



LP PYRA 08 - LP PYRA 08AC - LP PYRA 08AV PIRANOMETERS

Delta Ohm manufactures, according to ISO 9060 and the recommendations of the WMO, the range of 2nd class pyranometers **LP PYRA 08**. These tools are robust, reliable, provided to withstand the adverse climatic conditions are suitable for installation in the field.

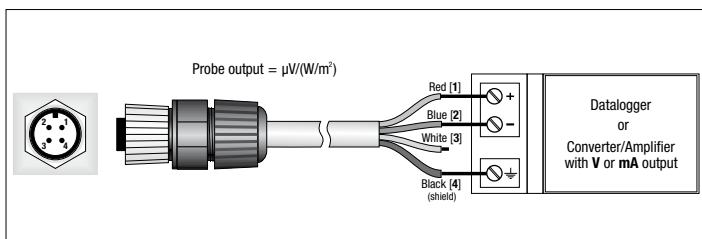
The pyranometer **LP PYRA 08**, measure the radiation on a flat surface (Watt/m^2). The radiation measured is the sum of direct solar irradiance and diffuse irradiance (global radiation).

The sensors with mV output does not need power and have a typical sensitivity of $15 \text{ mV} / (\text{kW m}^{-2})$. The pyranometer are also available with the output signal amplified and converted into a current signal $4 \dots 20\text{mA}$ or voltage $0 \dots 1 \text{ Vdc}$, $0 \dots 5 \text{ V}$ or $0 \dots 10\text{Vdc}$. The heating option allows you to operate at low temperatures with good results in those places where frequent snowfall would cover the glass dome for long periods.

Each pyranometer is calibrated individually with reference to the WWR (World Radiometric Reference in Davos CH) and accompanied by calibration report.

LP PYRA 08 thanks to a new sensor used has a response time of less than 8 seconds and is used when it is necessary to record changes in short and very short-term irradiation.

LP PYRA 08 - LP PYRA 08BL CONNECTION DIAGRAMMS



| Technical specifications | LP PYRA 08 |
|--------------------------|-----------------------------------|
| Typical sensitivity | 15 mV (kW/m^2) |
| Impedance | 5Ω |
| Measuring range | 2000 W/m^2 |
| Viewing field | $2\pi\text{sr}$ |
| Spectral field | 305 nm – 2800 nm (50%) (Figure 1) |
| Working temperature | -40 °C – 80 °C |

Specifications according to ISO 9060

| | |
|---|---------------------------|
| Response time (95%) | <8 sec |
| Zero Off-set | 25 W/m^2 |
| a) Response to a thermal radiation (200 W m^{-2}) | $< \pm 6 \text{ W/m}^2$ |
| b) Response to a change of temperature 5K/h | $< \pm 2.5 \%$ |
| Long-term instability (1 year) | $< \pm 2 \%$ |
| Non linearity | $< \pm 22 \text{ W/m}^2$ |
| Response according to cosine | $< \pm 7 \text{ W/m}^2$ |
| Spectral selectivity | $<8\%$ |
| Tilt response | $< \pm 4 \%$ |

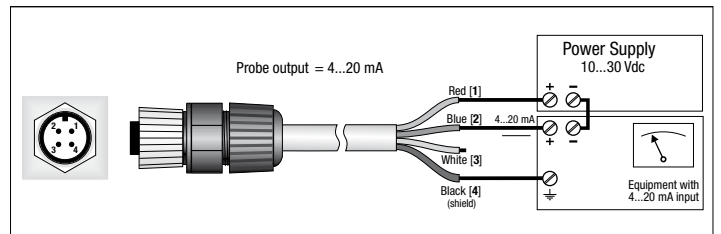


Figure 1. Typical spectral response of the pyranometers.

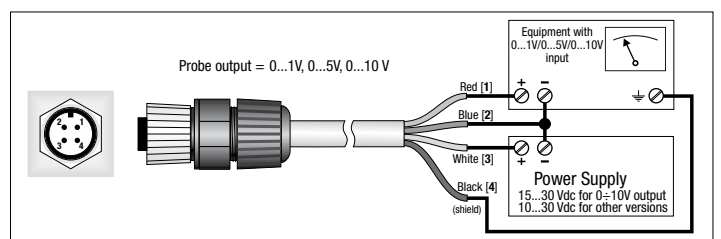
PURCHASING CODES


LP PYRA 08: Second Class pyranometer according to ISO 9060, complete with fast response sensor, calibration report, Silica gel can be replaced when exhausted. Different configurations available. M12 male connector. The cable with the female connector must be ordered separately. Use the cables CPM12 AA ... 2, 5 or 10 meters.

LP PYRA 08BLAC




LP PYRA 08BLAV



LP PYRA  **R = heating option**
No letter = not heated

08 = output in mV per kW / m²
08BL = output mV per kW / m², complete with base and level
08BLAC = output 4-20 mA, complete with base and level
08BLAV = 0-10 V, complete with base and level

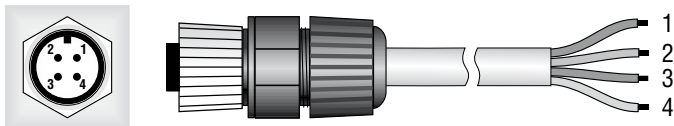
CABLES:

CPM12 AA  **2 = 2m long**
5 = 5m long
10 = 10m long

4 = 4-poles cable for not heated versions
8 = 8-poles cable with heating, option R

WIRING DIAGRAMS:

4-poles cable CPM12 AA4...



