

# MOD-PD2LH Series PD2 & PD4 Light/Horn Modification

## Instruction Manual



Meters Shown with MOD-PD2LHRB1  
Red Light/Horn and Button.  
*Meters Sold Separately.*

- Light/Horn and Button Mounted and Wired to Meter
- Single Lights in Red, Green, Yellow, Blue, or White Available
- Units with One of Five User Selectable Lights Available
- Three Color Light Stack with Red, Yellow, and Green Lights Available
- Light/Horn Powered from Meter or External Power Supply
- Light and Horn Can be Controlled Independently Using Separate Relays
- Light/Horn Programmable for Variety of Reset Functions, Including:
  - Silence Horn at Any Time
  - Light Stays on Until Alarm Clears
- Light Can Be Wired to Flash or Stay Steady On
- IP65 Rated
- 85 dB Horn
- Operates from -5 to 40°C (23 to 104°F)
- Control Station Accessory For Remote Operation of Light/Horn Button

Watch the Light/Horn  
Video



*Click or scan*











## OVERVIEW

Transform a Precision Digital PD2 and PD4 series meter into an efficient display, control, and alarm system with the MOD-PD2LH series. It provides a light/horn to boost visibility of alarm conditions, a button that connects to the meter's digital input to control or reset the alarms, and hole drilling on the enclosure for both the light/horn and button. Also included is the light/horn and button installation and wiring to the meter. Meter is sold separately.

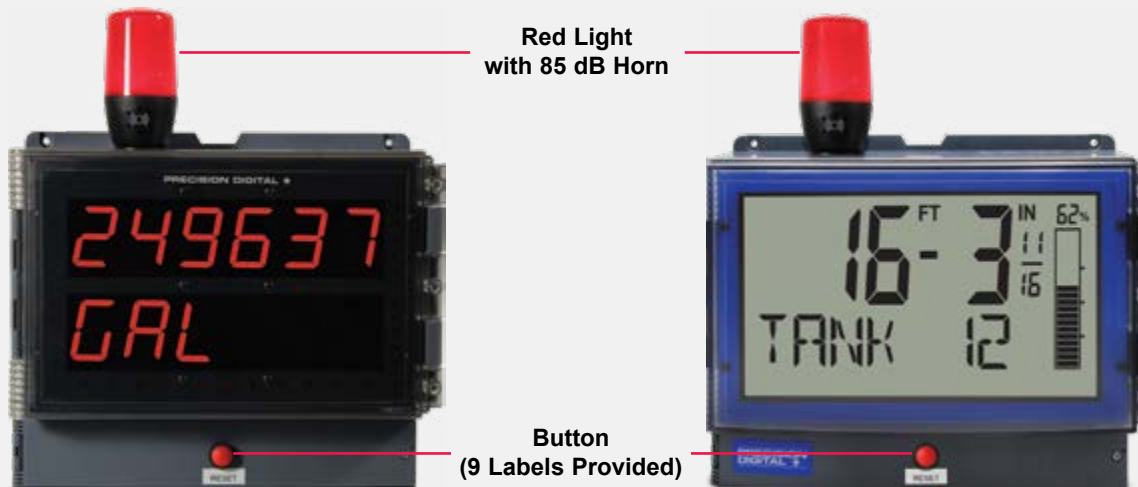
Overall, the MOD-PD2LH series is a simple solution for PD2 and PD4 series meters that adds audible and visual ways to indicate critical alarms.

Installation of the light/horn accessory voids all of the PD2 and PD4 agency approvals. The NEMA 4X and IP65 ratings are not affected.

## What's Included

-   
  
 Light/Horn
-   
  
 Button and  
9 Labels
-   
  
 Hole Drilling  
on Enclosure
-   
  
 Installation and  
Wiring
-   
  
 Meter

PD2 and PD4 Meters Shown with MOD-PD2LHRB1 Red Light/Horn and Button.  
*Meters Sold Separately.*



### Light/Horn

The light/horn is available in three different light configurations and each comes with a built-in 85 dB horn.

The first light option is a single color light in either red, green, yellow, blue, or white. The second light option is a user selectable light with five color options in either red, green, yellow, blue or white. Simply connect the appropriate wire to display the desired light color. The third option is a light stack with red, yellow, and green lights that can turn on independently (not compatible with PD4).



The light can be wired to flash (not available on MOD-PD2LH5CB1) or stay steady on. Both the light and horn can be controlled independently of each other using separate relays on the meter, and may be reset in a variety of ways based on the connected meter's relay reset capabilities.

### Button

The button connects to the meter's digital input and it can be used to remotely control the light/horn such as resetting, acknowledging, or silencing an alarm. Nine (9) printed labels are provided to identify the button's action including: RESET, BATCH, ACK, TARE, SILENCE, STOP, START, PAUSE, and START/STOP.



(9) Printed Labels Provided

### Control Capabilities

The light and horn can be controlled independently of each other using separate relays on the Precision Digital meter they are connected to. These relays can be programmed for automatic or manual reset action to satisfy a wide variety of audible and visual alarm applications.

