PDA-LH Series Light/Horns
Instruction Manual

Red   Green   Yellow   Blue

White   5 Colors   3 Color Stack

- **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/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)**

Watch the Light/Horn Video

Click or scan

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OVERVIEW

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.

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.

The light can be wired to flash (not available on PDA-LH5C) 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.

The PDA-LH light/horn is IP65 rated, making it suitable for outdoor applications and has an operating temperature range of -40 to 40°C (-40 to 104°F).

PDA-LHR	**PDA-LHG**	**PDA-LHY**	**PDA-LHB**	**PDA-LHW**	**PDA-LH5C**	**PDA-LH3LC-RYG**
Single color	Single color	Single color	Single color	Single color	5 colors	3 color stack
R	G	Y	B	W	R G Y B W	R Y G
Flashing or steady on light	Flashing or steady on light	Flashing or steady on light	Flashing or steady on light	Flashing or steady on light	Steady on light	Flashing or steady on light

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 PDA-LH series light/horn. See Specifications for details on power consumption.
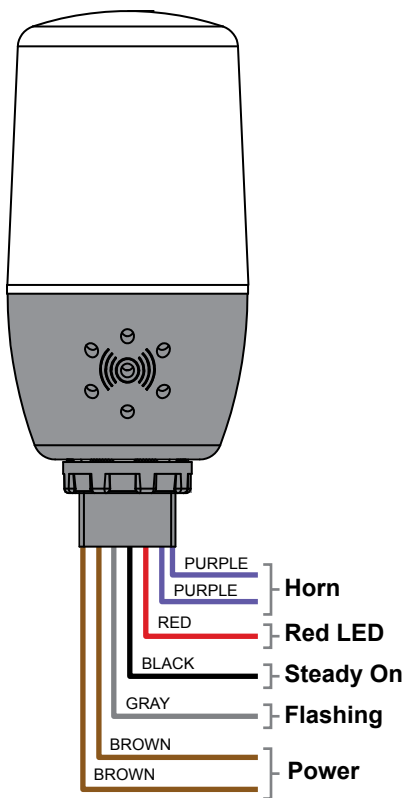
If a meter connected to the light/horn does not have an internal transmitter power supply or more power is required than the meter provides, then consider the PDA1024-01 24 VDC transmitter power supply.

Control Capabilities

The PDA-LH 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.

A front panel button (F3 or Ack) on the meter can be used to silence the horn. Additionally, meters with a digital input can have a PDA-BUTTON momentary pushbutton or PDA2360 control station wired in to remotely control the light/horn such as resetting, acknowledging, or silencing an alarm (Not suported on SuperNova meters).

CONNECTIONS

PURPLE
PURPLE } **Horn**
RED } **Red LED**
BLACK } **Steady On**
GRAY } **Flashing**
BROWN
BROWN } **Power**

PURPLE } **Horn**
WHITE
RED
BLUE
YELLOW
GREEN } **User Selectable LED**
BLACK } **Minus Supply**

PURPLE } **Horn**
RED
YELLOW
GREEN } **Layered LEDs**
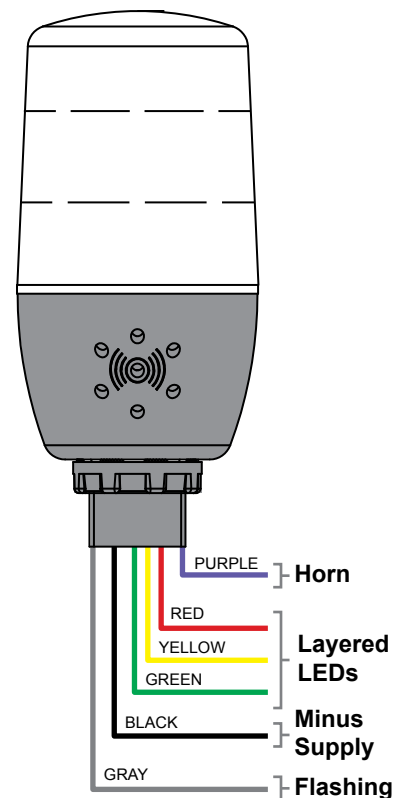BLACK } **Minus Supply**
GRAY } **Flashing**

PDA-LH Models

Connections shown for a red light model. For other PDA-LH 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.
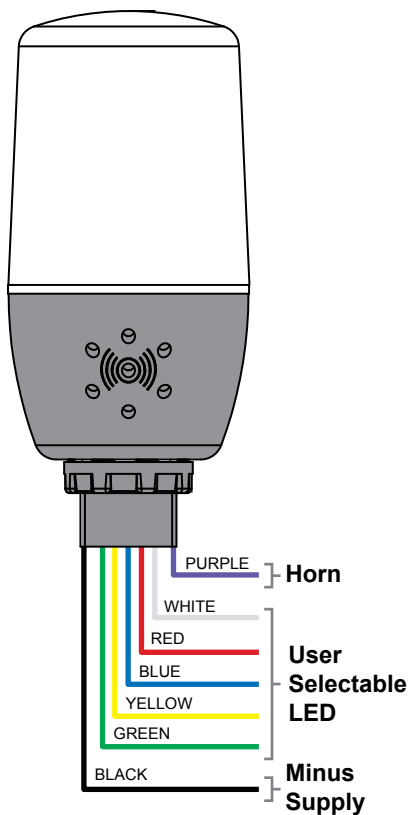
PDA-LH5C

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.

PDA-LH3LC-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 is 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.
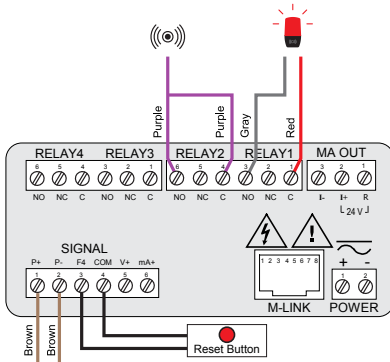
PROVU meter with internal transmitter power supply connections shown

PDA-LH Models

The PDA-LH 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 PDA-LH 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 or Ack front panel button, and the light to reset automatically when the alarm clears:

Relay	Connected to	Default Reset Mode
1	Flashing Light[1]	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.
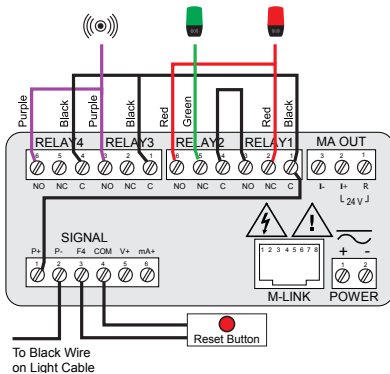
PROVU meter with internal transmitter power supply connections shown

