

MOD-LH Series

Light / Horn Accessory for PROVu Meters



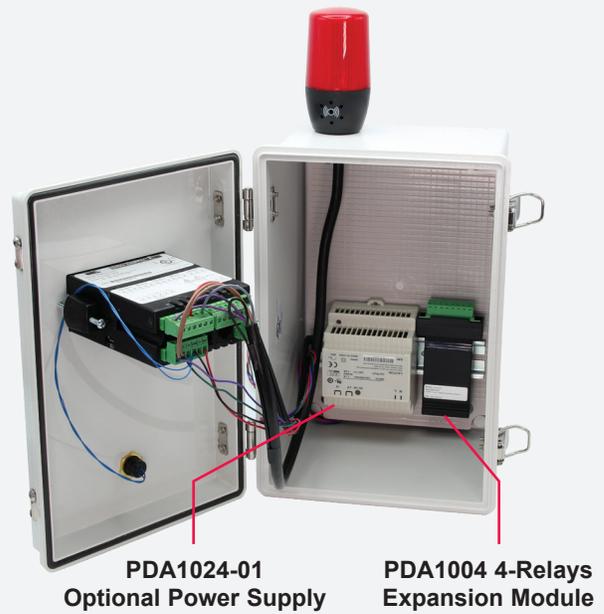
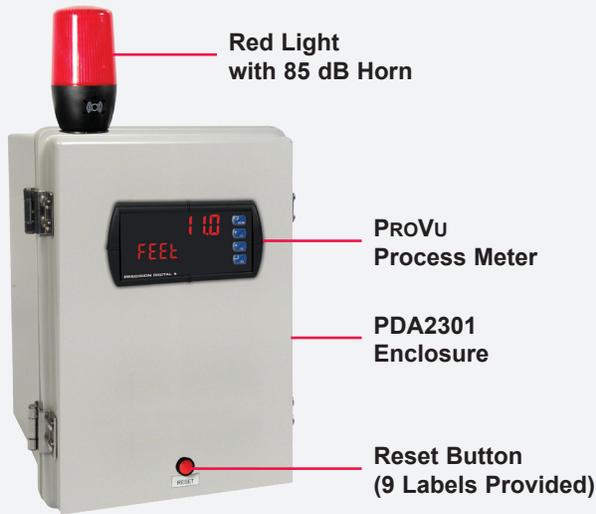
PROVu Meter Shown in a PDA2301 Enclosure with MOD-LHRB1 Red Light / Horn and Reset Button.
Meter & Enclosure Sold Separately. Assembly Required.

FEATURES

- Holes Drilled for Light / Horn and Reset Button in Enclosure
- Single Lights Available in Red, Green, Yellow, Blue, or White
- Units with One of Five User Selectable Lights Available
- Units with Three Layered Lights Available
- PROVu Meter Can be Equipped with up to 8 Relays to Drive Variety of Light & Horn Configurations
- 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 (Not Available on MOD-LH5CB1) or Stay Steady On
- IP 65 Rated
- 85 dB Horn
- Operates from -5 to 40°C (23 to 104°F)
- Control Station Accessory For Remote Operation of Light / Horn Button

MOD-LH Series Light / Horn Accessory for ProVu Meters

ProVu Meter Shown in a PDA2301 Enclosure with MOD-LHRB1 Red Light / Horn and Reset Button.
 Meter & Enclosure Sold Separately. Assembly Required.



OVERVIEW

Precision Digital offers a wide variety of NEMA 4 and NEMA 4X enclosures that can be equipped with MOD-LH Light / Horn and Reset Button. The MOD-LH Series is available in three different light configurations. The first option is a factory ordered Light / Horn with a color of either red, green, yellow, blue, or white. The second option is a Light / Horn the user determines the light color (red, green, yellow, blue or white) by connecting the appropriate wire. The third option is a Light / Horn with red, yellow, and green layers the user can turn on independently.

The MOD-LH can be powered from the ProVu's 200 mA transmitter power supply with enough power left over to drive most transmitters.

