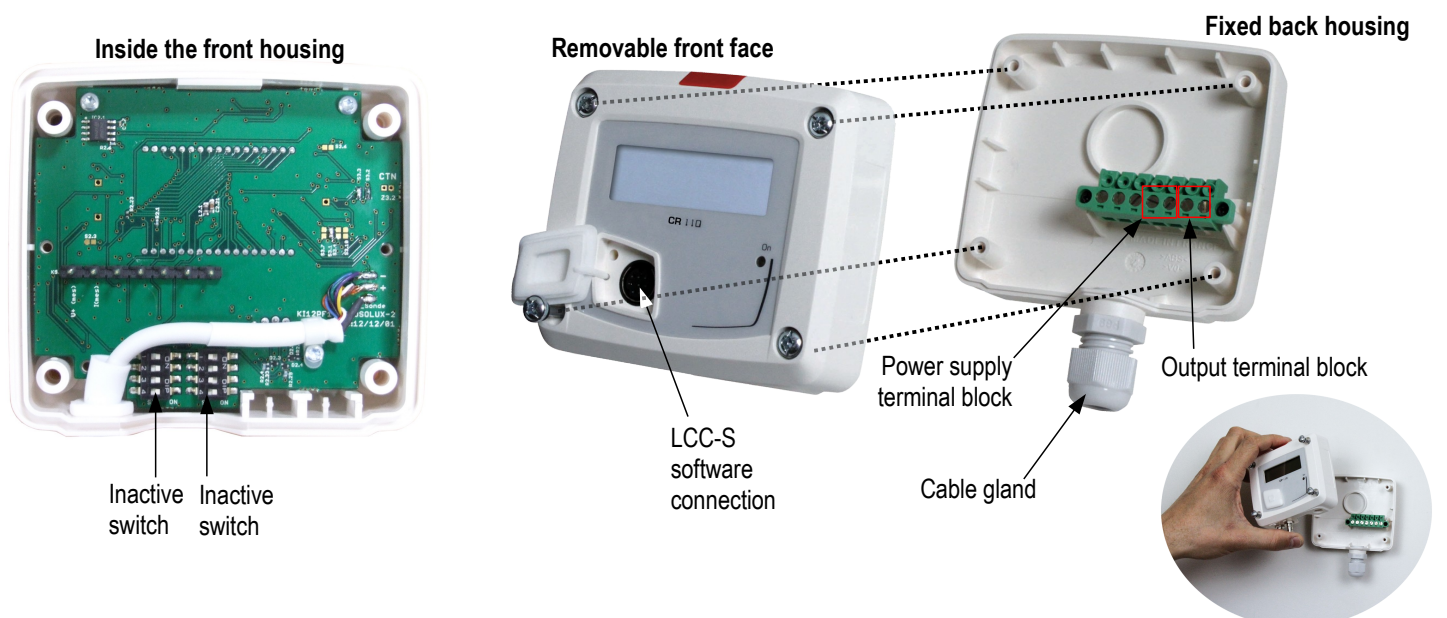
## FEATURES OF THE SOLAR CELL

<b>Measuring range</b>	From 0 to 1500 W/m <sup>2</sup>
<b>Spectral response</b>	400-1100 nm
<b>Nominal sensitivity</b>	100 mv for 1000 W/m <sup>2</sup> STC (Standard Test Conditions 25°C – Solar spectrum AM 1.5)
<b>Response in cosine</b>	Corrected until 80°
<b>Coefficient in temperature</b>	+0.1% / °C
<b>Effective area</b>	1 cm <sup>2</sup>
<b>Operating temperature</b>	From -30 to +60°C
<b>Relative humidity dependence</b>	100% RH
<b>UV performance</b>	Excellent (PPMA filter)
<b>Mode</b>	Photovoltaic
<b>Material</b>	Polycrystallin silicon
<b>Front face</b>	Translucent PPMA
<b>Tightness</b>	Polyutethane resin and housing in PPMA and polyacetol
<b>Weight</b>	60 g
<b>Size</b>	30 x 32 mm
<b>Protection</b>	IP65