PDA-LH5C

The PDA-LH5C 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 PDA-LH5C 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:

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

To Black Wire on Light Cable
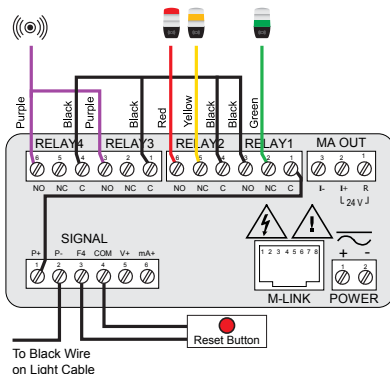
PROVU meter with internal transmitter power supply connections shown

PDA-LH3LC-RYG

The PDA-LH3LC-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 PDA-LH3LC-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 or Ack front panel button:

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

To Black Wire on Light Cable

PROVU meter with internal transmitter power supply connections shown

ACCESSORIES

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

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
PDA-BUTTON1R	Red Momentary Pushbutton
PDA-BUTTON1G	Green Momentary Pushbutton
PDA-BUTTON1B	Black Momentary Pushbutton

The PDA-BUTTON comes with nine printed labels the user can apply to identify the pushbutton's programmed action. These actions include: RESET, BATCH, ACK, TARE, SILENCE, STOP, START, PAUSE, and START/STOP.

(9) Printed Labels Provided

Pushbutton and Label Installed on Enclosure

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, acknoledging 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
PDA2361-A	Ack Button
PDA2361-R	Reset Button
PDA2361-Q	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.
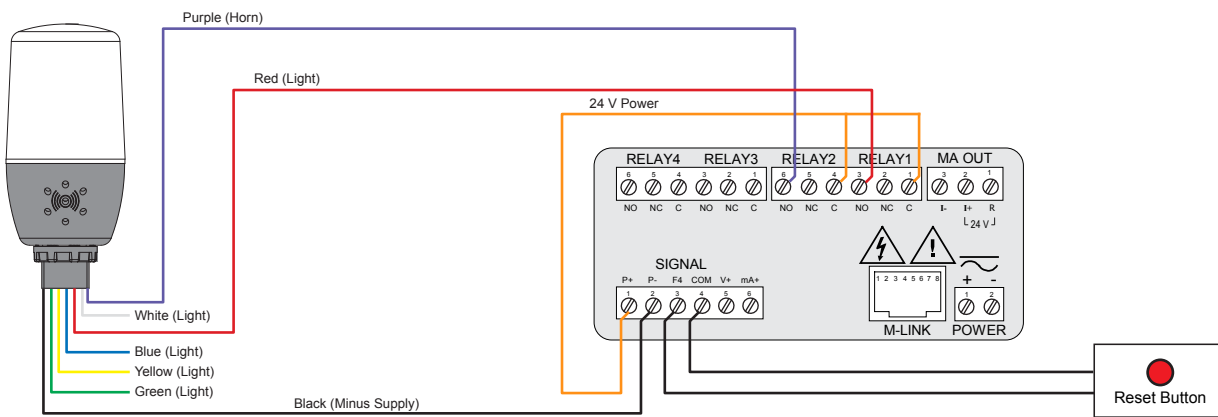

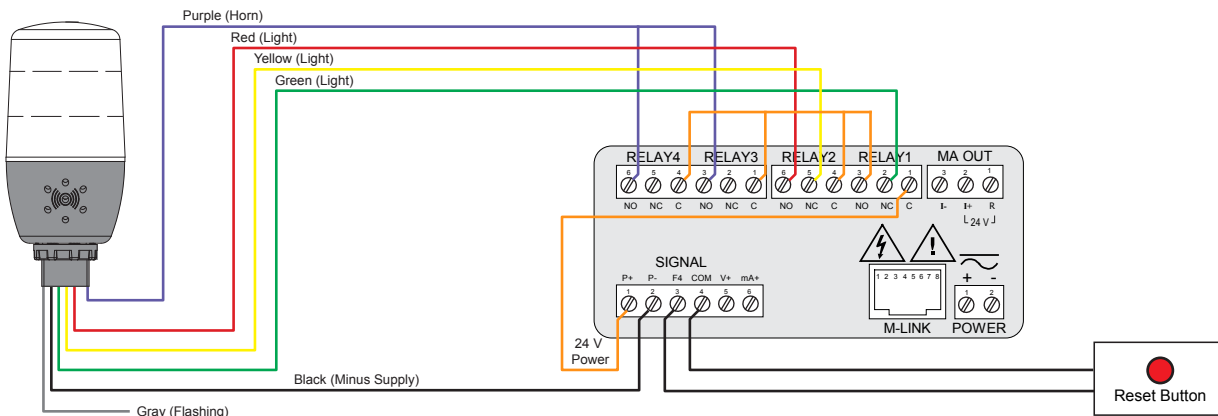| Model	Description
PDA1024-01	24 VDC Transmitter Power Supply
PDA1002	6" DIN Rail Mounting Kit

