



Copycounter 4

Infrared shingle counter

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1. Safety Information:

1. Light source: There are no known safety issues concerning the Infrared light emissions from this product. The infrared light is non-coherent and diverged.
2. Connection: This unit only requires 24 volts DC but it is advised that the power to the unit is switched off before making or changing the connections. It is possible that floating 24 volt power supplies can carry both static and capacitive mains voltages which may cause bodily harm. The product, once connected, is grounded to the 24 volt return wire.
3. Glass: If the product is dropped and the glass window is broken as a result of the impact we recommend the use of heavy duty gloves whilst handling the product. Please return the unit for repair enclosed in a thick walled bag marked clearly with "BROKEN GLASS".
4. The installation must comply with the installation requirements (see Installation).
5. We advise that once the unit is installed the installation should be checked and accepted by a qualified engineer.

2. Description of use:

This device is intended only for the use of counting the leading edge of product, presented as a shingle stream of folded paper or card passing below (see Technical Specification).

3. Parts Description:



1 x Cable and connector: 10 metres of 4 cores screened (def. 7.2.4CS) factory fitted with M12 female plug connector.

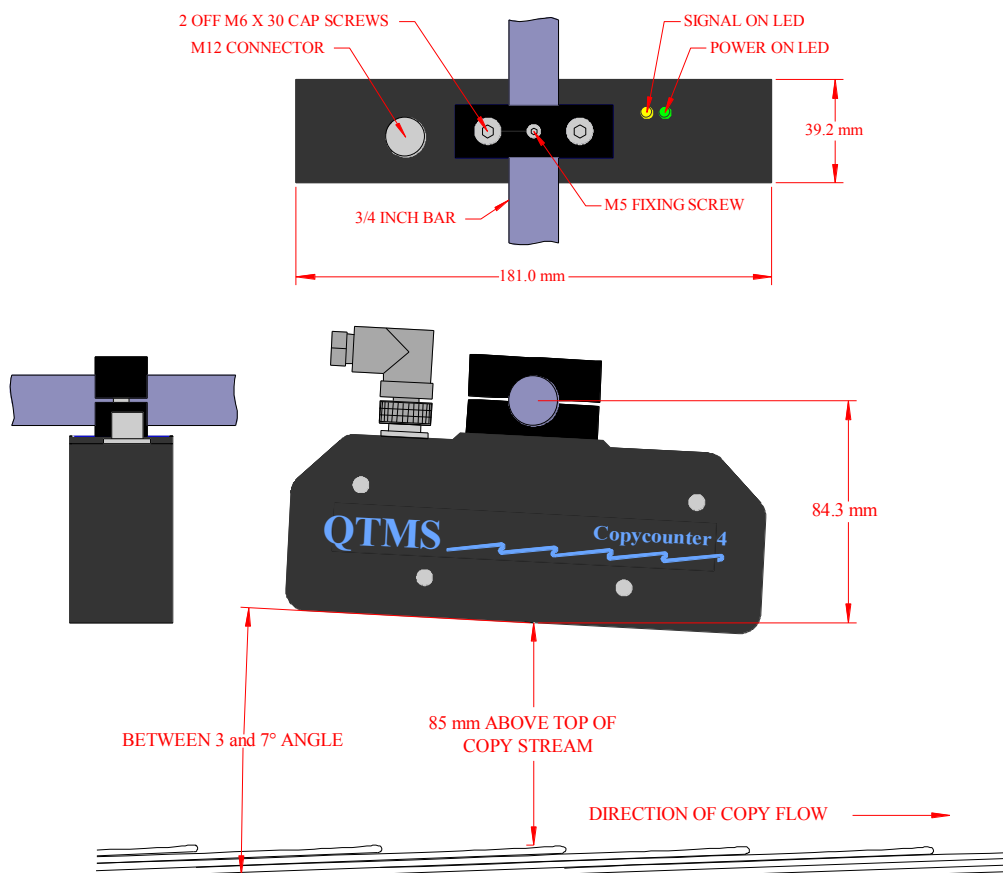
2 x M6 x 30mm caps screws to fit 5mm hexagonal key tool.

