

# LCTA Load Cell Trip/Relay Module

TYPE: LCTA

## Features

- Volt free relay outputs - 10A rating @ 230vac.
- 0-5V output for remote display
- IP66 sealed enclosure or DIN Rail mounting facility
- Simple trip level adjustment
- Field screw terminal connections
- Shunt Calibration facility

## Typical Applications

- Hoist overload protection
- Crane safe lifting control
- Personnel lifting platform protection

## Description

The LCTA series of trip/amplifier modules have been developed to provide dual volt free relay outputs from a load cell signal.

The main application use for this product is for overload protection on hoist, winches in lifting or crane applications.

The amplifier has the ability to power a single load cell or load pin, or up to four 350ohm load cells connected in parallel.

The primary outputs from the amplifier are dual volt free relay contacts, which can be adjusted independently, using a reference voltage to determine the adjustment value.

There is also a 0-5v output, which could be used for connecting to an externally and locally mounted display.

The LCTA is supplied in various mounting options, including, sealed plastic or metal case, or supplied for DIN rail mounting.

The LCTA requires a 12/24vdc power supply. There is also the option, using an external DIN rail mounting power supply, to power from a 48vac supply.

LCM Systems can assist with the selection and configuration of the correct module for your application. We can also supply, complete with the sensor required, pre-configured, ready for installation.



## Specification

### Electrical/Performance

Power Supply:	11.5vdc to 24vdc (48vac external DIN Rail mounting power supply also available)
Power Supply Current:	80mA max. with one 350ohm load cell connected, with both trips active 160mA max for four 350ohm load cell connected, with both trips active
Output:	Dual volt free SPCO trip relays 0-5vdc analogue output
Trip Adjustment Range:	0% to 125% FR
Trip Switching Current:	10A at 230vac 10A at 24vdc
Trip Hysteresis:	<1%FR
Load Cell Excitation Voltage:	9vdc typically
Load Cell Bridge Resistance:	85ohms minimum
Load Cell Sensitivity:	0.4 to 4mV/V (to provide 0-5vdc output)
Gain Adjustment:	Coarse Potentiometer -99% FR Fine Potentiometer ±4% FR
Offset Adjustment:	±23% FR
Minimum 0-5v Load Resistance:	600ohms
Bandwidth:	3.5HZ
Zero Temperature Coefficient:	<±0.01 %/°C with 1.5mV/V input
Span Temperature Coefficient:	<±0.01 %/°C with 1.5mV/V input
Linearity:	<±0.005 %FR

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## Environmental

Operating Temperature:	-20 to +50°C
Storage Temperature:	-40 to +70°C
Humidity:	95% RH max.
Environmental Sealing:	See case options below

## Mechanical

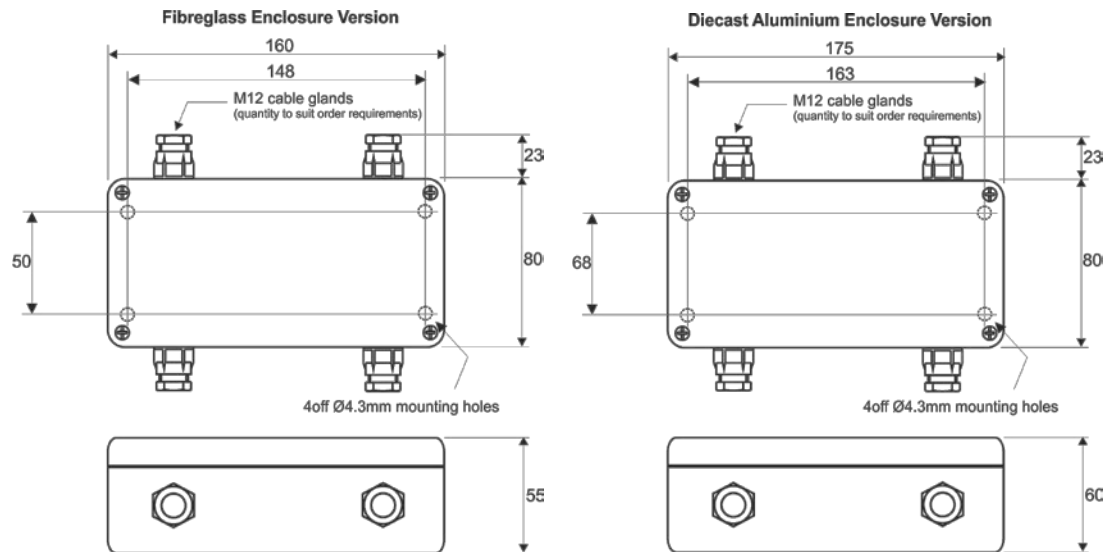
Electrical Connections:	Field Screw Terminals – 2.5mm rising clamp
Cable Access:	Via M12 cable glands
Case Options:	IP66 fibreglass enclosure (standard) IP66 Painted Diecast Aluminium IP40 Din Rail Mounting Open Frame

## Controls

Gain Adjustment:	Coarse Gain	-	25 turn potentiometer
	Fine Gain	-	25 turn potentiometer
Offset/Zero Adjustment:	Zero Offset	-	25 turn potentiometer
Trip Point Adjustment:	Trip 1	-	25 turn potentiometer
	Trip 2	-	25 turn potentiometer
Shunt Calibration:	Single switch, switching 100kohm 15ppm resistor		

## Mechanical Dimensions

All dimensions in millimeters



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Due to continual product development, LCM Systems Ltd. reserves the right to alter product specifications without prior notice.

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