### Power Options

Precision Digital meters with an internal transmitter power supply can provide up to 200 mA to power the transmitter and other devices including the light/horn. See Specifications for details on power consumption.

If a meter connected to the light/horn does not have an internal transmitter power supply or more power is required than the meter provides, then consider the [PDA1024-01](#) 24 VDC transmitter power supply.

### Hole Drilling Locations

All MOD-PD2LH models provide hole drilling on enclosure for light/horn and button. See below for hole locations for both the light/horn and button.

### Light/horn

The light/horn hole is on the top-left of the enclosure.

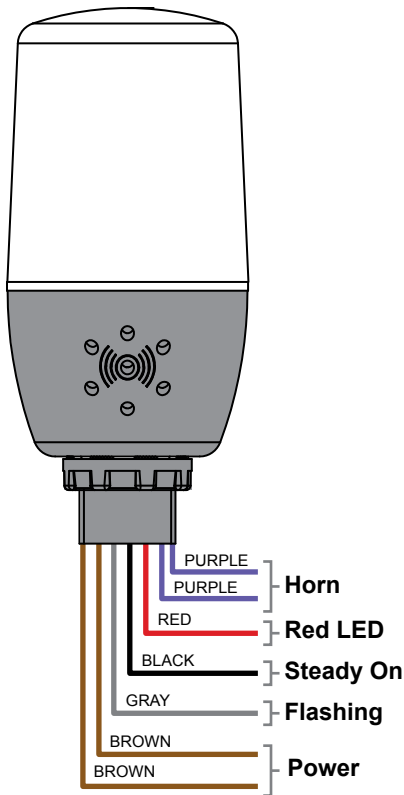


### Button

The button is centered on the cover of the enclosure below the display.

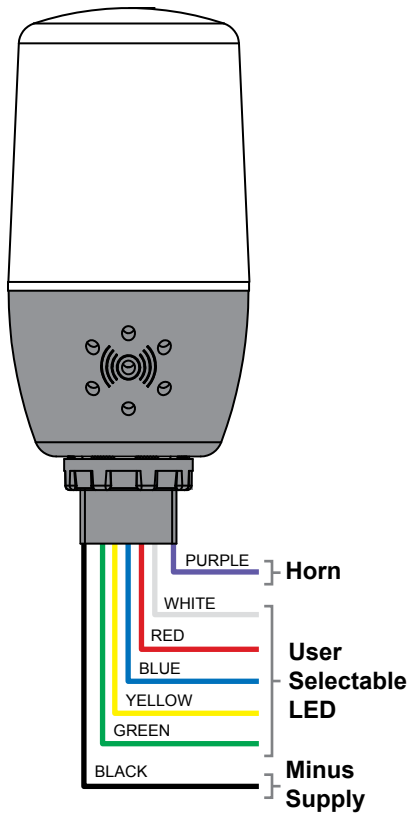


**CONNECTIONS**



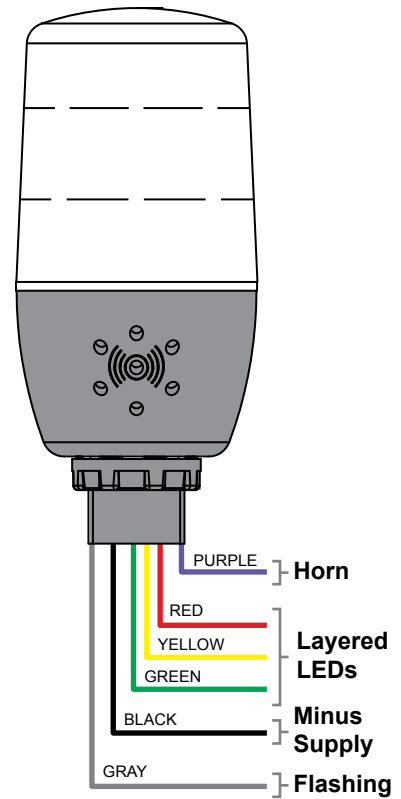
**MOD-PD2LH Models**

Connections shown for a red light model. For other MOD-PD2LH models, the red wire is the color of the light. Connect the red and black wires for a *Steady On* light and red and gray wires for *Flashing* light.



**MOD-PD2LH5CB1**

Connect the LED color to the plus supply and the black wire to the minus supply to turn the LED on. Be aware of limitations for applications requiring different color lights for different alarm conditions.



**MOD-PD2LH3LCB1-RYG**

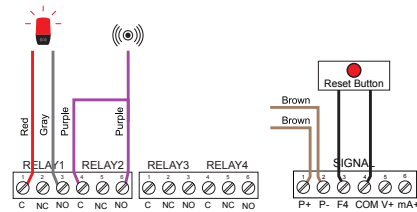
Connect the LED color to the plus supply for a *Steady On* light and LED color and gray wires to the plus supply for *Flashing* light. The black wire should be connected to the minus supply.

## APPLICATIONS

There are a wide variety of ways these light/horn devices can be controlled by Precision Digital meter's relays to satisfy visual and audible alarm applications. Feel free to contact tech support to discuss your particular application. The following examples illustrate some typical applications.

