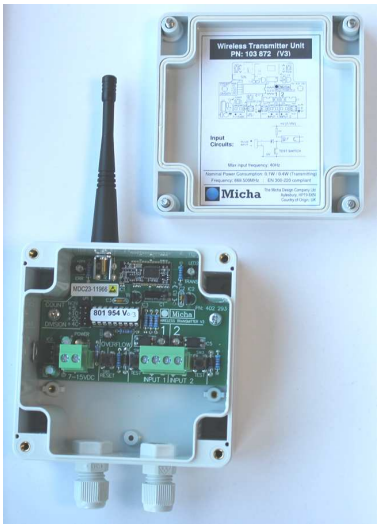
WIRELESS SIGNALLING UNITS (V3)



The **Micha** Wireless Signalling Units are designed to facilitate connection between the Power Generation Display Unit and a remote energy meter.

The **Transmitter** Unit (PN: **103872**, picture on left) can have inputs from two separate energy meters and includes a divider circuit to cater for combined input frequencies of up to 40Hz. The maximum output frequency should ideally be less than 2Hz for reliable transmission. A plug-top PSU is supplied with the unit to provide the required 7-15VDC supply.

The **Receiver** Unit (PN: **103873**, picture on right) is powered from auxiliary 5V terminals within the display unit or can be powered from a separate 5-15V DC supply. The transmitter and receiver units are supplied as matched units to minimise crosstalk between other installations and can be readily reprogrammed.

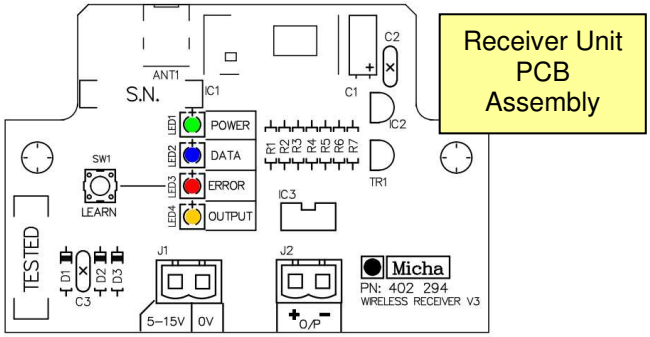
A range of over 1,000M can be expected, but this is highly dependent on positioning and local conditions - reception will be affected by both internal and external walls of buildings. The units should be mounted as high as possible with the aerial vertical, and away from any obstruction, particularly metal.

Installation Connections: Receiver

The Receiver unit is designed specifically to work with the Micha Power Generation Display and should be connected to it as below. Connect the available +5V supply from the Power Generation Control PCB Assembly, or an isolated 5V-15V supply to the '+V' and '0V' terminals.

Note that V3 now includes a 'watchdog' feature: if the Receiver has been matched with a Transmitter, and no regular signal from the matched Transmitter is received, the Error LED will blink continuously after approximately 30 seconds.

Connect each used output pair of terminals to the appropriate input terminals as shown below.

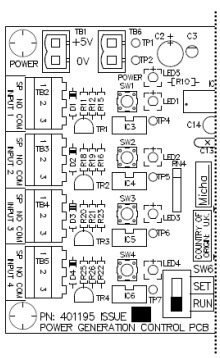


SW1 is used for 'learning' matched transmitters.

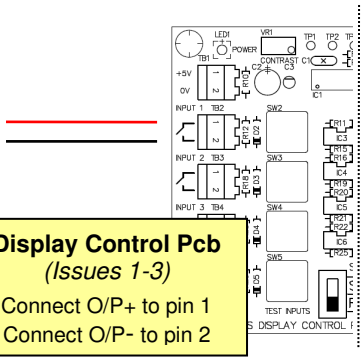
Learn Mode: press SW1 for approximately 1 second. The Error LED will flash. On the Transmitter, press one of the Test buttons, after the first valid input, the LED will turn off.