WIRING DIAGRAMS

PD6000 & PD7000 PROVU Series Connections (Internal Power)
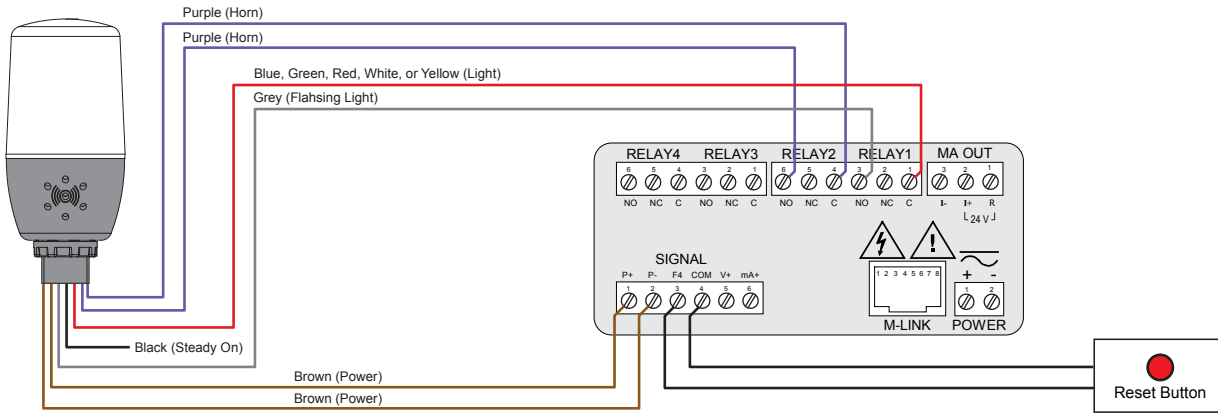
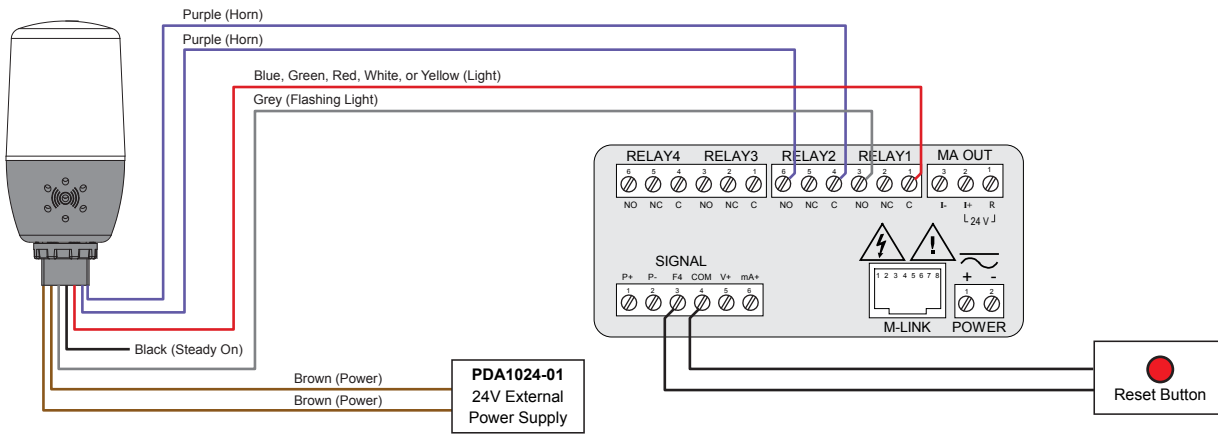

PDA-LH Models Using Internal Power Supply

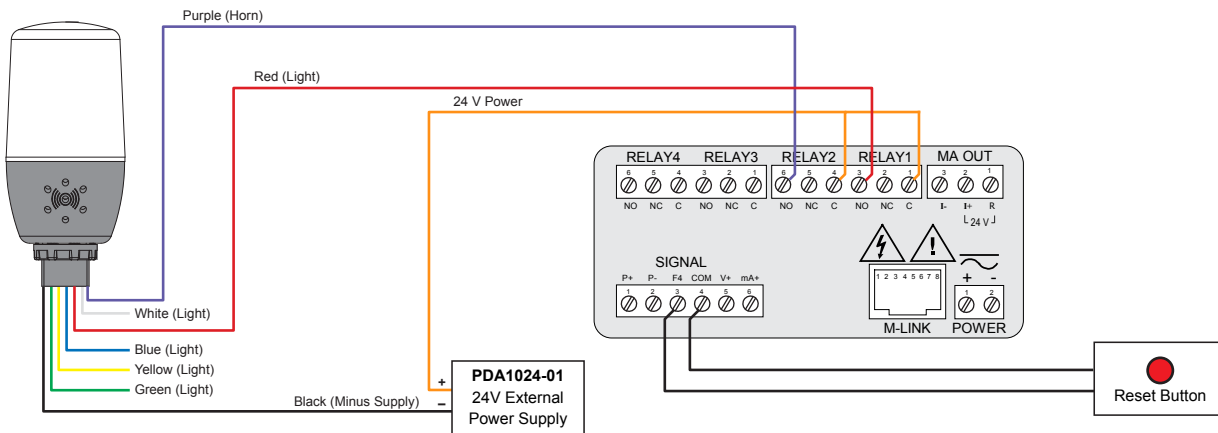**PDA-LH5C Models Using Internal Power Supply**

PDA-LH3LC-RYG Models Using Internal Power Supply
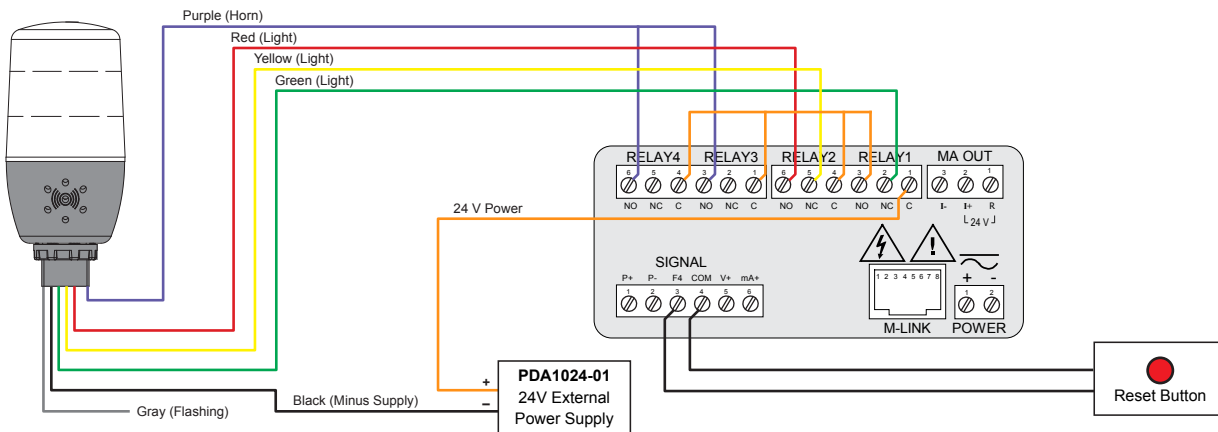
PD6000 & PD7000 PROVU Series Connections (External Power)

PDA-LH Models Using External Power Supply (PDA1024-01)
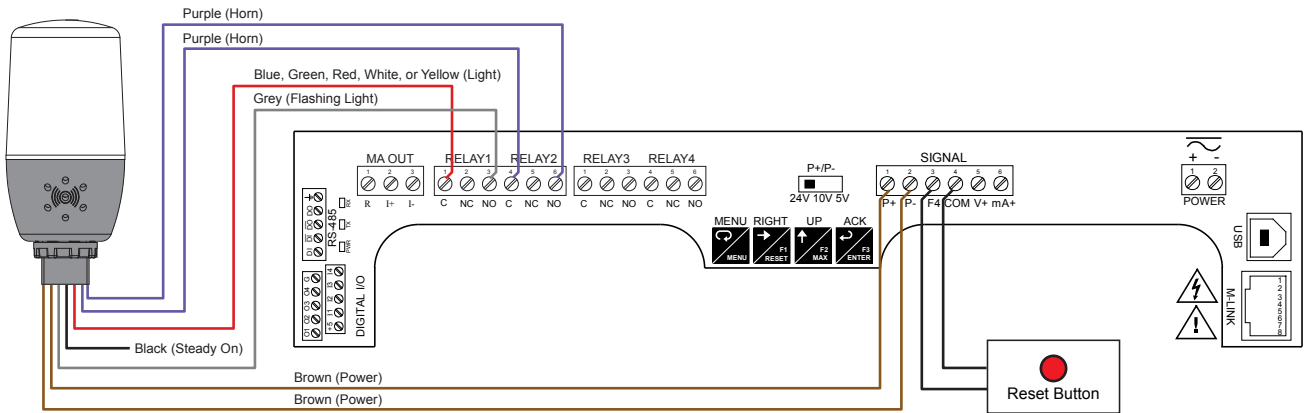