1 x mounting block clamp of two parts, upper and lower, made of black nylon and an M5 set screw to fit 2.5mm hexagonal key tool.

1 x Copycounter 4 sensor

1 x Manual for installation and operation.

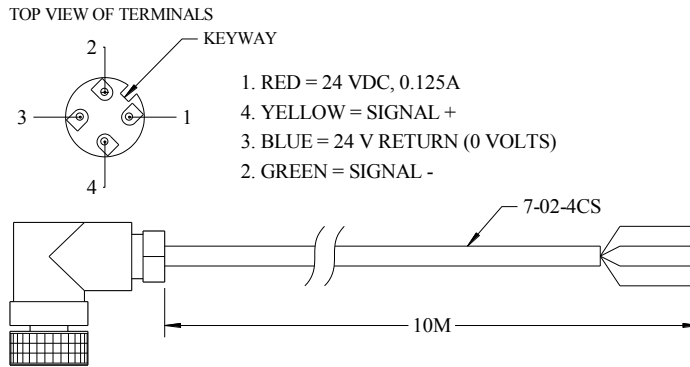
4. Mounting:



For highly reflective surfaces and/or product with heavy ripple increase the angle.

5. Connection:

The cable:

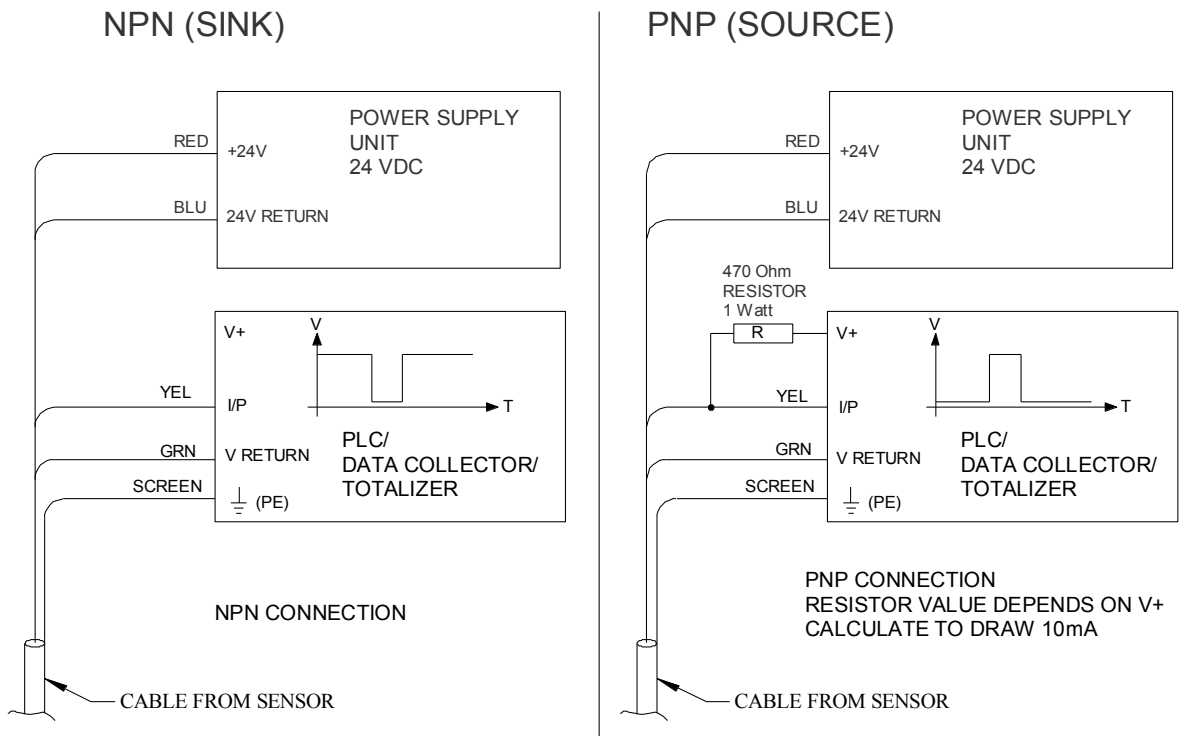


The power supply:

The supply should be a regulated 24 volts DC, 0.5 Amp (or greater).