Erase Mode: press SW1 for 5-10 seconds – the Error LED will flash twice.

(Note: Transmitter and Receiver units are normally supplied as matched pairs.)



Display Control Pcb
(Issue 4)
Connect O/P+ to pin 2
Connect O/P- to pin 3



Display Control Pcb
(Issues 1-3)
Connect O/P+ to pin 1
Connect O/P- to pin 2

LEDs

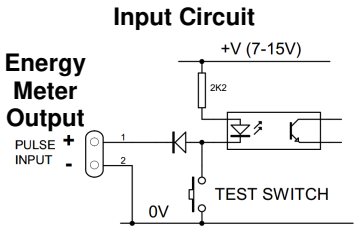
The **Data** LED flashes whenever a signal is received. This can be either an energy pulse signal, or a regular 'watchdog' signal.

The **Error** LED flashes if no valid 'watchdog' signal from a matched Transmitter is received for 10-15 seconds.

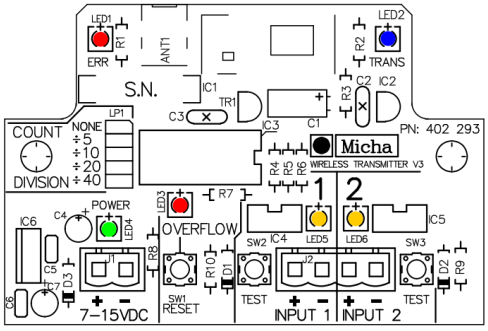
The **Output** LED flashes when a pulse signal is received.

Installation Connections: Transmitter

Connect a supply of between 7V and 15V to the power input. Connect the SO pulse output of the energy meter to Input 1 or Input 2. If the meter provides volt-free contacts, polarity is not important. If the meter uses a transistorised output, ensure the correct polarity of the switching circuit as shown below:



Transmitter Input Circuit



Transmitter PCB Assembly

LEDs:

ERR: Flashes if watchdog times out.

TRANS: Flashes for energy pulse and regular watchdog signal.

OVERFLOW: Input pulse rate too high – set Count Divider link to a greater division.

1 & 2: Indicate an input signal has been detected (or a TEST button pressed).

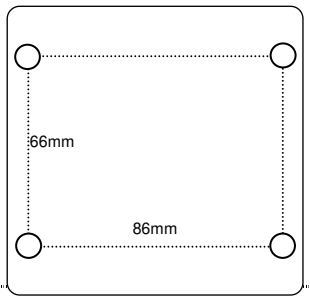
ERR: V3 includes a 'watchdog' feature. Regular pulses are transmitted and if no acknowledgement is received, the ERR LED will blink continuously.

Count Divider: If input pulses are received at too high a rate, set the link on LP1 to an appropriate division, and adjust the pulse value on the display accordingly.

General Specification:

	Transmitter 103872	Receiver 103873
Supply Input Voltage :	7-15VDC	5-15VDC
Quiescent Supply Current :	0.1W	60mW
Max Supply Current :	0.4W	100mW
Operating Frequency :	869.500MHz : CE compliant.	
Operating Temperature Range :	0°C to +55°C	
Cable Glands :	M12 (Max cable diameter 7.0mm)	
Enclosure :	Light Grey Polycarbonate	
Dimensions :	100mm x 100mm x 55mm excluding glands (Antenna Length: 85mm)	

Enclosure Fixing Centres:
86mm x 66mm



Notes:

The units are supplied 'unbranded' to allow the installer to fit their own label. The enclosures have a recess 65mm(W) x 85mm(H) on the lid which can be used for this purpose.

The wireless units use the 869.500MHz waveband which does not require a licence in the UK. The end user should be aware that other devices, such as wireless doorbells and security monitoring, may use a similar waveband and interaction may occur. To minimise interference, the transmitter incorporates secure data protocol.

Do not overtighten the antenna.

*These versions are **not** compatible with any previous wireless signalling units operating on 434.525MHz frequencies.*