CASWA Pty Ltd ABN: 71 109 918 710
9/4 Roper St O'Connor, Western Australia
Ph: +61 (0) 8 9277 0900, Fax: +61 (0) 8 9467 0550

LiftlogXL Hardware Guide

Version 1.1, 1/07/2011

Author: J. Sikorska

Table of Contents

PHYSICAL DIMENSIONS

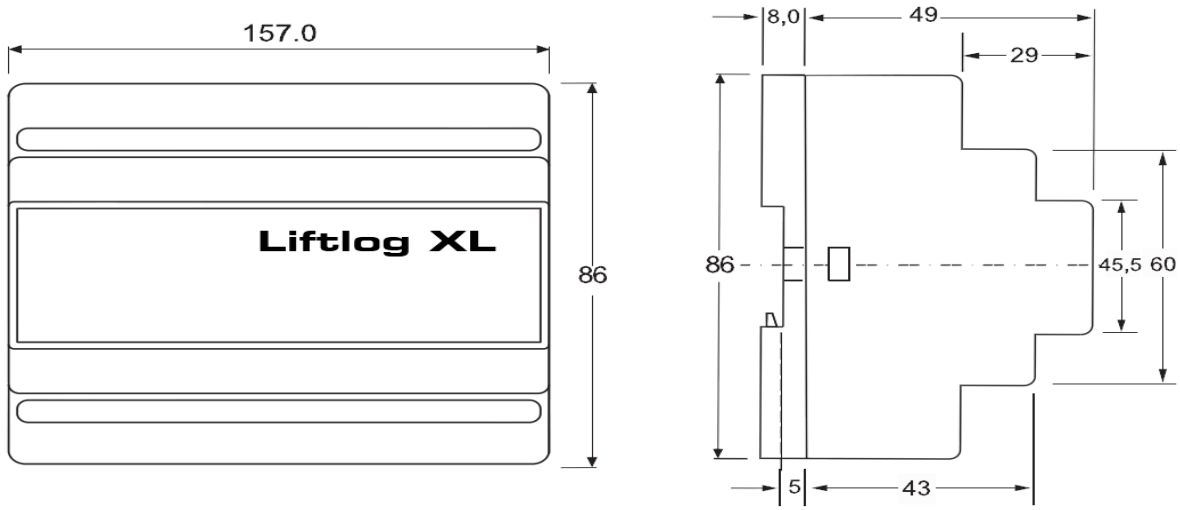


Figure 1, case dimensions

ELECTRICAL SPECIFICATIONS

Parameter	Description	Min	Typ	Max	Units
V_{in}	Supply voltage	48		250	VAC
		12		24	VDC
I_{in}	Supply current		40	100	mA
V_{limit}	Overload relay voltage			60	VAC
I_{limit}	Overload relay current	0.5		2	A
V_{limit}	Limit Switch input voltage			60	VAC
L_{sense}	mv load sensor sensitivity	0.5		10	mV/V
R_{in}	Input impedance of 0-10V input		1500		Ohms
I_{24}	24V output current			100	mA

Nb Power supply –ve and Gnd pins are at chassis Gnd (0V) potential

PRIOR TO INSTALLATION

Remove the lid from the unit by releasing the clips at each end.

Locate the SIM card socket on the upper circuit board and insert a SIM card (for details on what SIM cards work with Liftlog XL see section <> communication options).

Replace the cover.

POWER SUPPLY

Liftlog XL is designed to operate from 48VAC grounded neutral or 24VDC. It will NOT operate from 32VAC.

LiftlogXL requires constant power so that it can maintain a connection to the 3G/GPRS network. Do not connect the unit after the K1 or E-Stop relay.