PDA-LH5C Models Using External Power Supply (PDA1024-01)

PDA-LH3LC-RYG Models Using External Power Supply (PDA1024-01)

PD2 Helios Series Connections (Internal Power)

PDA-LH Models Using Internal Power Supply

PDA-LH5C Models Using Internal Power Supply

PDA-LH3LC-RYG Models Using Internal Power Supply

PD2 Helios Series Connections (External Power)

PDA-LH Models Using External Power Supply (PDA1024-01)

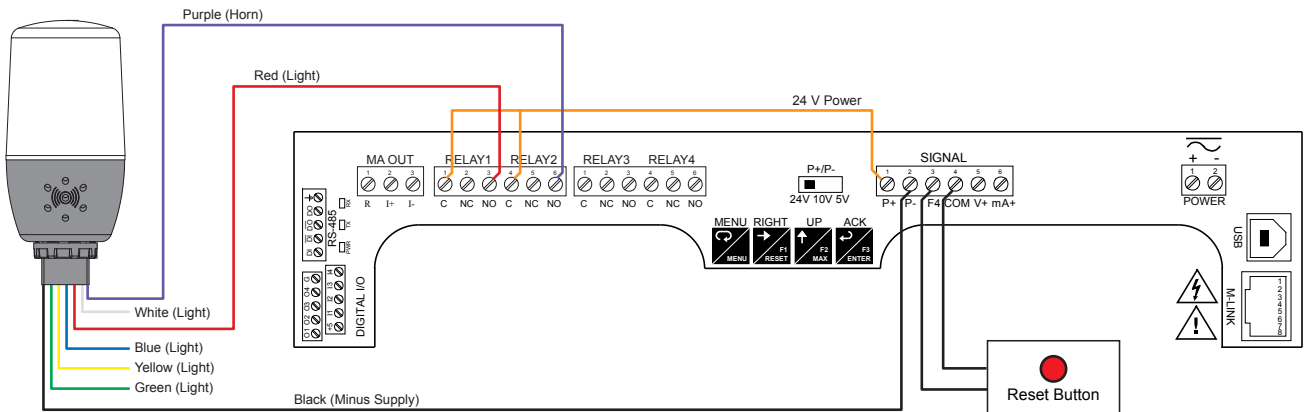**PDA-LH5C Models Using External Power Supply (PDA1024-01)**