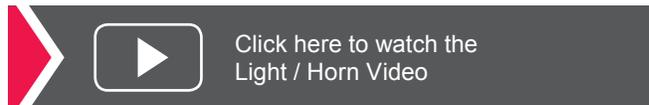
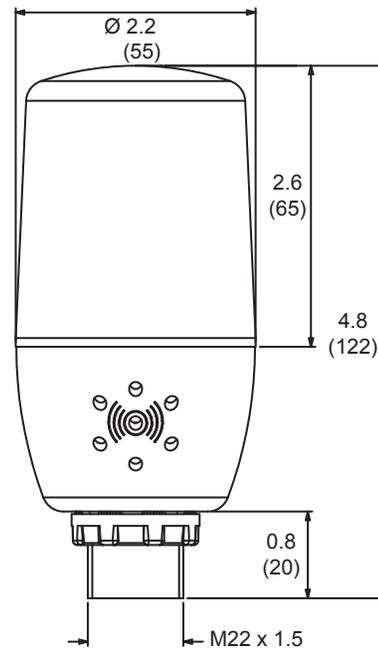
The light(s) and horn can be controlled independently of each other by up to eight separate relays on the ProVu meter. These relays can be programmed for automatic or manual reset action to satisfy a wide variety of audible and visual alarm applications. The light can be programmed to flash (not available on MOD-LH5CB1) or stay steady-on.

When MOD-LH is ordered, the accompanying enclosure on the order comes with the holes pre-drilled for the Light / Horn and the Reset Button and the user performs the mounting and wiring. Meter and enclosure are sold separately. The Light / Horn and the Reset Button can also be ordered as separate items and the user performs all hole-drilling, mounting and wiring as desired.

Note: The Light / Horn accessory is powered from the 200 mA transmitter power supply; so when it is installed, there is less power available for the transmitter. See MOD-LH Light / Horn, Transmitter Power Supply specification on page 7 for details.

DIMENSIONS

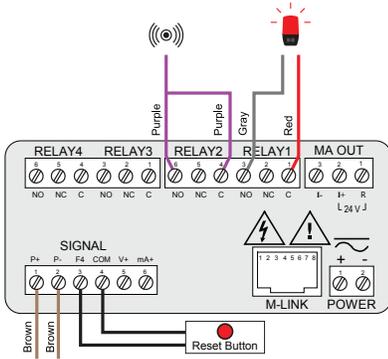
Units: Inches (mm)



MOD-LH Series Light / Horn Accessory for ProVu Meters

APPLICATIONS

There are a wide variety of ways these Light / Horn devices can be controlled by the ProVu's two, four or eight relays to satisfy visual and audible alarm applications. Please feel free to contact tech support to discuss your particular application. The following examples illustrate some typical applications.



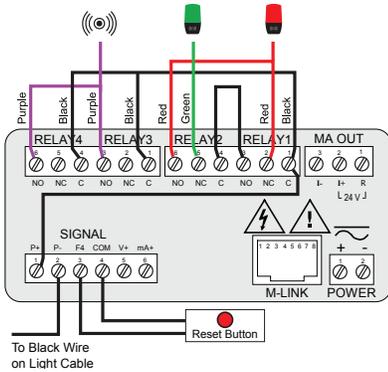
MOD-LH Models

The MOD-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 MOD-LH is to program the ProVu so the horn can be silenced at any time via the Reset Button or F3 front panel button on the ProVu, and light to reset automatically when the alarm clears:

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



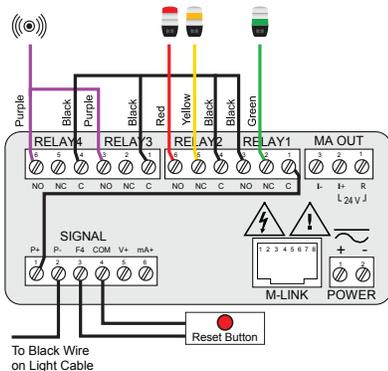
1. Light can be wired to flash or stay steady on.



MOD-LH5CB1

The MOD-LH5CB1 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 ProVu's relays. A typical application for the MOD-LH5CB1 might involve lighting up the red light to indicate high and low alarms and the green light to indicate everything is OK using the ProVu'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



