LD1000 Modbus Communications

Thank you for purchasing a SeaHawk LD1000 single-zone leak detection controller. Use this guide to configure the LD1000's Modbus communications feature.

If, after referencing this guide, you need further assistance with the LD1000 or its Modbus capabilities, please contact RLE Technologies at support@rletech.com.

SeaHawk

v1.0
(06/2018)

RLE Technologies

Modbus Registers

The LD1000 uses the following Modbus registers:

Input Registers

Register	Description	Units	Range
30001	Status bit field	0x01 (1) = Leak 0x100 (256) = Fault	0-65535
30002	Leak current on cable	μA	0-65535
30009	Is latching enabled?	0 = Disabled 1 = Enabled	0-65535
30010	Version		0-65535

Output Registers

Register	Description	Units	Range
40001	Current leak threshold (Set by pot on board)	μA	0-65535
40009	Number of zones	1	
40010	Is alarm silenced?	Write 1 to silence alarm	
40011	Alarm reset	Write 1 to reset alarm (clear latch)	
40012 - 40017	Reserved		

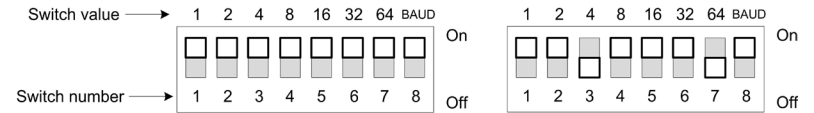## Connect the Modbus Communications

The LD1000 can be used as a stand-alone device but it also has a Modbus connection that allows it to communicate leak and fault status to another device or system. If you wish to use these communications, wire them at this time.

DIP Switch Settings

Use DIP switches to configure the Modbus address and baud rate.

SW1-1 through SW1-7 - Configure the Modbus Address

If you are communicating via Modbus, use these switches to set the address of the Modbus device. Adjust the switches until their sum equals the Modbus address. Switch values are as follows:
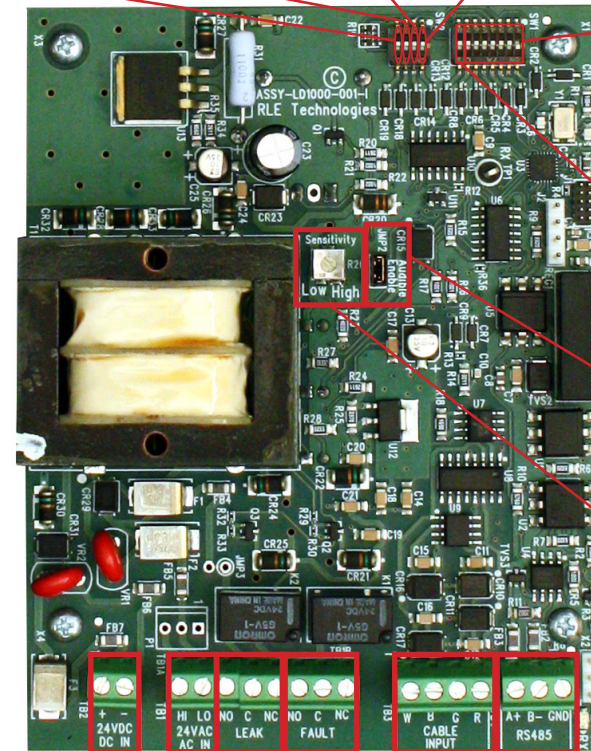

Example: Communications address 59 at 19200 baud

SW1-8 - Configure the Modbus Baud Rate

Off (default)	9600 Baud
On	19200 Baud

SW2-4
Alarm Delay
Off - 10 seconds
On - 2 minutes

SW2-3
Relay Outputs
Off - Leak & Alarm
On - 2 Summary

SW2-2
Relay Outputs
Off - Non-latching
On - Latching

SW2-1
Relay Outputs
Off - Non-supervised
On - Supervised

SW1-1 - SW1-7
Modbus Address
SW1-1 = 1
SW1-2 = 2
SW1-3 = 4
SW1-4 = 8
SW1-5 = 16
SW1-6 = 32
SW1-7 64

SW1-8
Baud Rate
Off - 9600
On - 19200

JMP2
Audible Alarm
Jumper On - Enabled
Jumper Off - Disabled

R25
Leak Sensitivity
Setting

24VDC Power Input

24VAC Power Input

Leak Relay Output

Cable Fault Relay Output

Leader Cable / Sensing Cable Input

Modbus Communications