



DESCRIPTION

Hydro line I-ZC-8 Intelligent Heating & Cooling Zone Controller - Modbus RTU Open Protocol

- A Single Heating & Cooling Controller
- Multiple Controllers – 32 Devices Per Network
- Modbus RTU communication for BMS & remote access
- Humidity Sensing for Dew Point Control on Cooling
- 2 Wire Sensor Bus and 4 wire Modbus Network Bus

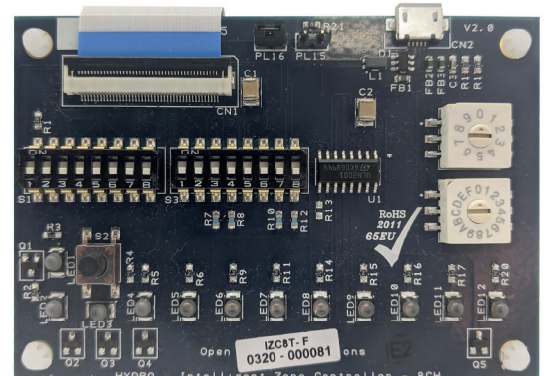
The underfloor heating controller has the following:

- 8 x 230v AC Outputs (Channel 1 – Channel 8) shown as Red LEDs on the front cover. Red LED ON = Demand for heat.
- 1 x Green LED that indicates 230v AC Power supply to the controller. Green flashing LED = OK.
- 1 x Green LED that indicates the on board relay for the Boiler / HIU output is ON – This output is volt free.
- 1 x Green LED that indicates the on board relay for the Pump Output is ON – This is a 230v L & N Output to the pump.
- 1 x Green LED that indicates the Output for the 'A' Auxiliary Relay is ON - See opposite.

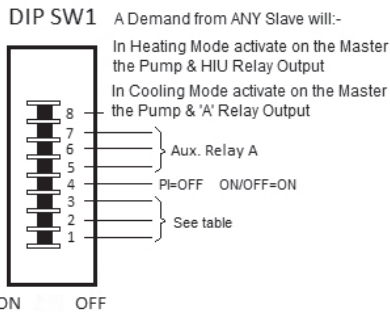
There is a Separate Output that is a configurable relay via a row of DIP switches. This relay can operate if Cooling mode is selected or High Supply water temperature is detected – via the application / supply water sensor.

The terminals on the outputs to the thermal heads are double stacked so that a maximum of 4 thermal actuator heads can be connected to 1 Zone. (Max thermal heads per controller 14)

Top PCB Board



Put DIP 8 to 'ON' on SLAVES to activate the MASTER as follows:-

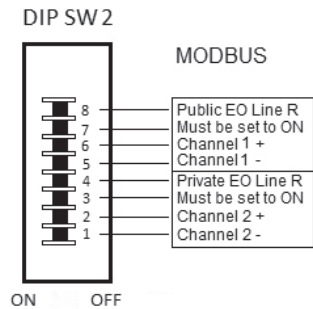
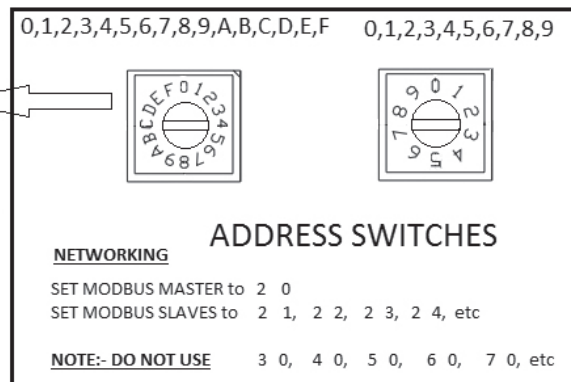
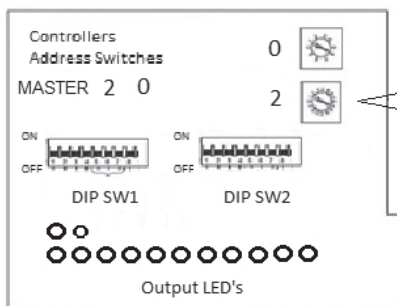


To Control Output :	DIP 1	DIP 2	DIP 3
Install Mode	ON	OFF	OFF
Commission Mode	OFF	ON	OFF
HIU / Boiler Test	OFF	OFF	ON
Learn Mode	ON	ON	OFF
Controller Factory Reset	ON	ON	ON

To Control Aux. Relay A Output :	DIP 5	DIP 6	DIP 7
HIU Pump	OFF	OFF	OFF
High Limit Zone Valve	ON	OFF	OFF
Cooling Permanent	OFF	ON	OFF
Cooling ON Demand	ON	ON	OFF
Differential Thermostat	OFF	OFF	ON

* NOTE: For Controller Factory reset put DIP 1-3 ON and HOLD the Black Push button for 10 seconds

* NOTE: For OUTPUT Test Mode Put DIP 2&3 ON and HOLD Down the Black Push button & Switch Power ON



TECHNICAL DATA

Supply	230V AC +10/-15%, 50Hz, DIMS 305x125x56mm
Max load Pump, HIU / Boiler & Thermal actuators	10A - AC1/AC3
Configurable Output Relay (X-output) Volt free signal	Max 4A Resistive
HIU / Boiler Output Relay	Max 4A Resistive
Underfloor heating pump	230V AC, 50Hz Max. 4A

OUTPUT FOR THERMAL ACTUATORS:

HL-I-ZC8- 230V	(Max. 2A per output) AC1 outputs @ 230V
Programmer input for night setback: NO for NSB / NC for Standard day operation	
Communication bus to Room sensors	12VDC 2-wire - Twisted pair cable
Communication bus standard RS485	3 wire A-B & GND (for Modbus sensors 4 wire +24vAC), 2x2 pair screened Belden 6107A
Cables: CAT5/6, max 250 meters between masters & slaves and 750 meters in total (Single Network)	
Supply water sensor type NTC	10K Ohm at 25 deg. C

Please follow the link for Correct Modbus Installation. Min 3 Wire.
www.modbus.org/docs/Modbus_over_serial_line_V1_02.pdf

PLEASE ENSURE THAT ALL WIRING IS CARRIED OUT IN ACCORDANCE WITH CURRENT IEE ELECTRICAL WIRING REGULATIONS