### MOD-PD2LH Models

The MOD-PD2LH models are the simplest devices in the series and are made up of a single-color light and horn. A typical way to use the MOD-PD2LH is to program the meter so that the horn can be silenced at any time via a button connected to the meter's digital input or via the F3 front panel button, and the light to reset automatically when the alarm clears:



PD2 meter with internal transmitter power supply connections shown

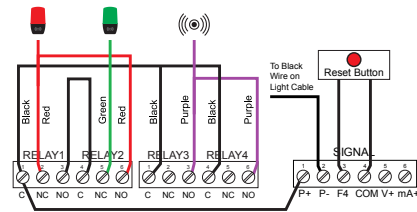
Relay	Connected to	Default Reset Mode
1	Flashing Light <sup>(1)</sup>	Auto reset
2	Horn	Silence with Button at any time
3	User Device	As user desires
4	User Device	As user desires



1. Light can be wired to flash or stay steady on.

### MOD-PD2LH5CB1

The MOD-PD2LH5CB1 shows one color at a time and the light color (red, green, yellow, blue or white) is determined by which wires are connected to power through the meter's relays. A typical application for the MOD-PD2LH5CB1 might involve lighting up the red light to indicate high and low alarms and the green light to indicate everything is OK using a Precision Digital meter's four internal relays:



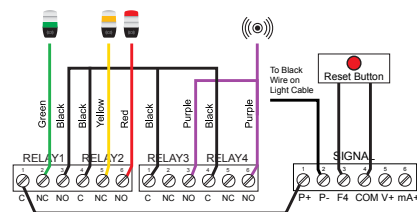
PD2 meter with internal transmitter power supply connections shown

Relay	Purpose	Range	Light/Horn	Action
1	Low alarm	< 199	Red light	Auto
3	Low alarm	< 199	Horn	Latch
2	All OK	200 to 500	Green light	Auto
2	High alarm	> 500	Red light	Auto
4	High alarm	> 500	Horn	Latch



### MOD-PD2LH3LCB1-RYG

The MOD-PD2LH3LCB1-RYG can light up red, yellow or green lights as determined by which wires are connected to power through the meter's relays. A typical application for the MOD-PD2LH3LCB1-RYG (and the default factory setting) might involve lighting up the green light to indicate everything is OK, the yellow light to indicate a High warning, and the red light to indicate a High alarm. The Horn will also sound at both the Warning and High alarms and can be manually reset at any time via a button connected to the meter's digital input or via the F3 front panel button:



PD2 meter with internal transmitter power supply connections shown

Relay	Purpose	Range	Light/Horn	Action
1	All OK	< 199	Green light	Auto
2	Warning	200 to 500	Yellow light	Auto
3	Warning	200 to 500	Horn	Latch
2	High alarm	> 500	Red light	Auto
4	High alarm	> 500	Horn	Latch



## ACCESSORIES

Precision Digital offers accessories to complement any light/horn alarm system. These accessories include control stations, and a 24 VDC power supply to drive the light/horn.

### PDA2360 Control Stations

The [PDA2360](#) series of plastic control stations are IP65, NEMA 4, 4X, and 13 rated, and provide a convenient way to remotely control the light/horn such as resetting an alarm, acknowledging an alarm, or silencing an alarm. The control stations come pre-assembled with knockouts on the top and bottom for convenient wiring and two mounting holes on the back for wall mounting.



Model	Description
<a href="#">PDA2361-A</a>	Ack Button
<a href="#">PDA2361-R</a>	Reset Button
<a href="#">PDA2361-Q</a>	Silence Button

### PDA1024-01 24 VDC Power Supply

The [PDA1024-01](#) 1.5 A, 24 VDC power supply can be used to power the light/horn when the connected meter does not have an internal transmitter power supply or when additional power is required. The PDA1024-01 is DIN rail mountable and is a UL recognized component.



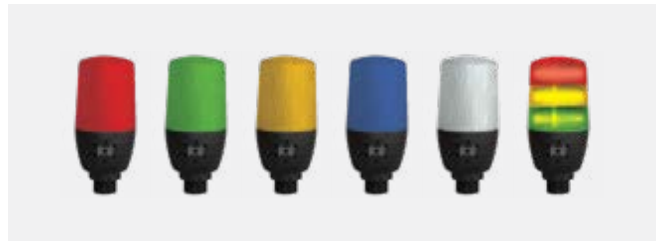
Model	Description
<a href="#">PDA1024-01</a>	24 VDC Transmitter Power Supply
<a href="#">PDA1002</a>	6" DIN Rail Mounting Kit

## CUSTOM INSTALLATIONS

MOD-PD2LH individual components are also sold separately for custom user installations.

### PDA-LH Light/Horn Accessory

The [PDA-LH](#) series light/horn accessory can be connected to select Precision Digital meters to provide better visibility and control of alarm conditions. It is available in three different light configurations and each comes with a built-in 85 dB horn.