MOD-LH3LCB1-RYG

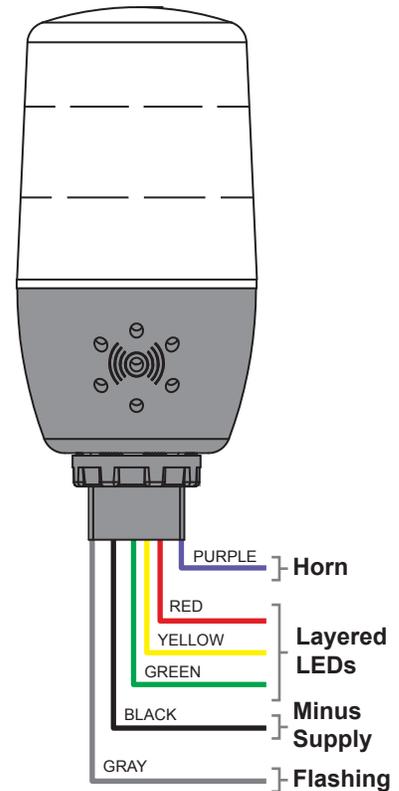
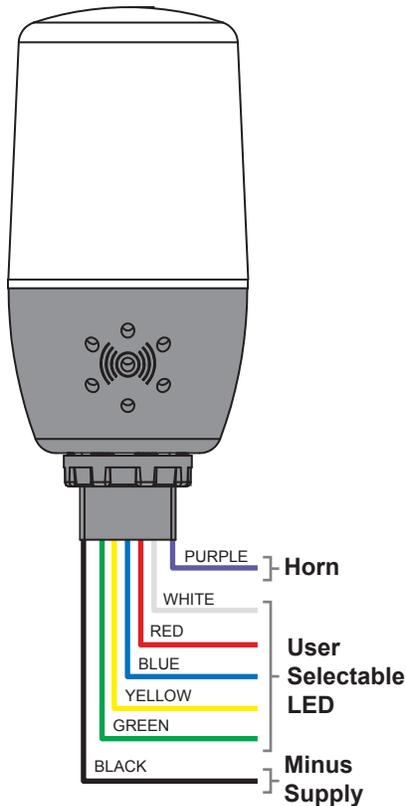
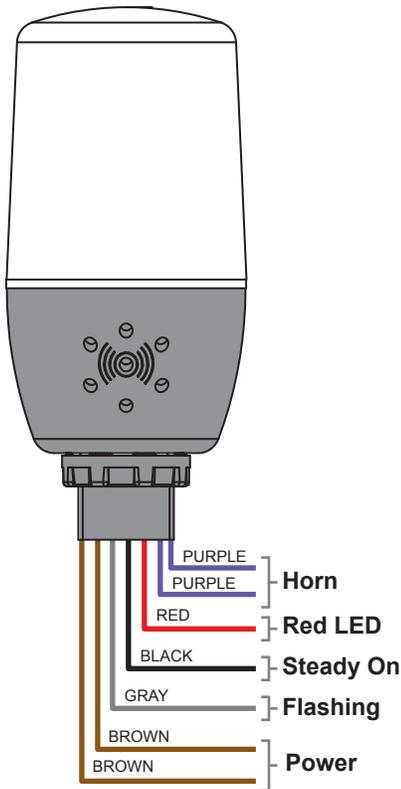
The MOD-LH3LCB1-RYG can light up red, yellow or green bands as determined by which wires are connected to power through the ProVu's relays. A typical application for the MOD-LH3LCB1-RYG (and the default factory setting) might involve lighting up the green light to indicate everything is OK, the yellow 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 with the front panel reset 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



MOD-LH Series Light / Horn Accessory for ProVu Meters

CONNECTIONS



MOD-LH Models

Connections shown for a red light model. For other MOD-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.

MOD-LH5CB1

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-LH3LCB1-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.

CONTROL STATIONS FOR REMOTE OPERATION OF LIGHT / HORN

The PDA2360 series of plastic control stations provide a convenient way to remotely control the Light / Horn. The control stations can mimic the button on the front of the Helios for remote control of the Light / Horn. The PDA2361-R is used to reset an alarm, the PDA2361-A is used to acknowledge an alarm, and the PDA2361-Q is used to silence an alarm.

- Complete Pre-Assembled Stations
- Normally Open (NO) Spring Return Plastic Bezel Pushbuttons
- IP65 / NEMA 4, 4X and 13 Rated
- Control Station for Remote Operation of Light / Horn Reset Button
- Wall Mountable



