

# LIGHT

## WIRING CONNECTIONS FOR: SKR 110

The sensor houses two semiconductor diodes which are connected back to back using a common ground connection. Thus there are three wires from each unit. These are shown below. The diodes are electrically fragile and no external sources of voltage or current should be applied to them.

### SKR 110 - Red / Far Red - Current Output Sensor

The green wire should be connected to the common of the logger or readout unit. If the sensor has been supplied with a Skye meter or logger then a connector will have been fitted using the same wiring colours as shown below.

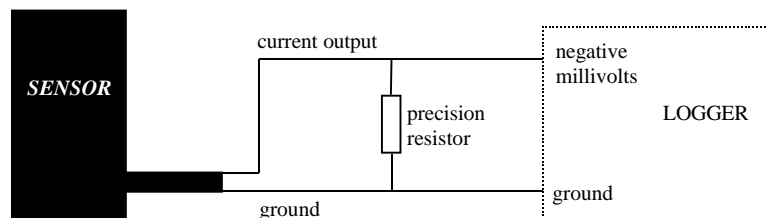
Wire Colour	Function
Blue	Red Channel negative current output
Red	Far Red Channel negative current output
Green	Ground
Grey	Cable Screen

### SKR 110/X - Red / Far Red - Current Output Sensor with Extension cable EXT/3

If your sensor has a cable length greater than 10m and is supplied wire ended then it will be fitted with an EXT/3 extension cable. The sensor cable and the extension cable will already be connected when supplied. The connection details are shown below. The blue wire should be connected to the common of the logger or readout unit.

Wire Colour	Function
Black	no connection
Red	no connection
Green	Red Channel negative current output
Yellow	Far Red Channel negative current output
Blue	Ground
White	Cable Screen

The current output from these sensors is often very small, e.g. 1 microamp or less. If the datalogger or recorder does not have a current input, then a precision resistor may be placed across each of the two sensor outputs to give a millivolt signal as below:



The millivolt signal will be proportional to the current output and resistor value as shown:

$$\text{mV per unit of light} = \text{microamp per unit of light} * \text{resistor (kohms)}$$

The resistor value should be as low as possible to get the mV output required for the anticipated light levels, and should not exceed 10 kohm (10,000 ohm). The millivolt output derived should not be greater than 60 mV otherwise a degree of non-linearity may occur.