Model	Description
<a href="#">PDA-LHR</a>	Red Light/Horn
<a href="#">PDA-LHG</a>	Green Light/Horn
<a href="#">PDA-LHY</a>	Yellow Light/Horn
<a href="#">PDA-LHB</a>	Blue Light/Horn
<a href="#">PDA-LHW</a>	White Light/Horn
<a href="#">PDA-LH5C</a>	Light/Horn with User Choice of Red, Green, Yellow, Blue or White Light
<a href="#">PDA-LH3LC-RYG</a>	Light Stack/Horn with Red, Yellow, Green Lights

### PDA-BUTTON Momentary Pushbutton

The [PDA-BUTTON](#) is an IP67 fully sealed momentary pushbutton that can be used to silence the horn or turn off the light. The pushbutton is available in red, black, or green. These fully sealed pushbuttons are SPST-NO so they will satisfy a variety of circuit requirements.



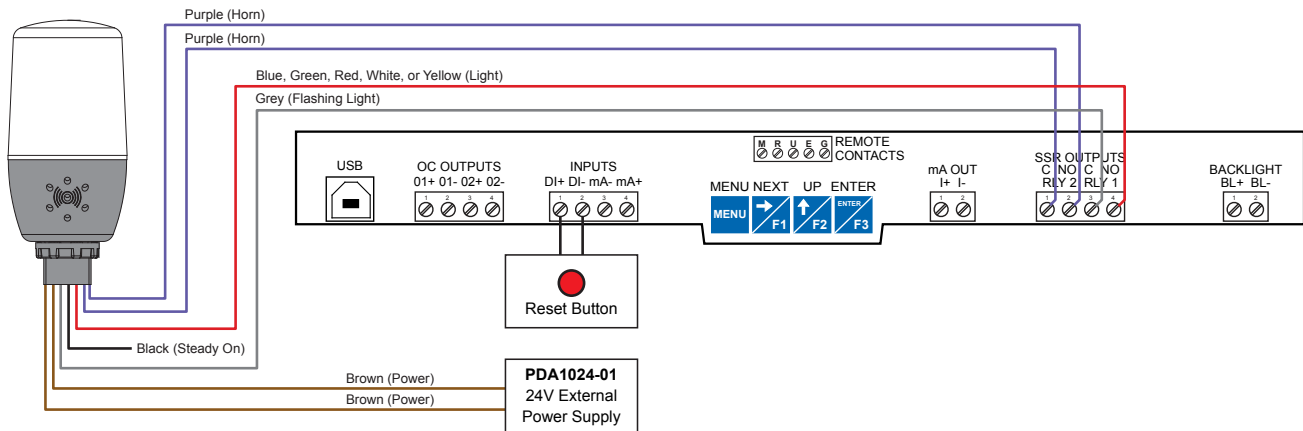
Model	Description
<a href="#">PDA-BUTTON1R</a>	Red Momentary Pushbutton
<a href="#">PDA-BUTTON1G</a>	Green Momentary Pushbutton
<a href="#">PDA-BUTTON1B</a>	Black Momentary Pushbutton

## WIRING DIAGRAMS

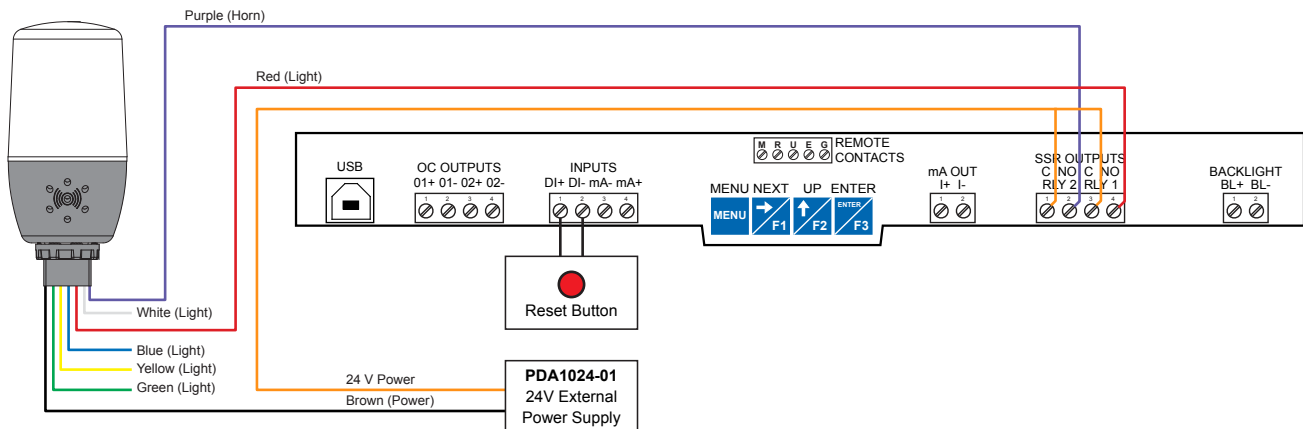
### PD4 Loop Leader+ Series Connections

#### ⚠ IMPORTANT

- The MOD-PD2LH light/horn ships installed and wired to the meter as shown in the diagrams below.
- A PDA1024-01 external power supply is required to power up the light/horn (sold separately).
- User wiring to the external power supply is required. See wiring connections below for reference.