## TECHNICAL SPECIFICATIONS

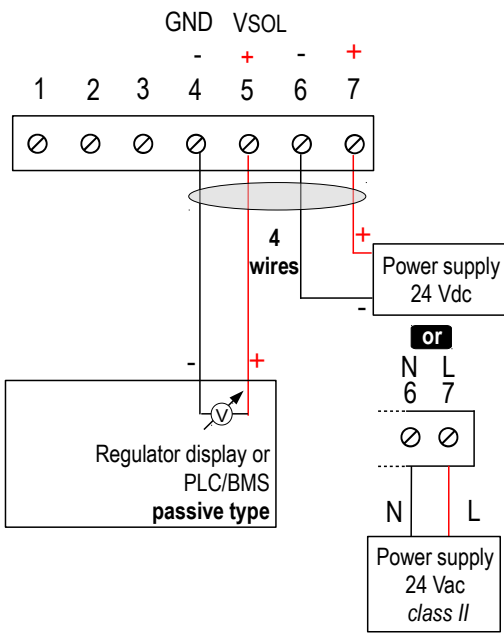
<b>Output / Power supply</b>	<ul style="list-style-type: none"> <li>- active 0-10 V (power supply 24 Vac/Vdc ±10%), 3-4 wires</li> <li>- passive loop 4-20 mA (power supply 16/30 Vdc), 2 wires</li> <li>- common mode voltage &lt;30 VAC</li> <li>- maximum load: 500 Ohms (4-20 mA) / minimum load: 1 K Ohms (0-10 V)</li> </ul>
<b>Consumption</b>	2 VA (0-10 V) or 0,6 VA (4-20 mA)
<b>European directives</b>	2014/30/EU EMC 2014/35/EU Low Voltage 2011/65/EU RoHS II 2012/19/EU WEEE
<b>Electrical connection</b>	Screw terminal block for cables from 0.05 to 2.5 mm <sup>2</sup> or from 30 to 14 AWG Carried out according to the code of good practice
<b>PC communication</b>	USB-mini DIN cable
<b>Environment</b>	Air and neutral gases

## CONNECTIONS



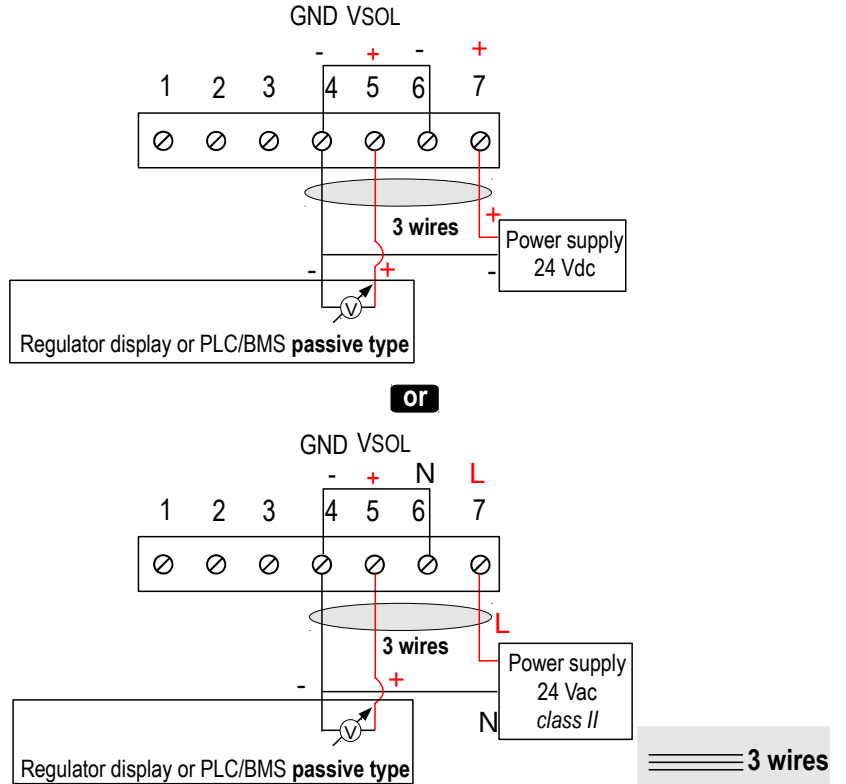
**⚠** This connection must be made by a qualified and trained technician. To make the connection, the transmitter must not be energized.