PDA2361-R



PDA2361-A



PDA2361-Q

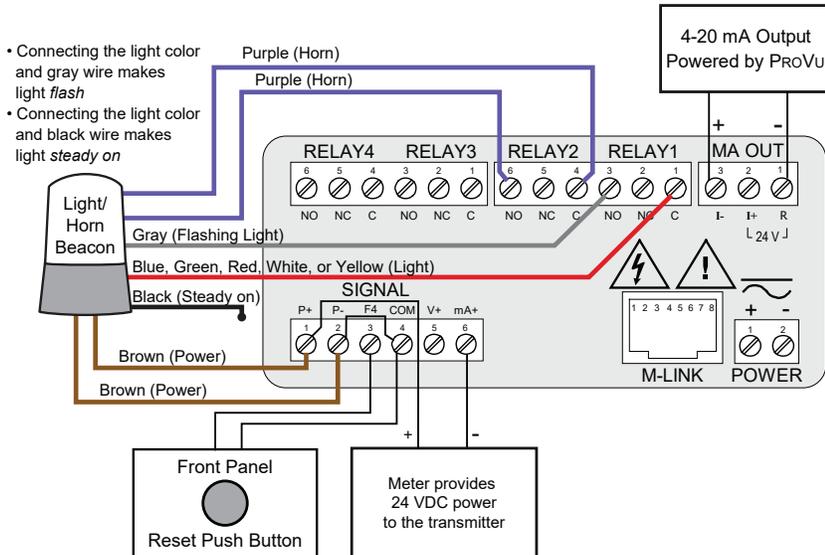
Ordering Information

PDA2360 Series Control Stations	
Model	Description
PDA2361-R	1 Black Reset Button
PDA2361-A	1 Black Ack Button
PDA2361-Q	1 Black Silence Button

MOD-LH Series Light / Horn Accessory for ProVu Meters

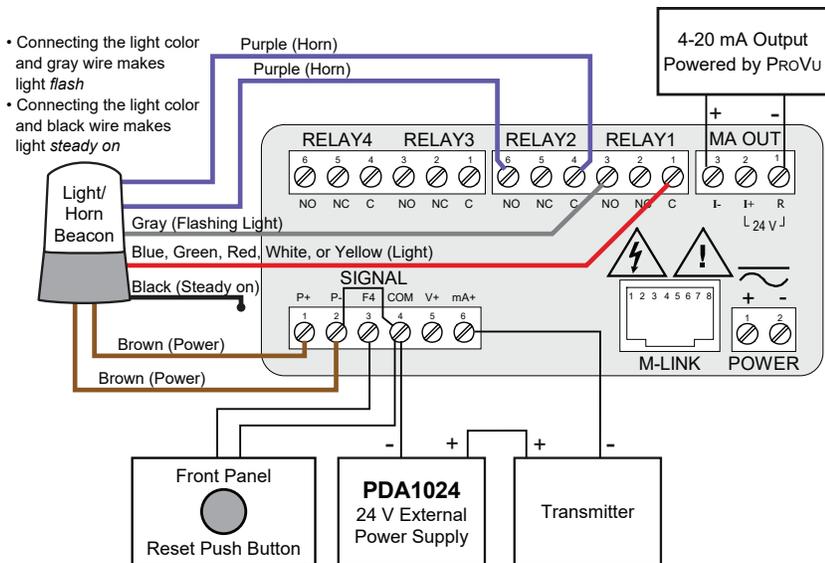
WIRING CONNECTIONS FOR MOD-LH MODELS

Using ProVu's Internal Power Supply



- Form C (SPDT) relays
- Two isolated supplies available even on 12/24 VDC input power models
- Removable terminal blocks
- 2 or 4 relays + isolated 4-20 mA output option
- Universal 85-265 VAC or 12/24 VDC input power
- Voltage or current inputs
- No jumpers needed for V/mA input selection
- M-Link for adding expansion modules
- Digital input (F4)

Using External Power Supply (PDA1024-01)



- Form C (SPDT) relays
- Two isolated supplies available even on 12/24 VDC input power models
- Removable terminal blocks
- 2 or 4 relays + isolated 4-20 mA output option
- Universal 85-265 VAC or 12/24 VDC input power
- Voltage or current inputs
- No jumpers needed for V/mA input selection
- M-Link for adding expansion modules
- Digital input (F4)

MOD-LH HOLE LOCATIONS

When MOD-LH is ordered with an enclosure, the enclosure comes pre-drilled with holes for Light / Horn and Reset Button.

Light / Horn

The Light / Horn hole is on the top, back left corner of the enclosure.



Reset Button

The Reset Button is centered on the cover of the enclosure below the meter about an inch off the bottom of the cover except on the PDA3400 series where it is mounted on the side of the enclosure.



MOD-LH Series Light / Horn Accessory for ProVu Meters

AVAILABLE FOR THESE ENCLOSURES



PDA2300 Economical Plastic NEMA 4X Enclosures

The PDA-LH Series is available on all PDA2300 Series Enclosures.



PDA2500 Rugged Plastic NEMA 4X Enclosures

The PDA-LH Series is available on all PDA2500 Series Enclosures.