To connect an AC source from 48-240VAC wire active and neutral as follows

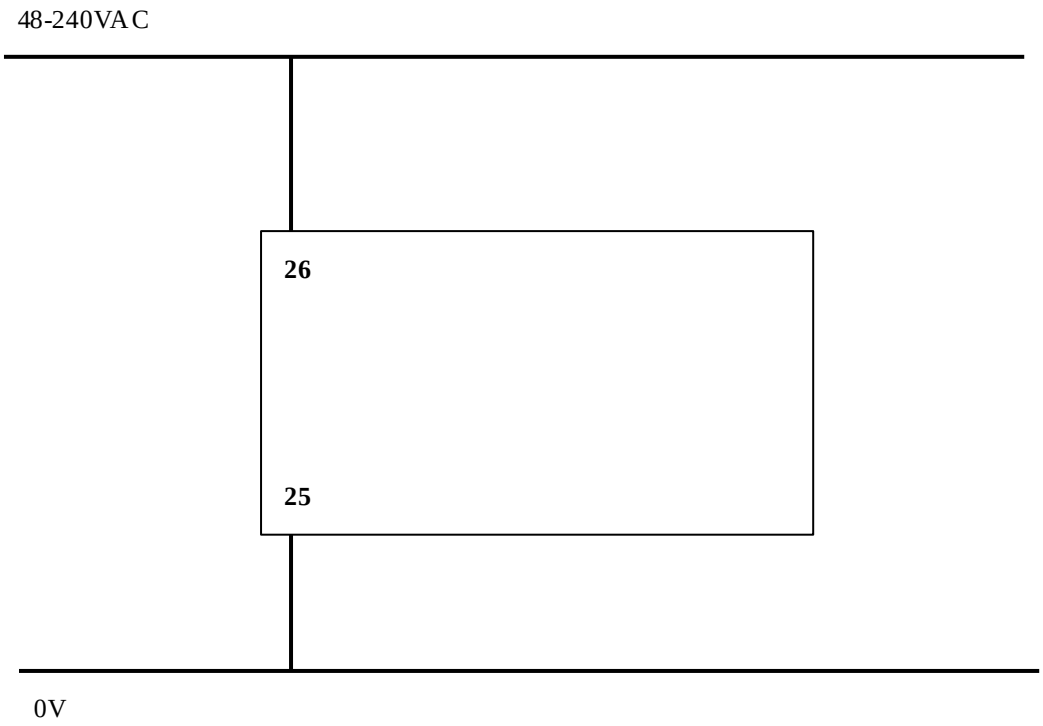


Figure 2, AC power connections

Nb Gnd Pins (1,27,33) are connected internally to 25

To connect a DC source from 12 to 24VDC wire positive and negative as follows:

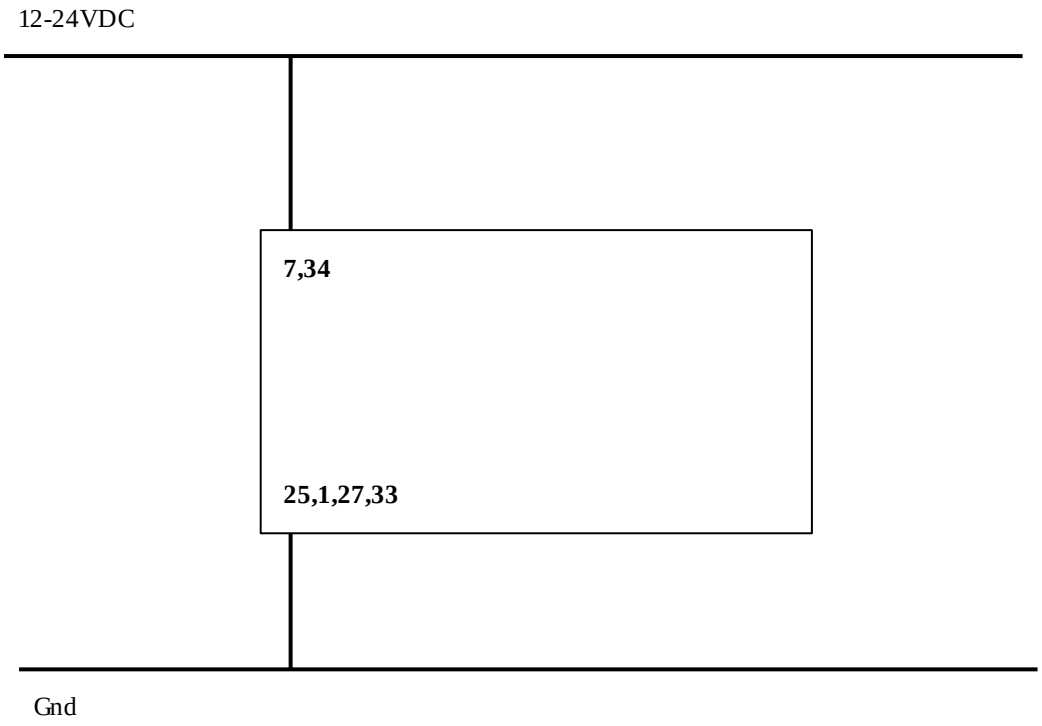


Figure 3, DC Power connection

WIRING THE INPUTS

The liftlog XL has three different kinds of inputs: Motion inputs, Limit inputs, and Load sensor inputs.

Motion inputs:

Pins 8-22 must be connected to Gnd (pins 1, 27, 33) by a set of voltage independent contacts. Where spare or auxiliary contacts are not available on the main contactors, small relays must be employed.

