

PRIME CONTROLS TL102A and TL102AL USER DOCUMENT

Description

The Prime Controls TL102A and TL102AL are solid-state illuminators designed specifically for use on rotary light testers. By emitting light totally in the infrared spectrum, the TL102A/L excites the sensors of the LT19 and LT20 light heads at their most sensitive wavelength providing maximum effective illumination with minimum power input. One TL102A/L unit consumes approximately 30 watts of power.



TL102A ILLUMINATOR

Whereas a halogen bulb radiates a large percentage of the consumed energy as heat, the TL102A/L illuminator radiates very little energy as heat. The heat energy produced by the TL102A/L is radiated as well as conducted into the housing of the unit and must be drawn into the structure of the machine to insure the TL102A/L does not overheat. Thus it is imperative that the mounting structure is capable of conducting the heat away from the unit and that the interface between the TL102A/L and the mounting structure is free of insulating materials and compounds.

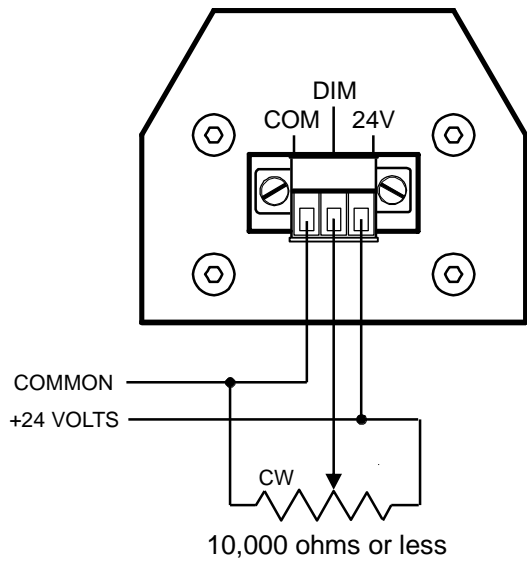
WARNING: Do not run a TL102A/L without heat sink (mounting) for more than approximately 10 minutes or the unit will overheat.

March 09, 2018

The TL102A/L has a three terminal removable connector at one end for connection of the power and dimmer control wires. At the end opposite the connector is a wide angle yellow LED that gives visible indication that the infrared LEDs are powered or off since the infrared radiation is not visible. The visible LED also responds to dimming. If the visible LED is off, the TL102A/L is emitting no radiation. If any infrared LED fails the visible LED shuts down.

Dimming

The infrared output of the TL102A/L may be reduced by applying a dc voltage to the DIM terminal of the input connector. Adjustable dimming may be achieved by connecting a 5000 or 10000 ohm potentiometer between +24 and COM with the wiper connected to the DIM input terminal as illustrated below. No connection or zero volts applied to the DIM terminal provides maximum illumination. Illumination decreases linearly as the voltage applied to the DIM terminal increases above zero volts.



POWER AND DIMMER WIRING

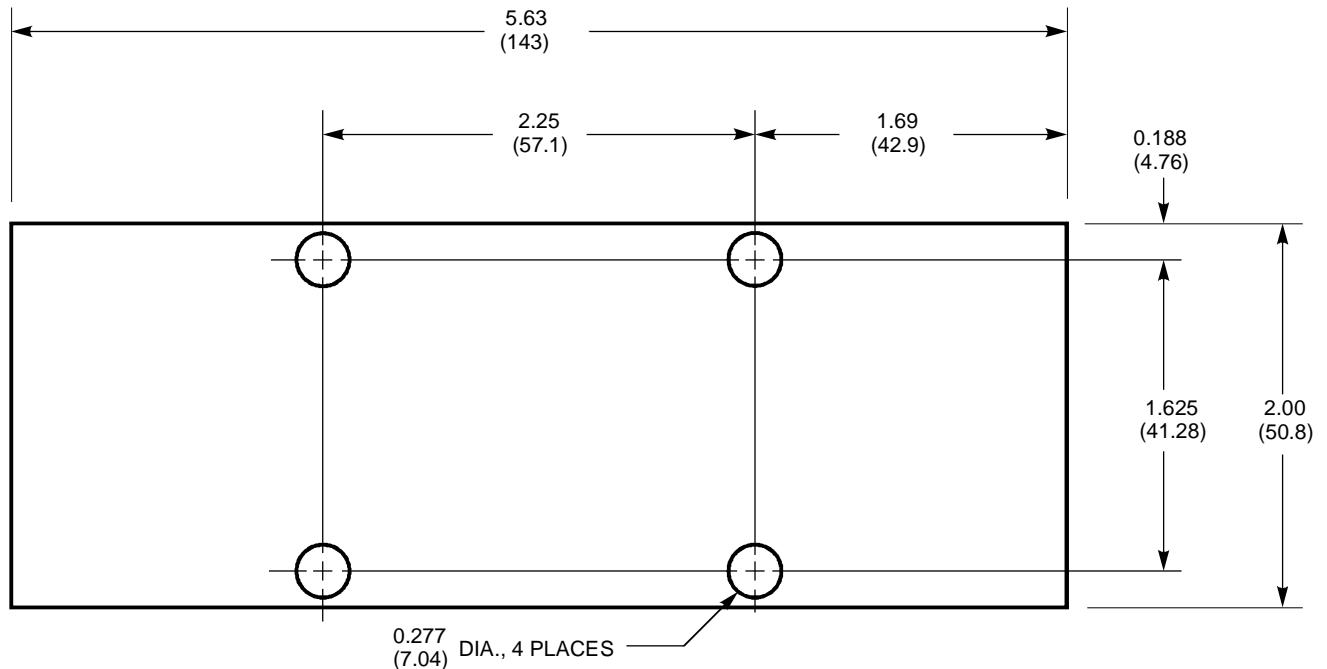


EATON PART NUMBER M22-R10K

EXAMPLE DIMMING POTENTIOMETER

TL102A/L Specifications:

Model Number:	TL102A or TL102AL
Light Source:	20 High Power Infrared LEDs
Dimensions:	5.62" L x 2.0" W x 1.625" H
Housing Material:	Aluminum
Radiation Projection Angle:	60 degrees TL102A, 15 degrees TL102AL
Luminous Flux:	Nominally 1800 lumens
Power Requirement:	24 volts +/- 5% at 1.25 Amps
Startup Current Requirement:	1.30 Amps
External Wiring Connections:	3 pole removable connector for +24 Volts, Dim, Common
Dim Signal:	0 to 24 volts dc. 0 volts: full illumination, 24 volts: fully off
Dim Signal Input Impedance:	200K ohms
Mounting Hole Spacing:	2.25" x 1.625 Rectangle
Bolt Head to Mounting Surface:	0.875"
Mounting bolts:	¼ inch Socket Head Cap Screws



MOUNTING FOOTPRINT