



Wiring Instructions and Operating Manual

12 POINT ULTRABEAM REMOTE MONITORING SYSTEM

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Safety Precautions

These instructions MUST be read carefully before installation and by every operator in order to maintain working condition and minimise risk of misuse. These precautions are in addition to any existing regulations.

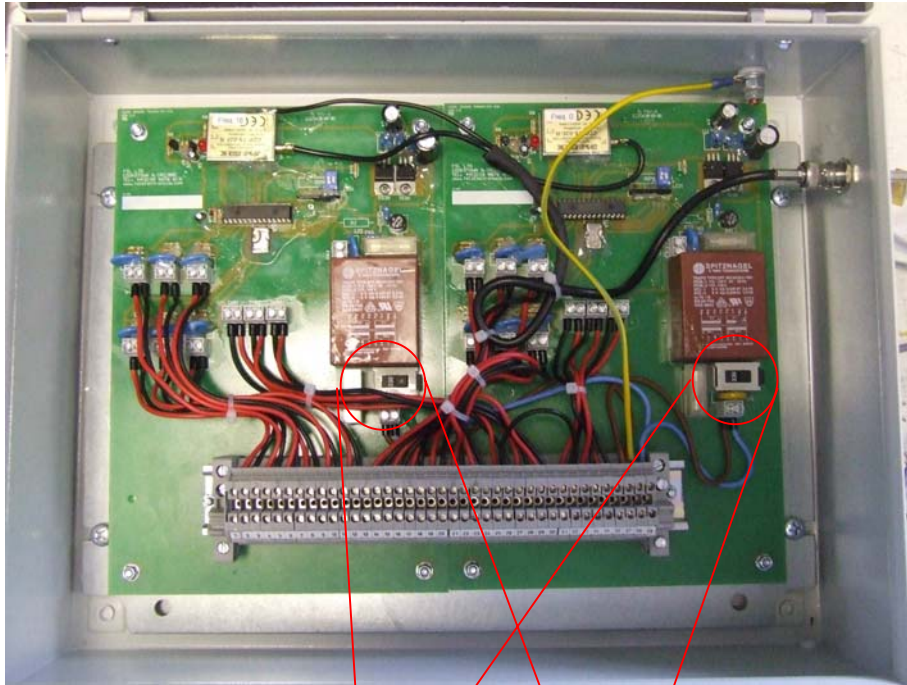
What you must do

- Strictly adhere to all instructions as outlined in this manual
- Ensure installation is carried out by professional and competent personnel
- Ensure all applicable site safety regulations are fully respected
- Make this manual permanently available to operators and maintenance personnel
- Keep the transmitter in a secure place when not in use
- Ensure that you have a clear view of any machinery to be operated and the surrounding area before beginning operation
- Keep a record of all remotes used on site and mark transmitters clearly for use with different equipment
- Service the equipment periodically (see preventive maintenance)

What you must not do

- Never modify any part of the equipment unless Hycontrol Limited has approved these modifications.
- Never apply any voltage exceeding the maximum supply voltage
- Never exceed current rating of the relays
- Never allow unauthorised personnel to operate the equipment
- Avoid knocking or dropping the receiver
- Do not attempt to inspect or repair the unit unless you are suitably qualified
- Do not use this equipment for lifting of persons, as part of a life support machine or in a potentially explosive atmosphere
- Do not use the equipment if any failure is suspected
- Never regard any remote control function as an emergency stop.

12ch Bin Level 4-20mA Transmitter



Supply Voltage
100VAC – 240V AC

Range
Dependant on conditions
Typical 250m

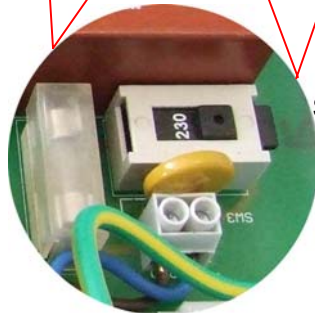
Transmission Type
434MHz

Operating Temperature
-20c to 60c

Input
From Level Sensor

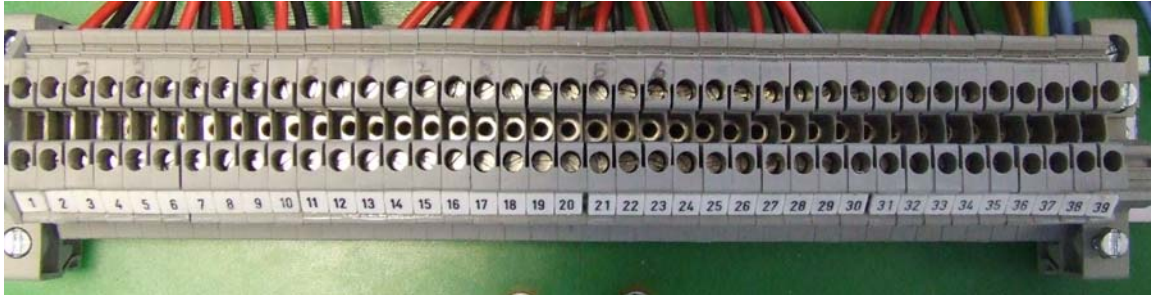
Housing
IP65 Sealed

Software
2 x "HYCONTROL 6CH TX V1.0"