**MOD-PD2LH Models Using External Power Supply (PDA1024-01)**



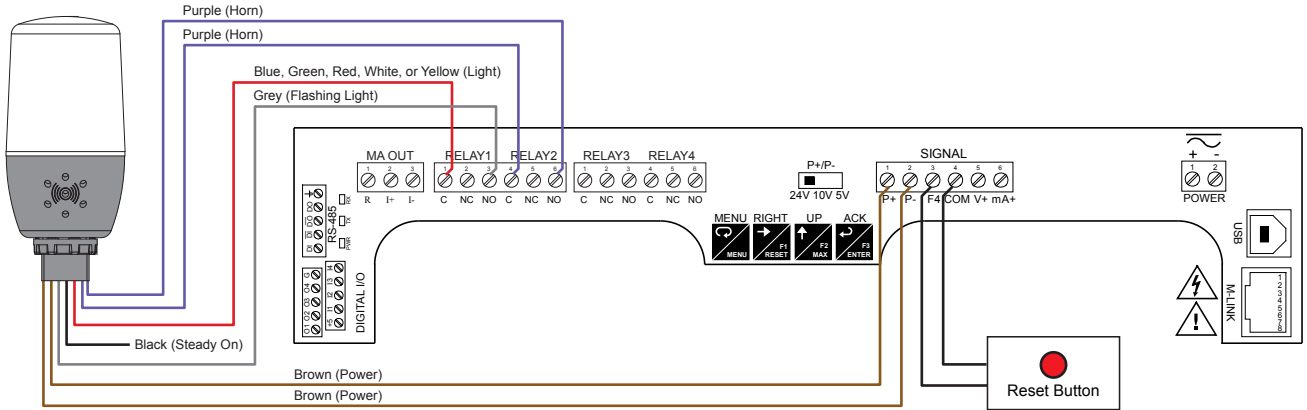
**MOD-PD2LH5CB1 Models Using External Power Supply (PDA1024-01)**



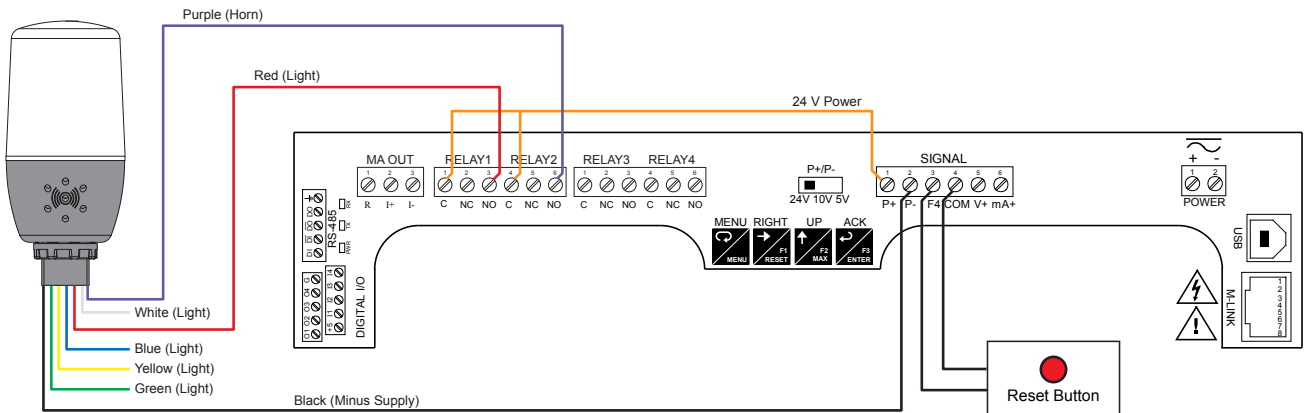
## PD2 Helios Series Connections (Internal Power)

### ⚠ IMPORTANT

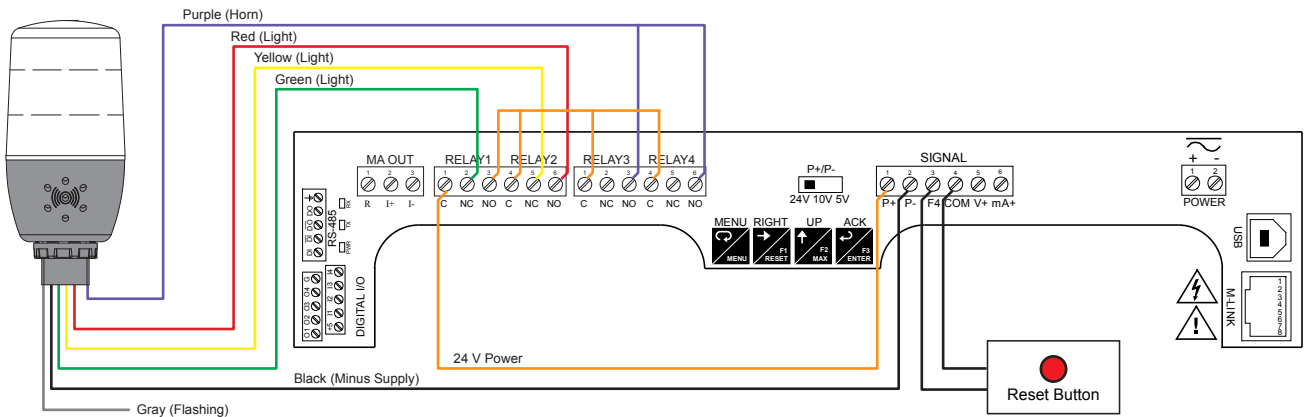
- The MOD-PD2LH light/horn ships installed and wired to the meter as shown in the diagrams below.
- Wiring shown for PD2 meters with an internal power supply.