Example connection.

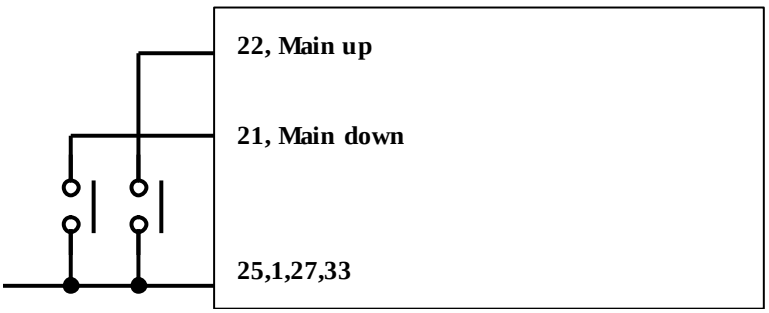


Figure 4, motion inputs

Limit inputs:

There are two input pins for each limit inpu,t eg Pins 15 and 16 for the North travel limit. These are opto-isolated must be wired across each limit switch.

Example connection

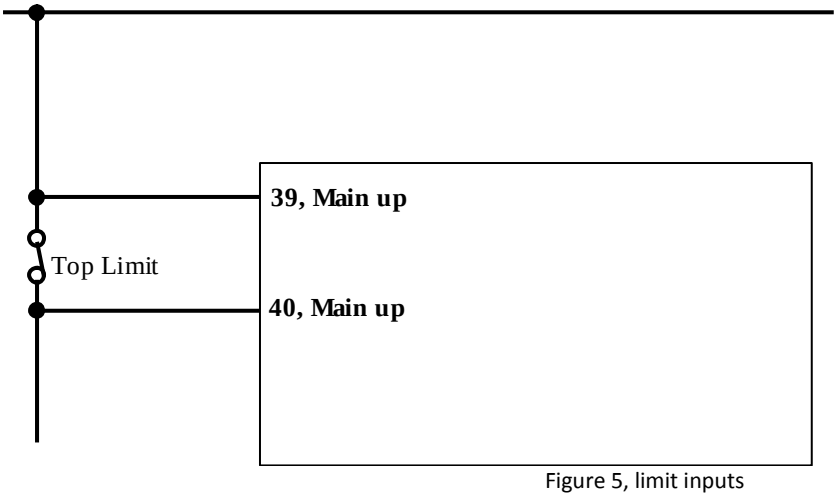


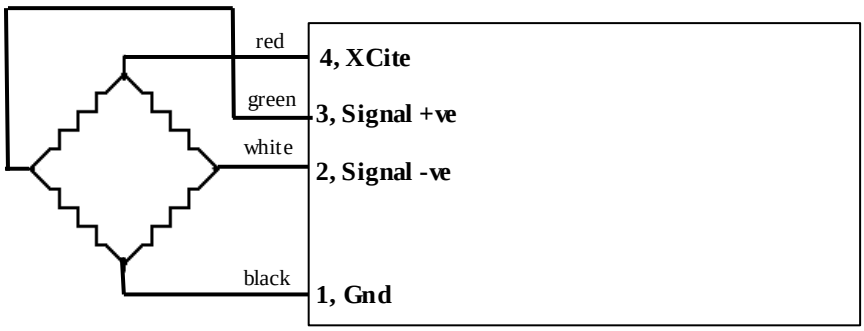
Figure 5, limit inputs

Load Sensor inputs:

The LiftlogXL supports two load sensor inputs with 3 kinds of connections.

The load sensor for the main hoist is connected to pins 1-7, the load sensor for the auxiliary hoist connects to pins 28-34 .

Example connections:



Nb, colour codes are for CASWA supplied load cells.