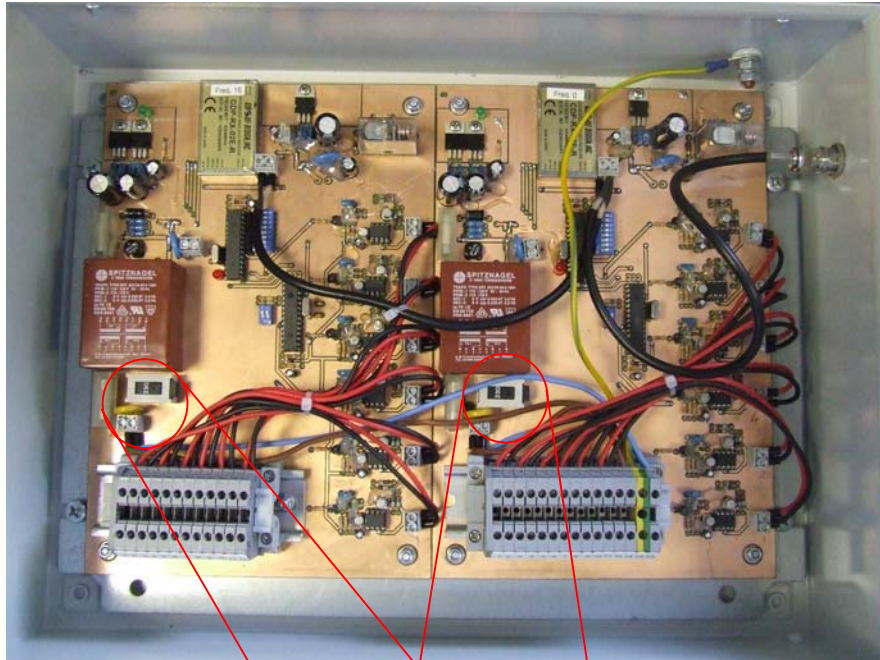
Switches for selecting
supply voltage.
(115/230V AC)

Terminal connections



Terminal Number	Connection	Channel
1	+ of 0-20mA connection on sensor	CH1
2	- of 0-20mA connection on sensor	CH1
3	+ of 0-20mA connection on sensor	CH2
4	- of 0-20mA connection on sensor	CH2
5	+ of 0-20mA connection on sensor	CH3
6	- of 0-20mA connection on sensor	CH3
7	+ of 0-20mA connection on sensor	CH4
8	- of 0-20mA connection on sensor	CH4
9	+ of 0-20mA connection on sensor	CH5
10	- of 0-20mA connection on sensor	CH5
11	+ of 0-20mA connection on sensor	CH6
12	- of 0-20mA connection on sensor	CH6
13	+ of 0-20mA connection on sensor	CH7
14	- of 0-20mA connection on sensor	CH7
15	+ of 0-20mA connection on sensor	CH8
16	- of 0-20mA connection on sensor	CH8
17	+ of 0-20mA connection on sensor	CH9
18	- of 0-20mA connection on sensor	CH9
19	+ of 0-20mA connection on sensor	CH10
20	- of 0-20mA connection on sensor	CH10
21	+ of 0-20mA connection on sensor	CH11
22	- of 0-20mA connection on sensor	CH11
23	+ of 0-20mA connection on sensor	CH12
24	- of 0-20mA connection on sensor	CH12
25	+24 V output	
26	0V output	
27	+24 V output	
28	0V output	
29	+24 V output	
30	0V output	
31	+24 V output	
32	0V output	
33	+24 V output	
34	0V output	
35	+24 V output	
36	0V output	
37	Live connection from supply	
38	Earth connection from supply	
39	Natural connection from supply	

12ch Bin Level 4-20mA Receiver



Supply Voltage
100VAC – 240V AC

Range
Dependant on conditions
Typical 250m

Transmission Type
434MHz

Operating Temperature
-20c to 60c

Input
From Level Sensor

Housing
IP65 Sealed

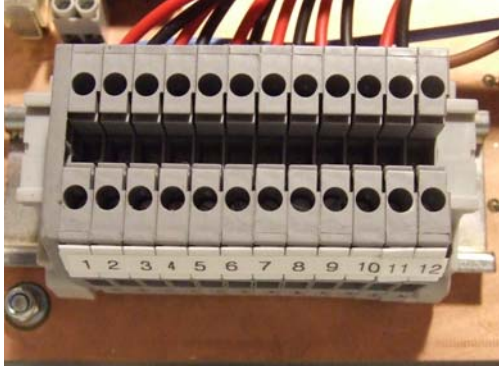
Software
2 x "HYCONTROL 6CH 0-10V out
V1.0"