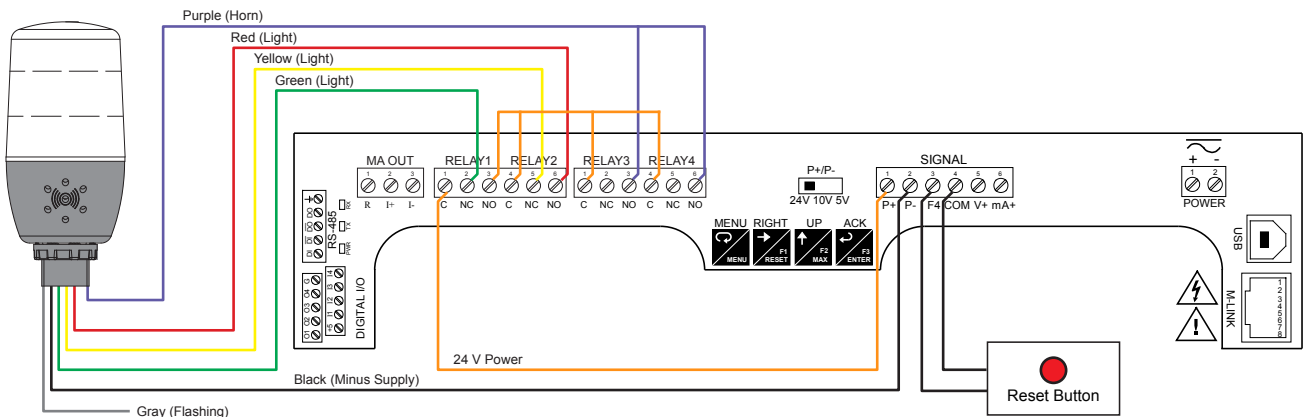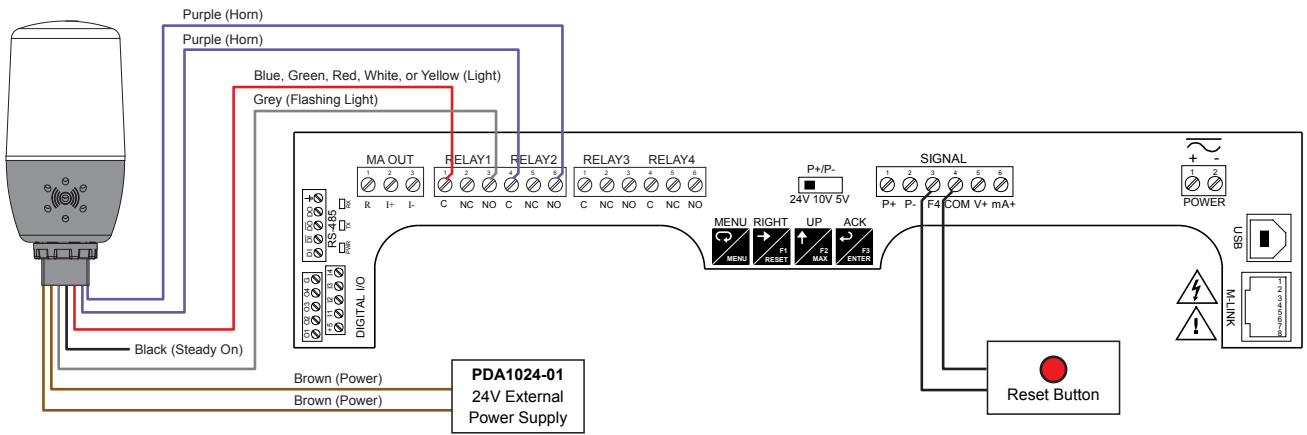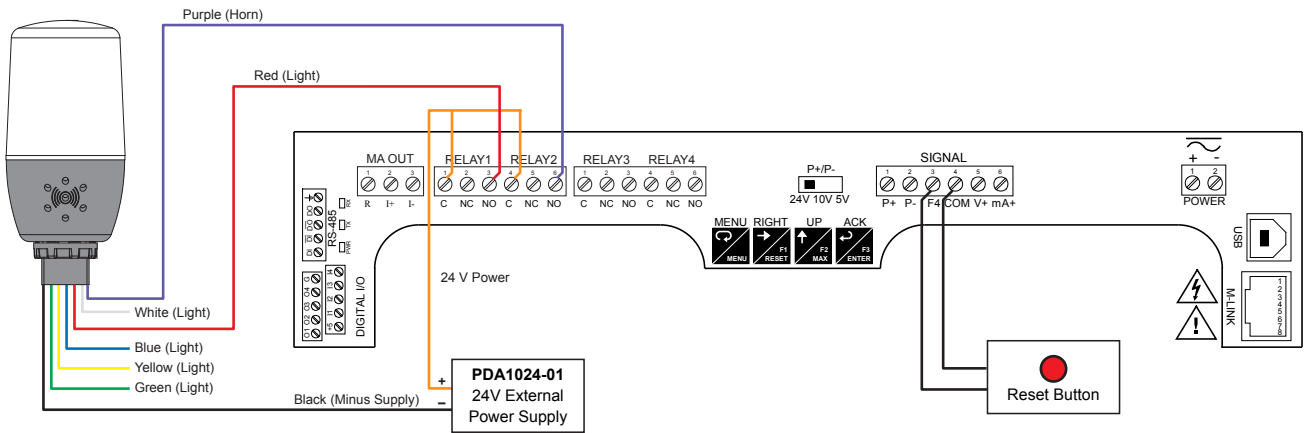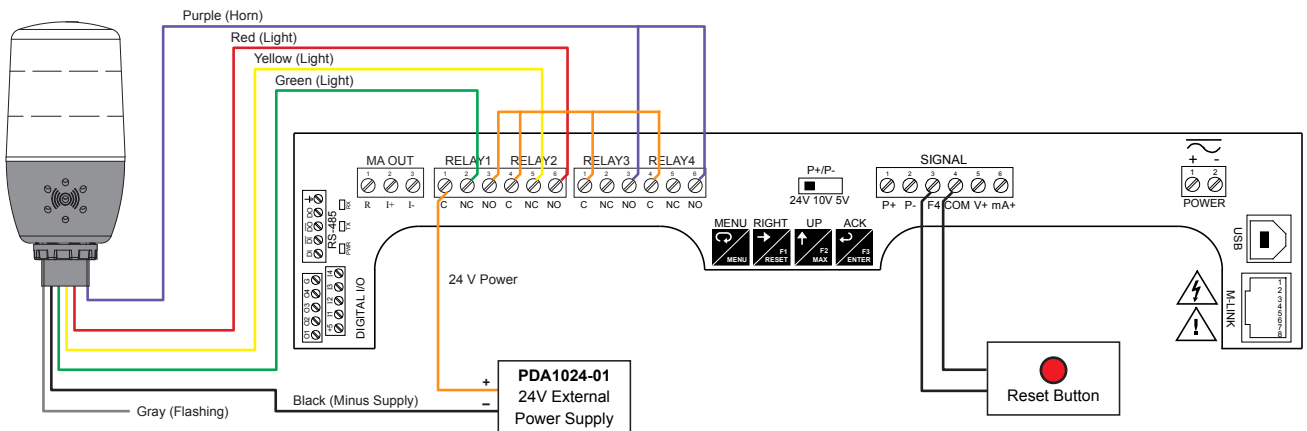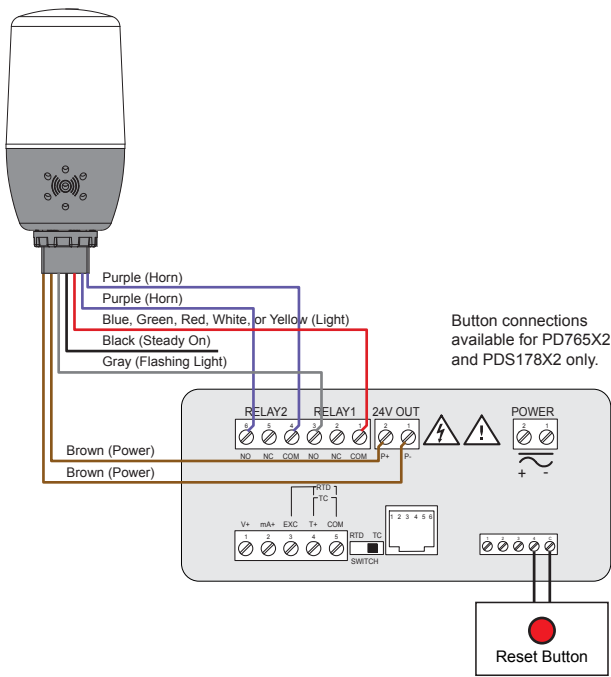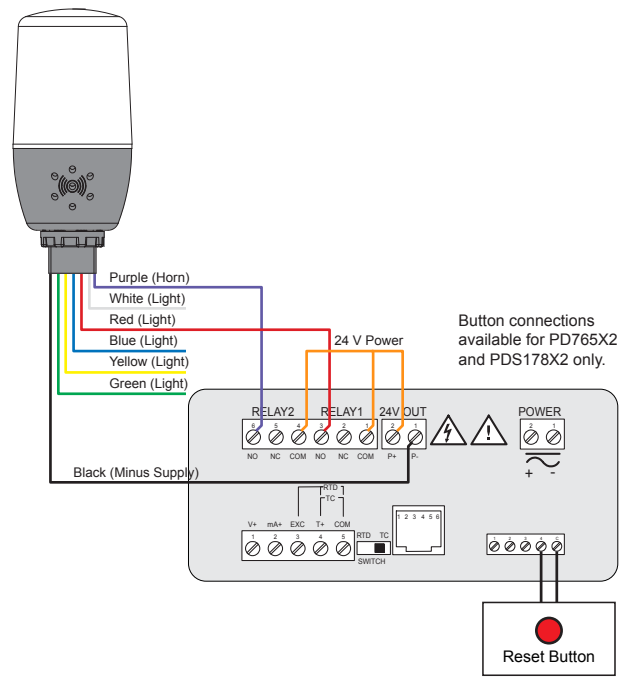

PDA-LH3LC-RYG Models Using External Power Supply (PDA1024-01)

PD765 Trident Series & PDS178 Series Connections (Internal Power)

Purple (Horn)
Purple (Horn)
Blue, Green, Red, White, or Yellow (Light)
Black (Steady On)
Gray (Flashing Light)

Button connections available for PD765X2 and PDS178X2 only.

