



## TYPE: LCTA



# LCTA Load Cell Trip/Relay Module

## 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 hoists and 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. It requires a 12/24vdc power supply, but there is 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 the LCTA complete with the required sensor, pre-configured, ready for installation.

## Specification

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 cells 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	Course 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
Operating temperature	-20 to +50°C
Storage temperature	-40 to +70°C
Humidity	95% RH max
Environmental sealing	IP66 or IP40 (dependant on case)
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

## 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

# LCTA Load Cell Trip/Relay Module

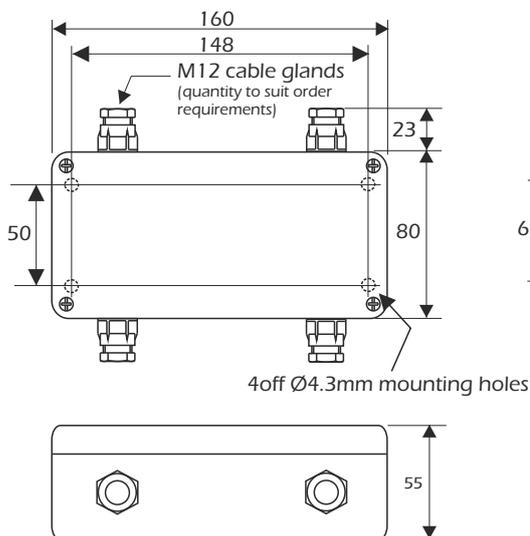
## Controls

Gain adjustment	Coarse gain - 25 turn potentiometer Fine grain - 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

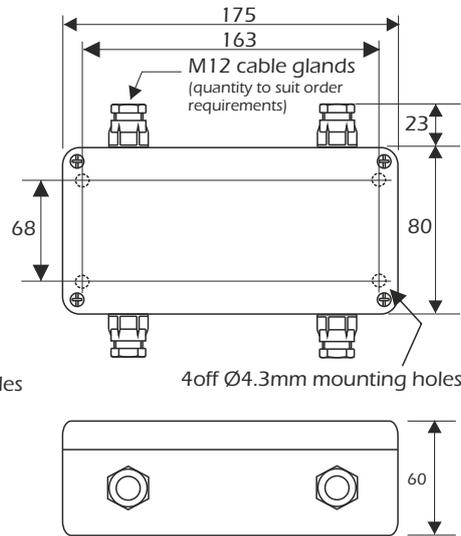


## Dimensions

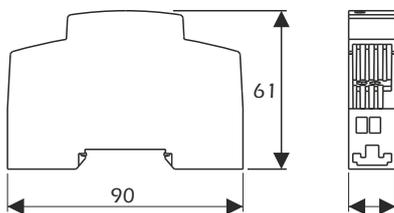
### Fibreglass Enclosure Version



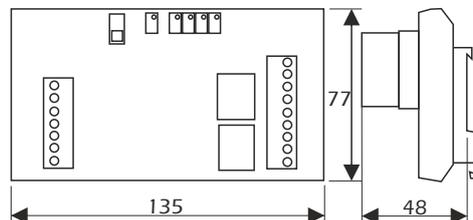
### Diecast Aluminium Enclosure Version



### Optional 48vac DIN Rail Power Supply



### DIN Rail Mounting Version



All dimensions are in mm

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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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APPROVED

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