Signal connection:

The output signal is isolated from the Copycounter 4 power supply to allow the signal to be connected to a PLC, Data Collector or Totalizer whose inputs provide a separate power source.

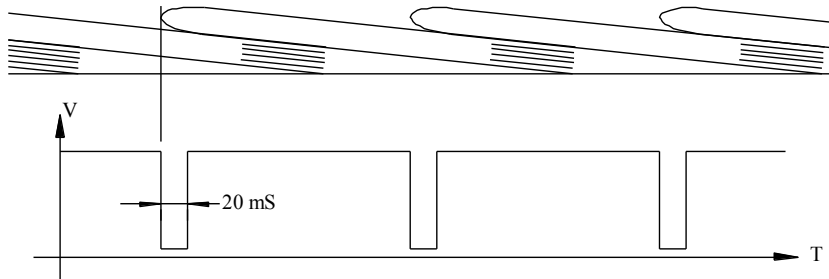


6. Set up:

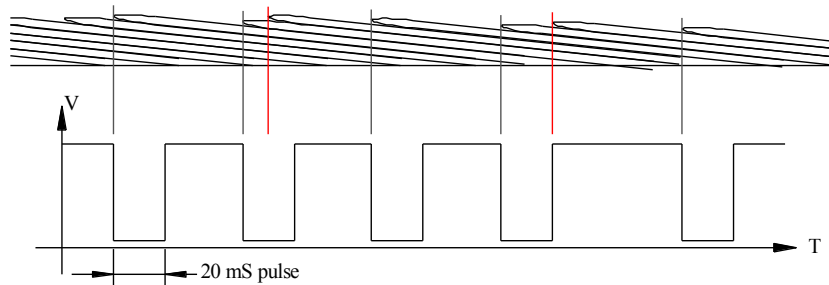
The output pulse:

Three output pulse lengths are available: 5, 12 and 20 milliseconds (mS).

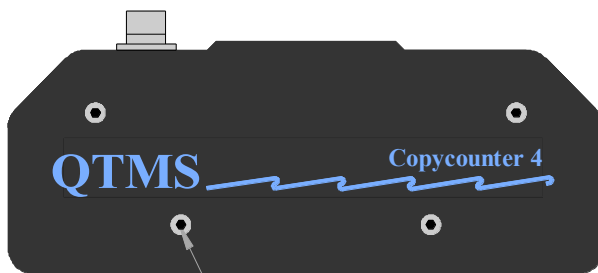
The output pulse length is factory set to 20 mS and is suitable for deliveries of 90,000 products/hour where the shingle stream is consistent,



The output pulse length may be adjusted if the time between leading edges is shorter than 20 mS, typically if the shingle stream is not consistent, where the product is “bunching”.



To change the output pulse time:



1. Disconnect the Copycounter and remove it from the mounting.
2. Place on a soft flat surface to avoid scratching the paintwork.
3. Remove the four cover screws.
4. Move the timing jump link to the appropriate setting.
5. Replace the cover and four screws.
6. Re-mount the Copycounter at its original position and angle.
7. Re-connect the cable

7. Technical summary:

Count rate:	Up to 360,000 copies per hour (output pulse length set to 5mS)
Product Range:	Single sheet 0.2mm & folded sheet (4 page) upwards
Operating distance:	85mm +/- 45mm
Minimum overlap:	3mm (single sheet)
Power supply:	24 VDC, 1 volt ripple max., 125mA.
Fusing:	Auto- reset fuse on power and signal
Output signal:	Optoisolated NPN (sink) transistor. (Max: 100mA, 50VDC)
Output signal width:	5 mS, 12 mS and variable from 20 to 100 mS.
Weight:	515 grams (1.12 lbs)
Dimensions:	length 181mm, height 68mm, width 39.2mm. (25.4mm = 1 inch)