Brown (Power)
Brown (Power)

RELAY2   RELAY1   24V OUT   POWER
NO NC COM NO NC COM   P+ P-   + -

V+ mA+ EXC T+ COM

Reset Button

PDA-LH Models Using Internal Power Supply

Purple (Horn)
White (Light)
Red (Light)
Blue (Light)
Yellow (Light)
Green (Light)

24 V Power

Button connections available for PD765X2 and PDS178X2 only.

Black (Minus Supply)

RELAY2   RELAY1   24V OUT   POWER
NO NC COM NO NC COM   P+ P-   + -

V+ mA+ EXC T+ COM

Reset Button

PDA-LH5C Models Using Internal Power Supply

PD765 Trident Series & PDS178 Series Connections (External Power)

Purple (Horn)
Purple (Horn)
Blue, Green, Red, White, or Yellow (Light)
Black (Steady On)
Gray (Flashing Light)

Button connections available for PD765X2 and PDS178X2 only.

RELAY2   RELAY1   24V OUT   POWER
NO NC COM NO NC COM   P+ P-   + -

V+ mA+ EXC T+ COM

Brown (Power)
Brown (Power)

PDA1024-01
24V External
Power Supply

Reset Button

PDA-LH Models Using External Power Supply (PDA1024-01)

Purple (Horn)
White (Light)
Red (Light)
Blue (Light)
Yellow (Light)
Green (Light)

Button connections available for PD765X2 and PDS178X2 only.

RELAY2   RELAY1   24V OUT   POWER
NO NC COM NO NC COM   P+ P-   + -

V+ mA+ EXC T+ COM

24 V Power
Black (Minus Supply)

PDA1024-01
24V External
Power Supply

Reset Button

PDA-LH5C Models Using External Power Supply (PDA1024-01)

PD9000 ConsoliDator+ Series Connections

The light/horn is powered by one of the analog input's transmitter power supply. Analog input card is required.

A PDA1024-01 external power supply may be used if the ConsoliDator+ does not have an analog input card installed.

Purple (Horn)
Purple (Horn)
Blue, Green, Red, White or Yellow (Light)
Black (Steady On)
Grey (Flashing Light)
Brown (Power)
Brown (Power)

4-20 mA INPUTS

mA- mA+ 24V   mA- mA+ 24V   mA- mA+ 24V   mA- mA+ 24V
AI-1   AI-2   AI-3   AI-4

C NC NO   C NC NO   C NC NO   C NC NO   C NC NO
RY-1   RY-2   RY-3   RY-4   RY-5

PDA-LH Using Internal Power Supply

The light/horn is powered by one of the analog input's transmitter power supply. Analog input card is required.

A PDA1024-01 external power supply may be used if the ConsoliDator+ does not have an analog input card installed.

24 V Power

Purple (Horn)
White (Light)
Red (Light)
Blue (Light)
Yellow (Light)
Green (Light)
Black (Minus Supply)

4-20 mA INPUTS

mA- mA+ 24V   mA- mA+ 24V   mA- mA+ 24V   mA- mA+ 24V
AI-1   AI-2   AI-3   AI-4

C NC NO   C NC NO   C NC NO   C NC NO   C NC NO
RY-1   RY-2   RY-3   RY-4   RY-5

PDA-LH5C Using Internal Power Supply

The light/horn is powered by one of the analog input's transmitter power supply. Analog input card is required.

A PDA1024-01 external power supply may be used if the ConsoliDator+ does not have an analog input card installed.

24 V Power

Purple (Horn)
Red (Light)
Blue (Light)
Yellow (Light)
Black (Minus Supply)
Gray (Flashing)

4-20 mA INPUTS

mA- mA+ 24V   mA- mA+ 24V   mA- mA+ 24V   mA- mA+ 24V
AI-1   AI-2   AI-3   AI-4

C NC NO   C NC NO   C NC NO   C NC NO   C NC NO
RY-1   RY-2   RY-3   RY-4   RY-5

PDA-LH3LC-RYG Using Internal Power Supply

PD6600 Loop Leader Series Connections
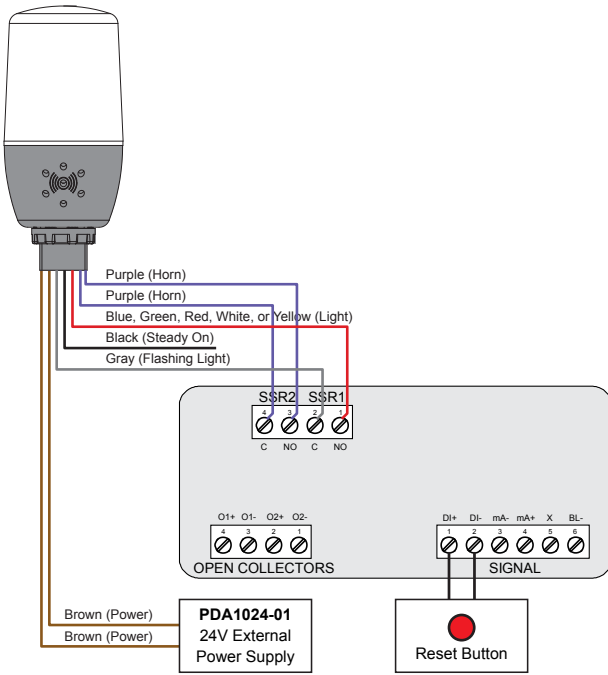
PDA-LH Using External Power Supply (PDA1024-01)

PDA-LH5C Using External Power Supply (PDA1024-01)

PD500 SuperNova Series Connections

PDA-LH Models with PD510 (1/16 DIN SuperNova) and Using External Power Supply (PDA1024-01)

PD4 Loop Leader+ Series Connections

PDA-LH Models Using External Power Supply (PDA1024-01)

