

SIGNUX RPG01

Weather and radiation — RS485 · 4-20 mA · Voltage



SX-RPG01



DESCRIPTION

Photosynthetically active radiation sensor for the 400 to 700 nm band, with an RS485 Modbus RTU or analogue output.

It works on the photoelectric principle: in light it produces a voltage signal proportional to the intensity of the incident radiation, and its sensitivity is proportional to the cosine of the angle of incidence. The cosine corrector keeps the standard cosine response.

The dust cover is treated so that dirt does not cling to it and so that environmental factors do not reach the components inside. It is used in meteorology, agriculture and air-pollution research.

FEATURES

- 0 to 2500 $\mu\text{mol}/\text{m}^2\cdot\text{s}$: Resolution of 1 $\mu\text{mol}/\text{m}^2\cdot\text{s}$ and accuracy of $\pm 2\%$.
- Linearity $\leq \pm 1\%$: And an annual stability of $\leq \pm 2\%$.
- 7 to 30 V DC, 0.06 W: Wide-range supply and very low consumption.
- Aluminium, IP67: Bubble level with adjustment handwheel, and -30 to $+75\text{ }^\circ\text{C}$ in service.

AT A GLANCE

Measures	PAR radiation
Output	RS485 · 4-20 mA · Voltage
Protection	IP67
Operating	-30 to $+75\text{ }^\circ\text{C}$

PART NUMBERS

PART NUMBER	CABLE LENGTH	CONNECTOR / OUTPUT	PROTOCOL / COMMS
SX-RPG01-15C-PT-485	15 cm	Pigtail	RS485
SX-RPG01-15C-M10-485	15 cm	M10 connector	RS485
SX-RPG01-2M-PT-485	2 m	Pigtail	RS485
SX-RPG01-2M-M10-485	2 m	M10 connector	RS485
SX-RPG01-15C-PT-420	15 cm	Pigtail	4-20 mA
SX-RPG01-15C-PT-05V	15 cm	Pigtail	0-5 V
SX-RPG01-15C-PT-010V	15 cm	Pigtail	0-10 V

GENERAL

Measured parameters	PAR radiation
Output	RS485 · 4-20 mA · Voltage
Spectral range	400-700 nm
Measuring principle	Photoelectric

MEASUREMENT

Range	0-2500 µmol/m²·s
Resolution	1 µmol/m²·s
Accuracy	±2 %
Linearity	≤±1 %
Response time	10 µs
Annual stability	≤±2 %

OUTPUT AND POWER

Output interface	RS485 Modbus RTU / 4-20 mA / 0-5 V / 0-10 V Depending on the order code
Power supply	7-30 V DC
Consumption	0.06 W

CONSTRUCTION

Ingress protection	IP67
Operating temperature	-30 to +75 °C
Housing	All-aluminium
Levelling	Bubble level and adjustment handwheel
Dimensions	ø80 × 51 mm80 mm base; 46 mm body diameter, from the dimensioned drawing
Mounting	Four ø4.2 mm holes on a 68 mm circle
Cable length	15 cm or 2 m