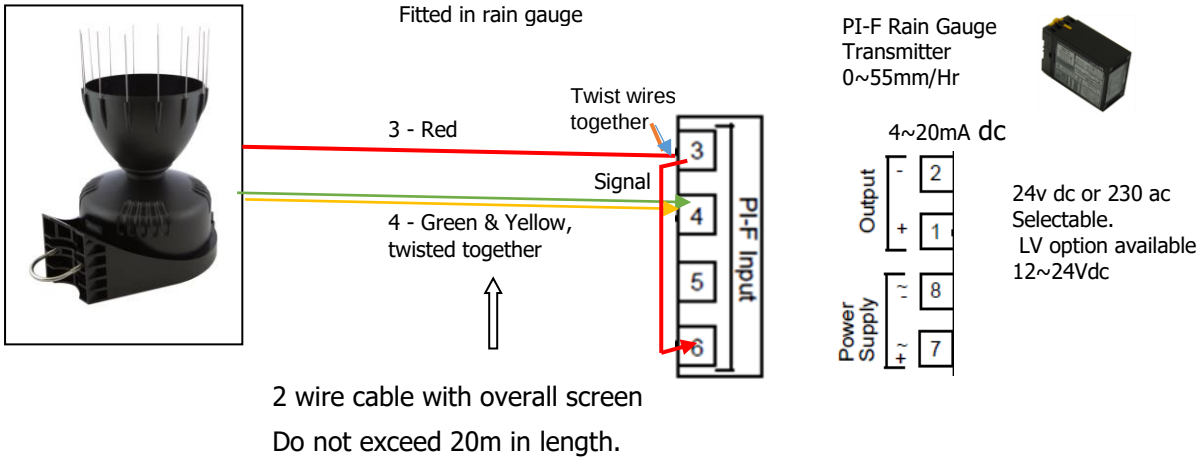
# Weather Station Hook-up for Rain Gauge

## Rain Gauge with PI-F-Rain transmitter




2 wire cable with overall screen

Do not exceed 20m in length.

The PI-F-Rain is a specially modified, low frequency PI-F transmitter, set up to be used in conjunction with a rain collector that has an output of 0.2mm per tip, such as the Davis 6466 and 6466M rain buckets.
Please refer to the rain collector user manual for installation instructions.
The PI-F-Rain default input (and lowest available) range is 0~55mm/hr with an output of 4~20mA. Other input ranges are available on request, for example 0~100mm/hr, 0~200mm/hr.

Make sure the Rain Gauge is wired correctly to the PI-F according to the above diagram (PI-F manual page 3.05-2 Reed Switch).

The Davis rain collector is supplied with 12 meters of cable. Cut the cable to a suitable length (includes removing the RJ12 plug) to connect directly to the PI-F via the bottom cable entry of the PI-F enclosure. Cut back the outer cable cladding, approximately 70mm, to expose the four wires Black, Green, Red and Yellow. Cut off the Black wire. Strip back the insulation of the other three wires by 10mm. Twist the **Green** and **Yellow** wires together and wire into **terminal 4** of the PI-F. If you have spare cable left over from the rain collector, cut off a 100mm length of **Red** wire and strip back both ends by 10mm. Wire one end of this **Red** wire to **terminal 6** of the PI-F. Twist together the other end of this wire with the **Red** wire from the rain collector cable and wire the twisted wires into **terminal 3** of the PI-F. (Wire crimps can be used if available)

The cable can be extended up to 20 meters however, care should be taken, especially if where the cable is joined is exposed to the weather. Proper waterproofing techniques are recommended.

Make sure DIP Switch S5-1 is set to ON (S5 2~4 should be OFF)


59 Mandeville Street
Riccarton, Christchurch 8011

www.intech.co.nz

sales@intech.co.nz
+64 3 343 0646

# PI-F-Rain Trouble shooting guide.

**Please also refer to the Rain Collector user manual's trouble shooting guide on page 7 before reading the following.**

Remove the top housing of the Rain Collector to expose the tipping bucket. Move the tipping bucket fully down, then back to its normal position do this movement quickly, once every 15 seconds minimum to 60 seconds maximum while monitoring the Output mA from the PI-F. You should see a change in the mA, please note that the longer you leave it the lower the output mA will drop down to.

If the output mA does not change. Try adjusting the Impedance Matching Pot. Remove lid of the PI-F. The IM pot is in the corner next to Dip Switch S5 – see page 3 of the PI-F manual. Set to IM pot fully counter-clockwise. Move the tipping bucket fully down and quickly release once every 15 seconds and turn the IM pot clockwise slowly until the output mA changes. Leave the IM pot in this position.

Lastly, trickle some water over the tipping spoon, do this slowly until it tips no less than once every 15 seconds (this is simulating rainfall). This should drop the PI-F Output readings into the 4~20mA range. Replace the top housing of the rain collector and fit the lid back on the PI-F

Please be aware that when in operation, the PI-F-Rain with the factory default range of 0~55mm/hr. The output will take approximately 35mins to drop back to 4mA after a downpour should the rainfall stop suddenly. This is normal and can be simulated by tipping the bucket once every 15 seconds for three tips then timing how long it takes for the PI-F output to change to 4mA (0mm/hr) after the last tip.

If the PI-F(Rain) is set to a higher rainfall rate of 0~200mm/hr. It will take approximately 10 minutes to return to 4mA (0mm/hr) should the rainfall stop suddenly.