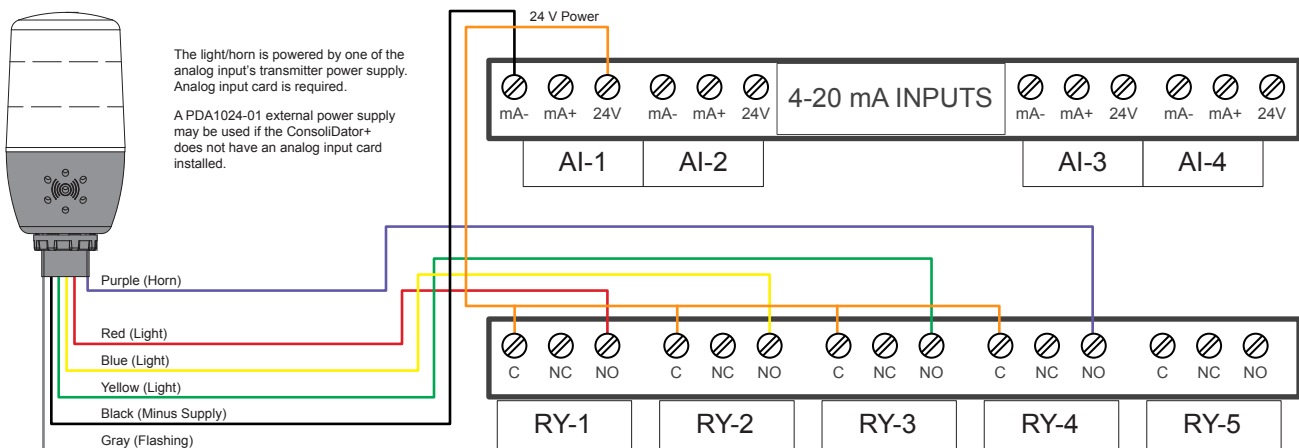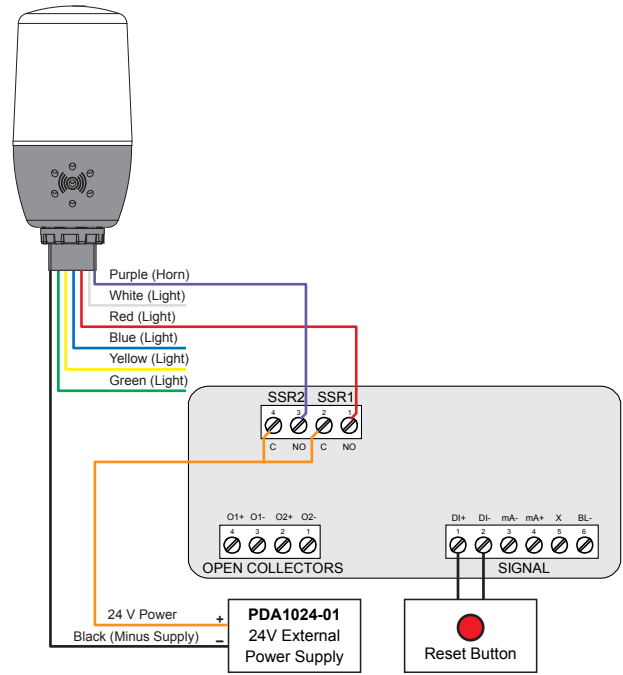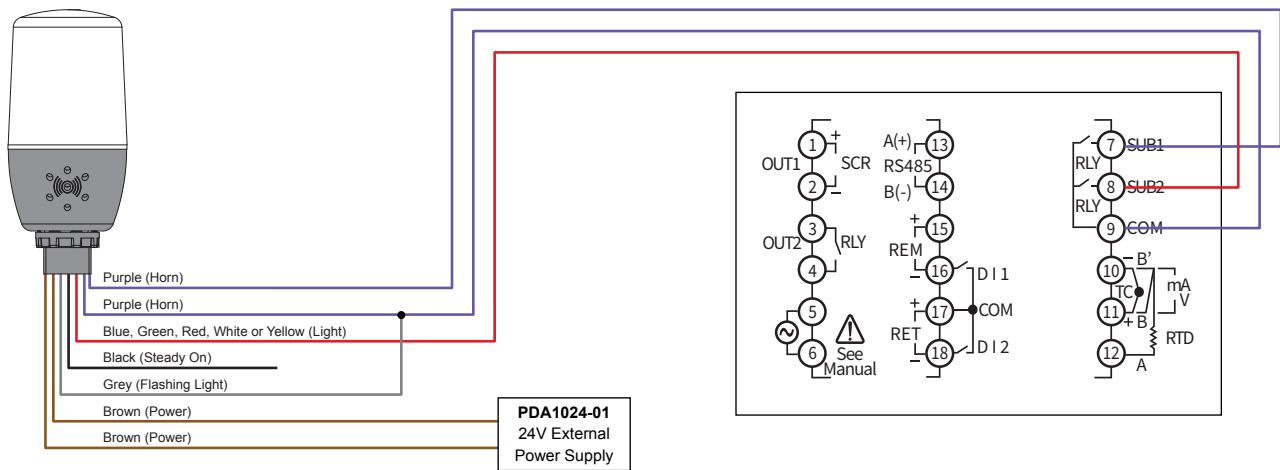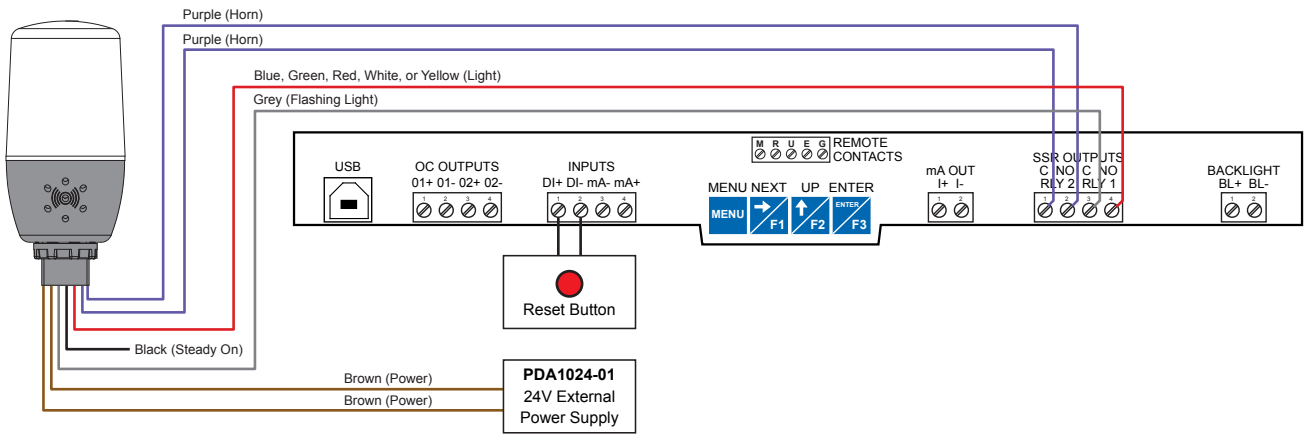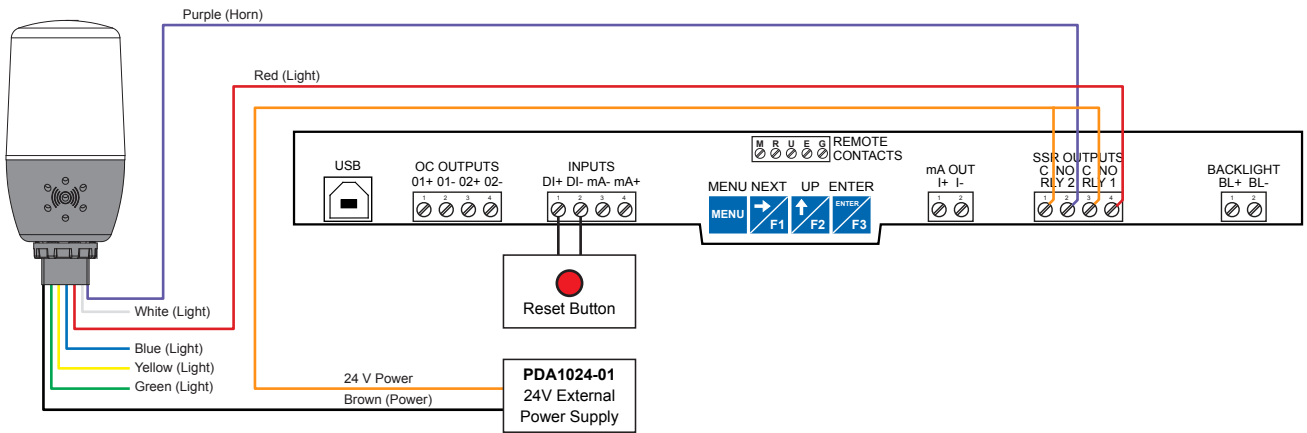
PDA-LH5C Models Using External Power Supply (PDA1024-01)