**MOD-PD2LH Models Using Internal Power Supply**



**MOD-PD2LH5CB1 Models Using Internal Power Supply**



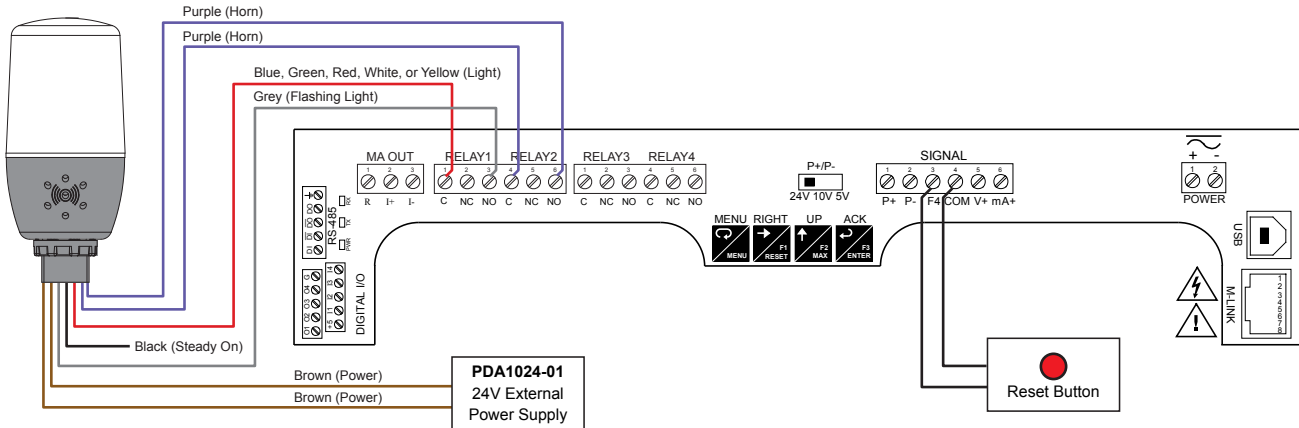
**MOD-PD2LH3LCB1-RYG Models Using Internal Power Supply**



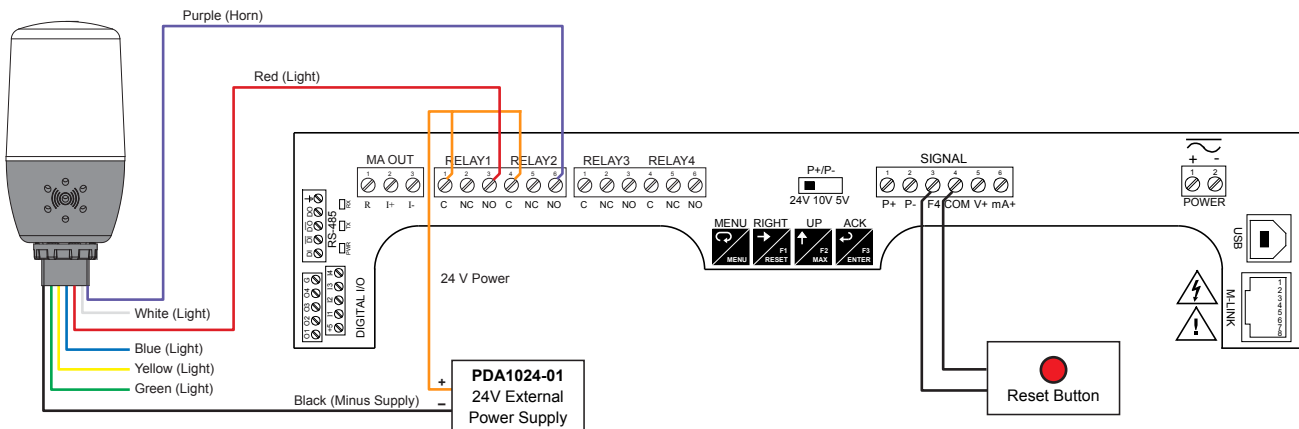
## PD2 Helios Series Connections (External Power)