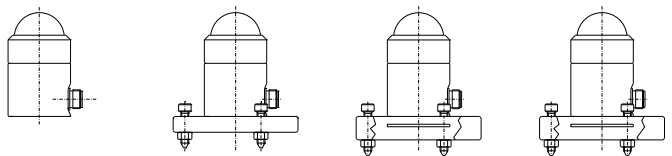
Spina M12 fissa 4 poli Presa M12 volante 4 poli

LP PYRA 08, LP PYRA 08BL, LP PYRA 08BLAC

| Connector | Function | Colour |
|-----------|---------------|--------|
| 1 | Negative (-) | Blue |
| 2 | Positive (-) | Red |
| 3 | Display | Black |
| 4 | Not connected | White |

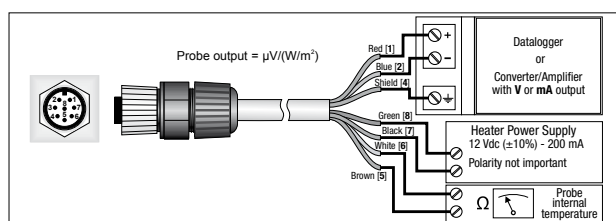
LP PYRA 08BLAV

| Connector | Function | Colour |
|-----------|----------------------|--------|
| 1 | (+) Vout and (-) Vcc | Blue |
| 2 | (+) Vout | Red |
| 3 | Display | Black |
| 4 | (+) Vcc | White |

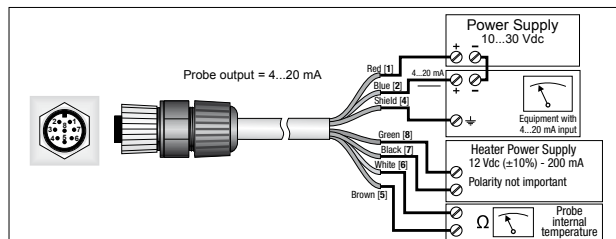


LP PYRA 08 LP PYRA 08BL LP PYRA 08BLAC LP PYRA 08BLAV

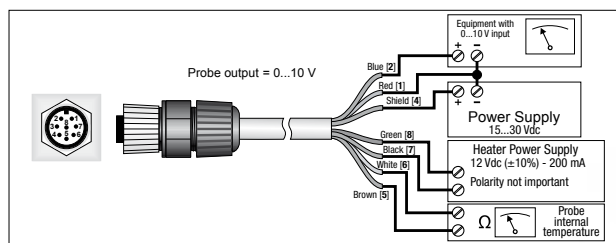
LP PYRA 08R - LP PYRA 08BLR CONNECTION DIAGRAMS



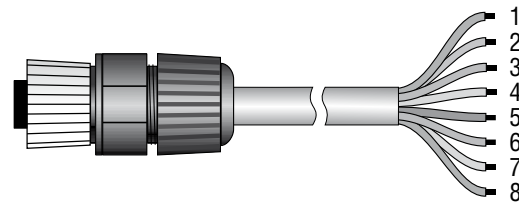
LP PYRA 08 - LP PYRA 08BLACR CONNECTION DIAGRAMS



LP PYRA 08 - LP PYRA 08BLAVR CONNECTION DIAGRAMS



8-poles cable CPM12 AA8...



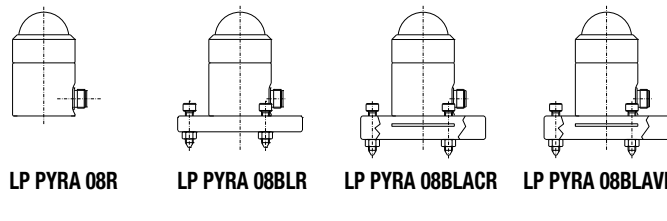
Spina M12 fissa 8 poli Presa M12 volante 8 poli

LP PYRA 08R, LP PYRA 08BLR, LP PYRA 08BLACR

| Connector | Function | Colour |
|-----------|--------------|--------|
| 1 | Positive (+) | Red |
| 2 | Negative (-) | Blue |
| 3 | | |
| 4 | Display | Black |
| 5 | NTC (10K) | Brown |
| 6 | | White |
| 7 | Heater | Black |
| 8 | | Green |

LP PYRA 08BLAVR

| Connector | Function | Colour |
|-----------|----------------------|--------|
| 1 | (-) Vout and (-) Vcc | Red |
| 2 | (+) Vout | Blue |
| 3 | | |
| 4 | (+) Vcc | Black |
| 5 | NTC (10K) | Brown |
| 6 | | White |
| 7 | Heater | Black |
| 8 | | Green |



LP PYRA 08R LP PYRA 08BLR LP PYRA 08BLACR LP PYRA 08BLAVR



Environmental Analysis