

Full-Spectrum Quantum Sensors

Accurate PAR measurements under all light sources, including LEDs



	SQ-500-SS	SQ-512-SS	SQ-514-SS	SQ-515-SS	SQ-520	SQ-521-SS	SQ-522-SS
Power Supply	Self-powered	5 to 24 V DC	12 to 24 V DC	5.5 to 24 V DC	5 V USB power source	5.5 to 24 V DC	
Current Draw	—	At 12 V is 57 μ A	maximum of 20 mA	At 12 V is 57 μ A	61 mA when logging	1.4 mA (quiescent), 1.8 mA (active)	RS-232 37 mA; RS-485 quiescent 37 mA, active 42 mA
Output (sensitivity)	0.01 mV per μ mol $m^{-2} s^{-1}$	0.625 mV per μ mol $m^{-2} s^{-1}$	0.004 μ mol $m^{-2} s^{-1}$ per mA	1.25 mV per μ mol $m^{-2} s^{-1}$	—		
Calibration Factor (reciprocal of output)	100 μ mol $m^{-2} s^{-1}$ per mV	1.6 μ mol $m^{-2} s^{-1}$ per mV	250 μ mol $m^{-2} s^{-1}$ per mA	0.8 μ mol $m^{-2} s^{-1}$ per mV	Custom for each sensor and stored in the firmware		
Calibration Uncertainty	$\pm 5\%$						
Output Range	0 to 40 mV	0 to 2.5 V	4 to 20 mA	0 to 5 V	USB	SDI-12	Modbus
Measurement Repeatability	Less than 0.5 %						
Long-term Drift	Less than 2 % per year						
Non-linearity	Less than 1 % (up to 4000 μ mol $m^{-2} s^{-1}$)						
Response Time	Less than 1 ms				Software updates every second	Less than 0.6 s	Less than 200 ms
Field of View	180°						
Spectral Range	389 to 692 nm ± 5 nm (wavelengths where response is greater than 50 %)						
Directional (cosine) Response	$\pm 5\%$ at 75° zenith angle						
Temperature Response	-0.11 \pm 0.04 % per C						
IP Rating	IP68						
Operating Environment	-40 to 70 C; 0 to 100 % relative humidity; can be submerged in water up to depths of 30 m						
Dimensions	24 mm diameter, 37 mm height	30.5 mm diameter, 37 mm height			24 mm diameter, 37 mm height	30.5 mm diameter, 37 mm height	
Mass (5 m of cable)	100 g	140 g			100 g	140 g	
Warranty	4 years against defects in materials and workmanship						