### ⚠ IMPORTANT

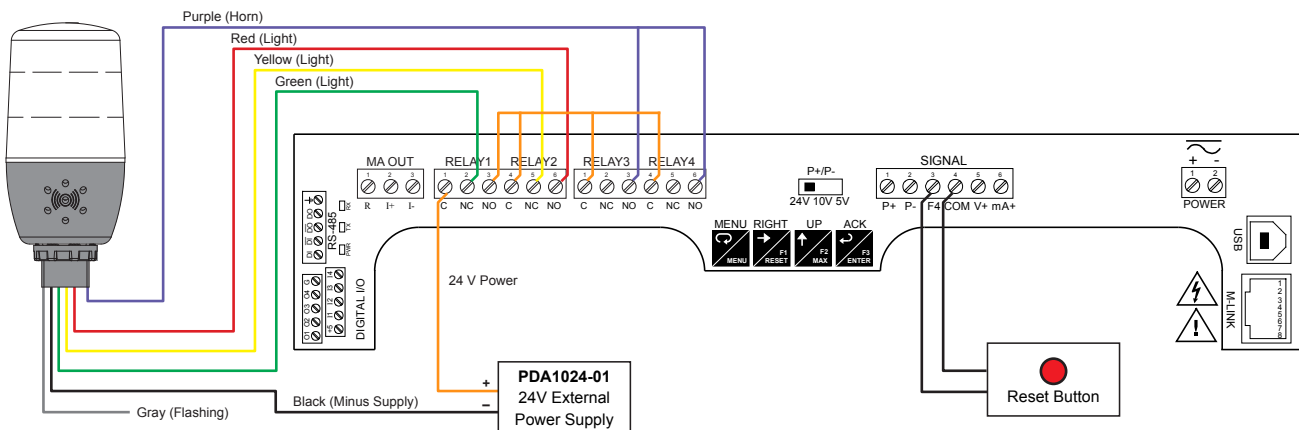
- The MOD-PD2LH light/horn ships installed and wired to the meter as shown in the diagrams below.
- Wiring shown for PD2 meters without an internal power supply.
- A PDA1024-01 external power supply is required to power up the light/horn (sold separately).
- User wiring to the external power supply is required. See wiring connections below for reference.



**MOD-PD2LH Models Using External Power Supply (PDA1024-01)**



**MOD-PD2LH5CB1 Models Using External Power Supply (PDA1024-01)**



**MOD-PD2LH3LCB1-RYG Models Using External Power Supply (PDA1024-01)**

## SPECIFICATIONS

### General

<b>Installation</b>	Holes drilled in enclosure for light/horn and button. User installation and wiring required.
<b>Environmental</b>	Operating Temperature Range: -5 to 40°C (23 to 104°F)
<b>Approvals</b>	Installation of the light/horn accessory voids all of the PD2/PD4 agency approvals. The NEMA 4X and IP65 ratings are not affected.
<b>Warranty</b>	1 year parts and labor. See Warranty Information and Terms & Conditions on <a href="http://www.predig.com">www.predig.com</a> for complete details.

### Light/Horn

<b>Light/Horn Independence</b>	Light and horn can be controlled independently via separate relays.
<b>Rating</b>	IP65
<b>Connection</b>	M22
<b>Hole Size</b>	0.875" (22 mm)
<b>Cable Length</b>	3.28 feet (1 meter)
<b>Light Colors</b>	MOD-PD2LH Models: Red, green, yellow, blue, or white. MOD-PD2LH5CB1: User selectable: red, green, yellow, blue, white. MOD-PD2LH3LCB1-RYG: Light stack with red, yellow, green lights (consult factory for other colors).
<b>Light Action</b>	Can be wired to flash or stay steady on (Flashing not available on MOD-PD2LH5CB1)
<b>Horn</b>	85 dB
<b>Overall Dimensions</b>	2.2" x 4.8" X 2.2" (55 x 122 x 55 mm) (W x H x D)
<b>Weight</b>	8 oz (227 g)

### Button

<b>Rating</b>	IP67, NEMA 4X
<b>Connection</b>	M16
<b>Hole Size</b>	0.630" (16 mm)
<b>Action</b>	Wire to the meter's digital input to reset, acknowledge, or silence an alarm.
<b>Labels</b>	Nine (9) labels provided: RESET, BATCH, ACK, TARE, SILENCE, STOP, START, PAUSE, START/STOP

### Power

<b>Power Required</b>	24 VDC
<b>Transmitter Power Supply</b>	Precision Digital meters with an internal transmitter power supply can supply up to 200 mA to power the transmitter and other devices including the MOD-PD2LH series light/horn. The following tables illustrate how much power is required to power various light colors and the horn.