Figure 6, strain gauge load sensor connection

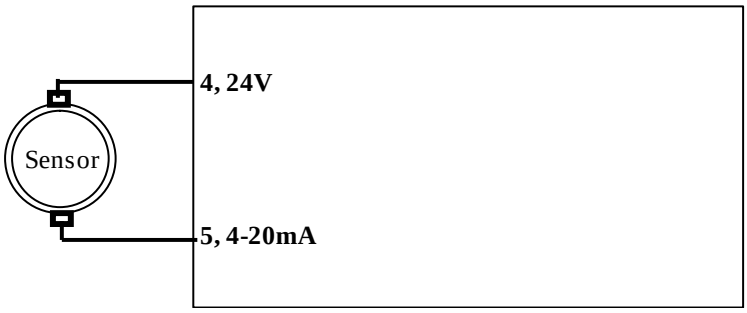


Figure 7, 4-20mA load sensor connection

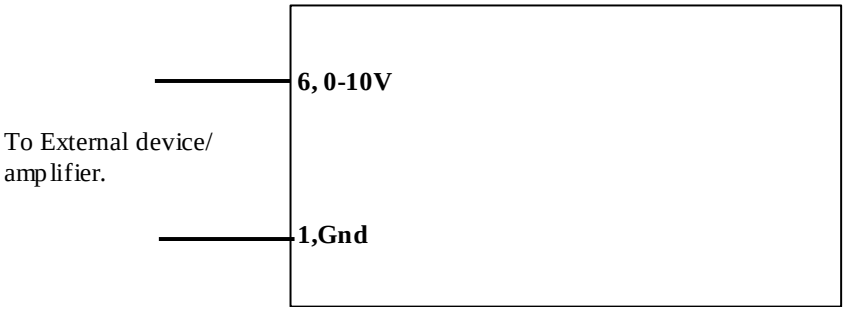


Figure 8, 0-10V connection

Nb, care should be taken to ensure that the ground potentials of the LiftlogXL and the connected device match. The Gnd pins on the Liftlog XL are connected to the chassis via the 0V connection.

Fault Output.

The fault output is a normally closed relay which opens when an overload is detected. It is typically wired in series with the up contactor coil. On a dual hoist crane an interposing relay may be required if both hoists are to be inhibited.

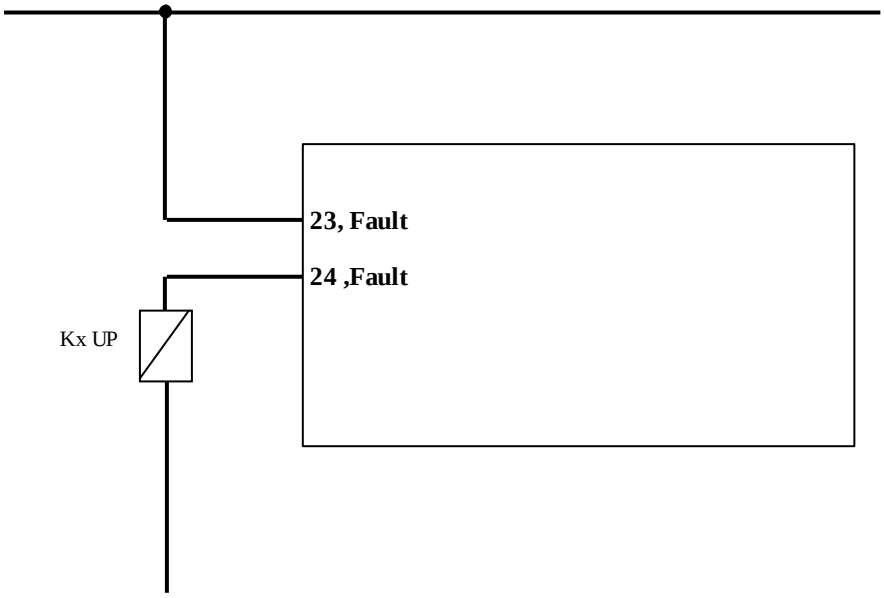


Figure 9, overload wiring

COMMUNICATION OPTIONS

When purchasing a sim card for use with the LiftlogXL system please ensure:

1. The pre or postpaid plan includes data access. Voice only SIM cards will not work with the Liftlog XL
2. That you obtain the network name, User ID, and Password required to connect to the carriers network.

Many carriers do not require a User ID or Password, however most require that you configure the LiftlogXL with at least the network name. For details on how to do this, consult the “User guide to the Pocket Field Service Utility” which can be downloaded from http://www.liftlog.com.au

Appendix A of the Pocket FSU user guide contains a list of global mobile network service providers and some suggested network name, user ID and Password combinations. Obviously it is not possible for CASWA to continuously monitor and maintain this list, as such we can make no guarantee as to its accuracy.

How Much Data?

When choosing a mobile service plan for use with LiftlogXL, select the one with the lowest available monthly data limit. A VERY busy crane will generate around 1 megabyte of data per month. Some carriers offer low cost options for telemetry applications. It’s worth investigating these.

LED indicators

Power

Illuminates whenever power is applied to the unit.

If this light is flashing, then check the input voltage. LiftlogXL requires a minimum of 48VAC or 12VDC to operate.

Connected

Flashes quickly while a connection is established.

Flashes every 3 seconds once connected.

Overload

Illuminates when either hoist exceeds it overload limit.