SPECIFICATIONS

General

Light/Horn Independence	Light and horn can be controlled independently via separate relays.
Rating	IP65
Connection	M22
Hole Size	0.875" (22 mm)
Cable Length	3.28 feet (1 meter)
Environmental	Operating Temperature Range: -5 to 40°C (23 to 104°F)
Overall Dimensions	2.2" x 4.8" X 2.2" (55 x 122 x 55 mm) (W x H x D)
Weight	8 oz (227 g)
Warranty	1 year parts and labor. See Warranty Information and Terms & Conditions on www.predig.com for complete details.

Light

Light Colors	PDA-LHR: Red; PDA-LHG: Green; PDA-LHY: Yellow; PDA-LHB: Blue; PDA-LHW: White; PDA-LH5C: User selectable: red, green, yellow, blue, white; PDA-LH3LC-RYG: Light stack with red, yellow, green lights (consult factory for other colors).
Light Action	Can be wired to flash or stay steady on (Flashing not available on PDA-LH5C)

Horn

Sound	85 dB

Power

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

PDA-LH and PDA-LH5C 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

PDA-LH3LC-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

External Power Supply	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.

METER COMPATIBILITY

Series	Models	PDA-LH	PDA-LH5C	PDA-LH3LC-RYG	Light/Horn Powered by Meter	Light/Horn Requires External Power	Reset Capabilities
PRoVu	PD6000, PD6001, PD6080, PD6081, PD6200, PD6210, PD6300, PD6310, PD6310-WM	•	•	•	•		•
	PD6060, PD6088, PD6089, PD6100, PD6262, PD6363, PD6400, PD7000	•	•	•		•	•
Helios	PD2-6000, PD2-6001, PD2-6060, PD2-6080, PD2-6081, PD2-6200, PD2-6210, PD2-6300, PD2-6310	•	•	•	•		•
	PD2-6100, PD2-6262, PD2-6363, PD2-6400, PD2-7000	•	•	•		•	•
Trident / PDS178	PD765-6R, PD765-7R, PDS178	•	•		•		
	PD765-6X, PD765-7X, PDS178X2	•	•		•		•
ConsoliDator+	PD9000	•	•	•	•		•
SuperNova	PD510, PD520, PD530	•				•	
Loop Leader	PD6602, PD6603, PD6604, PD6622, PD6624	•	•			•	•
Loop Leader+	PD4-6603, PD4-6604, PD4-6624	•	•			•	•

DIMENSIONS

Ø 2.2"
(55 mm)

2.6"
(65 mm)

4.8"
(122 mm)

0.8"
(20 mm)

M22 x 1.5
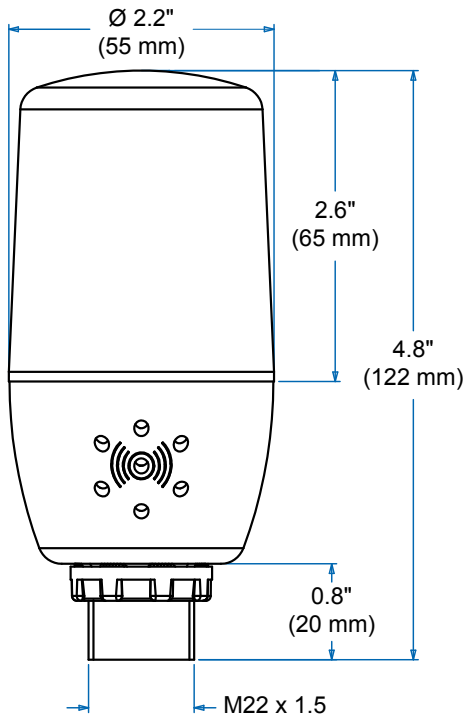
You may be interested in

MOD-LH

For panel meters. Includes light/horn, button, and holes drilled on enclosure. Meter and enclosure sold separately. User assembly required.

MOD-PD2LH

For PD2 & PD4 meters. Includes a light/horn, button, and holes drilled on enclosure. Meter and enclosure sold separately. User assembly required.

⚠ **WARNING**
Cancer and Reproductive Harm - **www.P65Warnings.ca.gov**

ORDERING INFORMATION

Light/Horns

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

Accessories

General Accessories	
Model	**Description**
PDA-BUTTON1R	Red Momentary Pushbutton
PDA-BUTTON1G	Green Momentary Pushbutton
PDA-BUTTON1B	Black Momentary Pushbutton
PDA1024-01	24 VDC Power Supply for DIN Rail

PDA2360 Series Control Stations	
Model	**Description**
PDA2361-A	Ack Button
PDA2361-R	Reset Button
PDA2361-Q	Silence Button

Your Local Distributor is:

Disclaimer

LIMLH_C   11/23

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PRECISION DIGITAL
www.predig.com