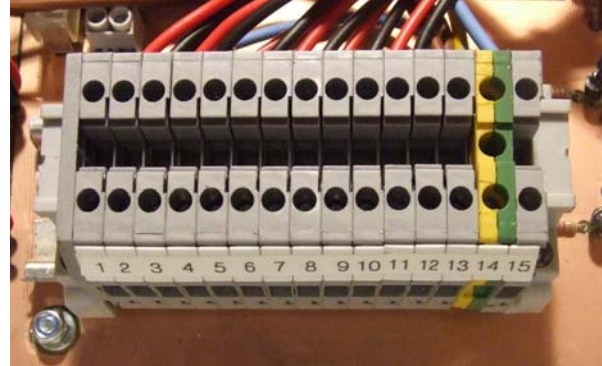
Switches for selecting
supply voltage.
(115/230V AC)

Terminal connections

Receiver



Receiver



Receiver 1

Terminal Number	Connection	Channel
1	+ of 4-20mA	CH1
2	0V output	CH1
3	+ of 4-20mA	CH2
4	0V output	CH2
5	+ of 4-20mA	CH3
6	0V output	CH3
7	+ of 4-20mA	CH4
8	0V output	CH4
9	+ of 4-20mA	CH5
10	0V output	CH5
11	+ of 4-20mA	CH6
12	0V output	CH6

Receiver 2

Terminal Number	Connection	Channel
1	+ of 4-20mA	CH7
2	0V output	CH7
3	+ of 4-20mA	CH8
4	0V output	CH8
5	+ of 4-20mA	CH9
6	0V output	CH9
7	+ of 4-20mA	CH10
8	0V output	CH10
9	+ of 4-20mA	CH11
10	0V output	CH11
11	+ of 4-20mA	CH12
12	0V output	CH12
13	Live connection from supply	
14	Earth connection from supply	
15	Natural connection from supply	

Use of Ultrabeam Radio Equipment UBSY Range

Before using any of the equipment read the safety instructions at the start of this manual. Ensure stop functions are working before carrying out any operations.

- Ensure you are familiar with the operation of the equipment; do the functions latch or time? Etc. If in doubt check
- Ensure that the operating position is in line of site of the aerial of the receiver and you are within range.
- Ensure that the area surrounding the machinery concerned is clear
- Hold the transmitter vertically and press the relevant button, the red LED indicator should light. When appropriate release the button, the red LED should remain on for 0.5 to 1sec.

Preventative Maintenance

Carry out the following routines regularly to ensure prolonged and reliable operation

- Clean the transmitter and receiver with only a damp cloth
- Store receiver in a dry place when not in use
- Avoid knocking or dropping receiver
- Ensure that all screws on receiver and transmitter are secure
- Ensure that all wiring to the PCB connector on the receiver are secure
- Check the aerial connections on the receiver
- Check mounting screws on receiver

Troubleshooting

Before inspecting any of the equipment read the safety instructions at the start of this manual. Qualified personnel should only carry out inspection.

If the unit does not work correctly carryout the following checks

- If the red LED on the transmitter is not lighting then the problem is most likely the transmitter. If the problem persists contact FSL for assistance.
- If the LED on the transmitter is working correctly, check the receiver for operation.
- If the LED on the transmitter is working correctly, check the supply voltage to the receiver.
- If the range is poor check the receiver aerial and connections for signs of wear and tear, also check for sources of interference in the local area.

If the fault is not found with the above checks, contact Hycontrol Limited for assistance. Have the following details to hand;

- Serial numbers for all transmitters and receivers (these can be found on the units)
- The name of the company who originally bought the equipment and the address of the site where it is now installed
- Details of the nature of the fault and any checks already made
- Details of what equipment / machinery the unit is installed on, in particular what the output relays of the Ultrabeam receiver are controlling.

Make the basic checks and then contact Hycontrol Limited before returning any equipment.

EU Declaration Of Conformity

Manufacturer of the UBSY series, remote control system is:

Hycontrol Limited
Larchwood House
Orchard Street
Redditch
Worcestershire
B98 7DP

Description of equipment

The Level Sensor range is a level indicator remote control system.

Manufacturer's Declaration

We hereby declare, under our sole responsibility, that the above equipment complies with the provisions of the Electro Magnetic Compatibility Directive 89/336/EEC, amended by 92/31/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Basis on which conformity is declared

The above equipment complies with the protection requirements of the EMC Directive.

Standards applied

BS EN 50081-2 Electromagnetic compatibility generic emission standard.
Part 2 Industrial environment 1994
BS EN 50082-2 Electromagnetic compatibility generic immunity standard
Part 2 Industrial environment 1995

Authorised signatory:

Date: 29 February, 2000

Ken Odell
Position: Technical Director

Guarantee

Hycontrol Limited provides a 1-year guarantee with all products. This covers repairs and replacements due to faulty parts or workmanship. A full fault report and order number must accompany any returns. Hycontrol Limited will be pleased to provide technical assistance on any matter relating to our products.

The guarantee does not cover damage resulting from the following:

- Damage in transit
- Incorrect installation
- Repairs or alterations made without the approval of Hycontrol Limited
- Misuse or neglect of equipment
- Flat batteries
- Inspection charge may be applied if equipment is returned but has no defect.

Hycontrol Limited reserves the right to evaluate breakdowns and damage.

Under no circumstances will Hycontrol Limited be responsible for hold-ups, accidents or expenses incurred as a result of equipment malfunctioning.