



# 4 Channel Sensor SKR 1860D & SKR 1860ND

Skye Instruments have been specialising in light and radiation sensors since 1983. All are designed, manufactured and calibrated to the highest standards. Each is supplied with a Calibration Certificate traceable to the UK's National Physical Laboratory (NPL).

These radiometers are available with 4 individual channels, essentially multiple sensors in one housing. Sensors intended for measuring downwelling or incident radiation are fitted with a cosine correcting head. Sensors supplied for upwelling or reflected light receive radiation from a narrow 25° cone, enabling measurements from a defined area. Other acceptance angles are available on request.

Usually a pair of sensors with identical wavebands are used to measure incident and reflected light simultaneously, to eliminate variations in natural solar radiation during measurement. Sensors can be mounted on meteorological or CO<sub>2</sub> flux towers for long term monitoring, and are light enough to be used on aircraft for larger scale studies.

Skye's calibration facility scope is between 280 and 2400 nm, with bandwidths from 5 nm to several hundred nm (broadband). The SKR 1860 series sensors can be ordered with the user's choice of wavebands in the VIS and NIR ranges between 400-2400nm. Once the wavebands are fitted and calibrated, they are not changeable by the user. Popular choices include Red & Far-Red, Red & Near Infra Red or channels matching satellite bands for ground truthing.

Sensors are suitable for use in natural solar radiation or radiation from any lamp or light source. Each is fully weatherproof, designed for permanent installations outdoors in all climates. These sensors cannot be submerged in water. They are compatible with Skye Display Meters, SpectroSense2 meters and DataHog2 loggers. There is also a choice of output scaling to suit instruments from other manufacturers.

As with all Skye products, these sensors have been quoted in many scientific references, please ask for a list of publications.



Choose wavelengths between 400-2400nm

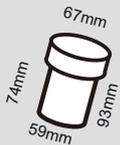
VIS, NIR & SWIR wavebands combined

Cosine corrected for incident light

Narrow angle FOV for reflected light

Ideal for NDVI, PRI, WBI & satellite ground truthing

## SKR 1860 SPECIFICATIONS

Range	4 channels individually chosen at time of ordering between 400-2400 nm. Bandwidths from 5nm to several 100 nm	Response Time	SKR 1860D/ND - typically less than 100 nanoseconds.
Construction	Plain anodised aluminium housing Cosine correcting head for incident. Waterproof rating IP65, fully weatherproof. Regular maintenance required to keep light collecting surfaces clean and free from obstruction, e.g. dust, moisture, algae etc	Calibration	Typically better than 5%. Note that this error is to some dependent on bandwidth - wide Bandwidths will be less subject to error than Very low bandwidth channels.
Filters	Metal interference and/or glass depending on wavelengths & bandwidths chosen, to military spec.	Weight	600g (with 3m cable)
Detector	Silicon photodiode	Dimensions	
Cable	Screened military specification. 3m. Standard length.	Mounting	M6 x 7mm tapped hole in base. Sensor supplied with M6 x 16mm screw + 4x 1.5mm washers to suit panel thicknesses of 3-10mm
Temperature Range	-35 to +75 °C		
Humidity Range	0-100%		
Output	SKR 1860D/ND - current output (nA) which varies with filters used.		
Power supply	SKR 1860D/ND not required		
Linearity	Better than 0.2% of scaled range.		

## ORDERING INFORMATION

### Sensor

SKR 1860D - 4 Channel sensor. Cosine corrected for incident light measurements (Please specify wavelength and bandwidth). 3m cable

SKR 1860ND - 4 Channel sensor. Narrow angle FOV for reflected light measurements. (Please specify wavelength and bandwidth). 3m cable

### Add Prefix

/SS2 - SpectroSense2 connector and 2m cable

/I - DataHog2 connector and 3m cable

### Meters and Dataloggers

SKL 904 - SpectroSense2 (1 sensor only)

SKL 908 - SpectroSense2+

SKL 925 - SpectroSense2+ with GPS Module

SDL 5000 series DataHog2 dataloggers

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