#### **MOD-PD2LH and MOD-PD2LH5CB1 Models**

Color	Power Required	Color	Power Required
Red	17 mA	Blue	15 mA
Green	15 mA	White	42 mA
Yellow	23 mA	Horn	20 mA

*Example:*

*17 mA (Red Light) + 20 mA (Horn) = 37 mA total current needed from the 200 mA supply. Available current = 163 mA*

#### **MOD-PD2LH3LCB1-RYG Model**

Color	Power Required	Color	Power Required
Red	34 mA	Yellow	33 mA
Green	29 mA	Horn	38 mA

*Example:*

*33 mA (Yellow Light) + 38 mA (Horn) = 71 mA total current needed from the 200 mA supply. Available current = 139 mA*

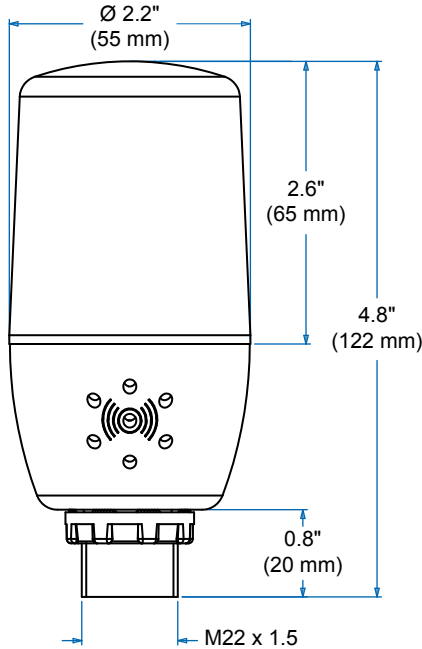
<b>External Power Supply</b>	If a meter connected to the light/horn does not have an internal transmitter power supply or more power is required than the meter provides, then consider the <a href="http://www.predig.com/PDA1024-01">PDA1024-01</a> 24 VDC transmitter power supply.
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**METER COMPATIBILITY**

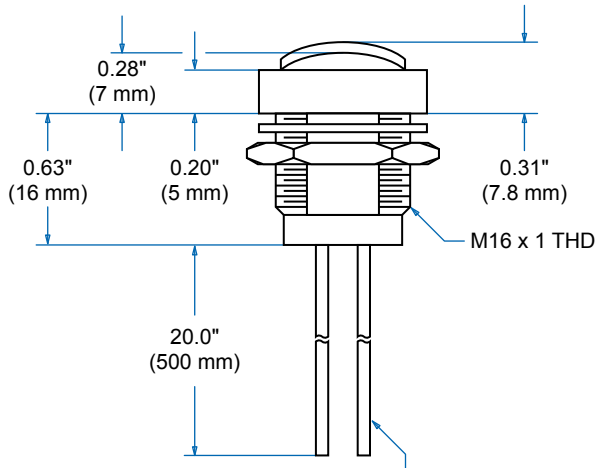
Series	Models	MOD-PD2LH	MOD-PD2LH5CB1	MOD-PD2LH3LCB1-RYG	Light/Horn Powered by Meter	Light/Horn Requires External Power	Reset Capabilities
Helios	PD2-6000, PD2-6001, PD2-6080, PD2-6081, PD2-6200, PD2-6210, PD2-6300, PD2-6310	•	•	•	•		•
	PD2-6060, PD2-6100, PD2-6262, PD2-6363, PD2-6400, PD2-7000	•	•	•		•	•
Loop Leader+	PD4-6603, PD4-6604, PD4-6624	•	•			•	•

**DIMENSIONS**

**Light/Horn**



**Button**



2 x 24 AWG Type 44 stranded primary lead wire with blue PVF insulation per MIL-W-81044 rated at -65 to 150°C plain, unstripped ends

**⚠ WARNING**  
Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**ORDERING INFORMATION**

**Light/Horn Modification**

Model	Description
<a href="#">MOD-PD2LHRB1</a>	Red Light/Horn and Button with Holes Drilled in Enclosure
<a href="#">MOD-PD2LHGB1</a>	Green Light/Horn and Button with Holes Drilled in Enclosure
<a href="#">MOD-PD2LHYB1</a>	Yellow Light/Horn and Button with Holes Drilled in Enclosure
<a href="#">MOD-PD2LHBB1</a>	Blue Light/Horn and Button with Holes Drilled in Enclosure
<a href="#">MOD-PD2LHWB1</a>	White Light/Horn and Button with Holes Drilled in Enclosure
<a href="#">MOD-PD2LH5CB1</a>	Light/Horn with User Choice of Red, Green, Yellow, Blue or White Light, Button, and Holes Drilled in Enclosure
<a href="#">MOD-PD2LH3LCB1-RYG</a>	Light Stack/Horn with Red, Yellow, Green Lights, Button, and Holes Drilled in Enclosure

**Notes**

- All MOD-PD2LH models provide a light/horn, button, and hole drilling on enclosure for light/horn and button. Both light/horn and button come installed and wired. Meter sold separately.
- For meters without an internal power supply, a PDA1024-01 external power supply is required to power up the light/horn. User wiring to the external power supply is required. See Wiring Diagrams for reference.

**Accessories**

General Accessories	
Model	Description
<a href="#">PDA1002</a>	6" DIN Rail Mounting Kit
<a href="#">PDA1024-01</a>	24 VDC Power Supply for DIN Rail

PDA2360 Series Control Stations	
Model	Description
<a href="#">PDA2361-A</a>	Ack Button
<a href="#">PDA2361-R</a>	Reset Button
<a href="#">PDA2361-Q</a>	Silence Button

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