For **CR110-AO** models with **0-10 V** output – active:



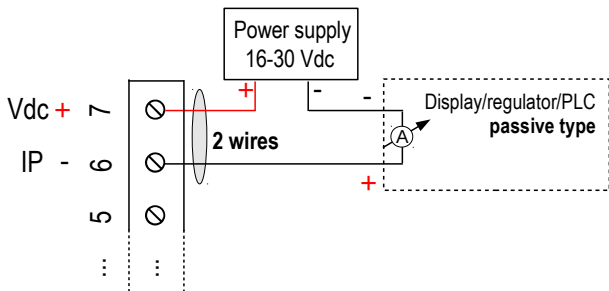
≡≡≡≡ 4 wires

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

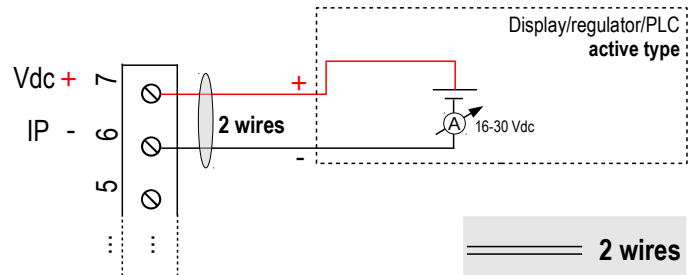


≡≡≡ 3 wires

For **CR110-PO** models with **4-20 mA** output – passive:



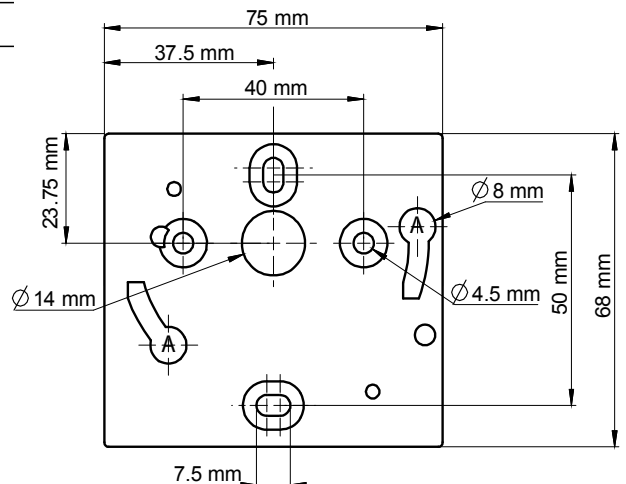
or



≡≡ 2 wires

## MOUNTING

To mount 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.



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## MAINTENANCE

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

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## OPTIONS AND ACCESSORIES

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- **KIAL-100A:** Power supply class 2, 230 Vac input, 24 Vac output
- **KIAL-100C:** Power supply class 2, 230 Vac input, 24 Vdc output
- **LCC-S:** configuration software with USB cable
- Angle mounting
- Fixing kit for solar panels



**Only the accessories supplied with the device must be used.**

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## PRECAUTIONS FOR USE

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Please always use the device in accordance with its intended use and within parameters described in the technical features in order not to compromise the protection ensured by the device.

**大華高科股份有限公司**

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