PDA2600 Stainless Steel NEMA 4X Enclosures

The PDA-LH Series is available on all PDA2600 Series Enclosures.



PDA2700 Steel NEMA 4 Enclosures

The PDA-LH Series is available on all PDA2700 Series Enclosures.



PDA2800 Smallest Footprint Plastic NEMA 4X Enclosures

The PDA-LH Series is available on all PDA2800 Series Enclosures except PDA2801 and PDA2812.



PDA3400 Internally Mounted Plastic NEMA 4X Enclosures

The PDA-LH Series is available on all PDA3400 Series Enclosures except the PDA3411, PDA3412, PDA3414.

Enclosures shown with a ProVu Meter and MOD-LHRB1 Red Light / Horn and Reset Button.
Meter, Enclosure, and MOD-LHRB1 are Sold Separately. Assembly Required.



RESET BUTTON LABELS

The Light / Horn accessory comes with 9 pre-printed message labels the user can affix under the red button: RESET, BATCH, ACK, TARE, SILENCE, STOP, START, PAUSE, START/STOP

MOD-LH Series Light / Horn Accessory for ProVu Meters

SPECIFICATIONS

Recommended for these ProVu Models: PD6000, PD6001, PD6100, PD6200, PD6300.

Light Colors: MOD-LH Models: Red, green, yellow, blue or white. MOD-LH5CB1: User selectable: red, green, yellow, blue, or white. MOD-LH3LCB1-RYG: 1 layer each of red, yellow, green (consult factory for other colors)

Light Action: Can be wired to flash (not available on MOD-LH5CB1) or stay steady on

Light / Horn & Reset Button Installation: When MOD-LH is ordered with an enclosure, the user performs installation and wiring of Light / Horn and Reset Button in pre-drilled holes.

Horn: 85 dB

Rating: IP 65

Light / Horn Independence: Light and horn can be controlled via separate relays

Power Requirement: No additional power required when wired to a ProVu meter. When mounted remote: 24 VDC

Transmitter Power Supply: The ProVu's internal transmitter power supply is capable of supplying 200 mA to power the transmitter and other devices such as the Light / Horn. The following table illustrates how much of this power is required to drive various Light / Horns. If more power is needed, then consider the PDA1024-01.

MOD-LH and MOD-LH5CB1 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-LH3LCB1-RYG:

Power Requirement for the horn and each color that is turned on:

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

Reset / Silence Button: NEMA 4X; may be wired to F4 terminal on ProVu. F3 front panel button can also be used to reset relays.

Reset Button Labels: The Light / Horn accessory comes with 9 pre-printed message labels the user can affix under the red button: RESET, BATCH, ACK, TARE, SILENCE, STOP, START, PAUSE, START/STOP

Light / Horn Mounting Connection: M22

Hole Sizes: Light / Horn: 0.875" (22 mm);

Reset Button: 0.630" (16 mm)

Cable Length: 3.28 feet (1 meter)

Operating Temperature Range: -5 to 40°C (23 to 104°F)

⚠ WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov

ORDERING EXAMPLE

Order meter, enclosure, and MOD-LH as separate items:

Item	Description
1	ProVu Meter with 2 or 4 Relays
2	NEMA 4 or NEMA 4X Enclosure that Accepts MOD-LH
3	MOD-LH Light / Horn and Reset Button with Holes Drilled in Enclosure

User performs the installation and wiring.

ORDERING INFORMATION

Model	Description
MOD-LHRB1	Red Light / Horn and Reset Button with Holes Drilled in Enclosure ⁽¹⁾
MOD-LHGB1	Green Light / Horn and Reset Button with Holes Drilled in Enclosure ⁽¹⁾
MOD-LHYB1	Yellow Light / Horn and Reset Button with Holes Drilled in Enclosure ⁽¹⁾
MOD-LHBB1	Blue Light / Horn and Reset Button with Holes Drilled in Enclosure ⁽¹⁾
MOD-LHWB1	White Light / Horn and Reset Button with Holes Drilled in Enclosure ⁽¹⁾
MOD-LH5CB1	Light / Horn with User Choice of Red, Green, Yellow, Blue or White Light, Reset Button, and Holes Drilled in Enclosure ⁽¹⁾
MOD-LH3LCB1-RYG	Light / Horn with Red, Yellow, Green Light Layers, Reset Button, and Holes Drilled in Enclosure ⁽¹⁾
PDA-BUTTON1R	Reset Button
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 / Horn with Red, Yellow, Green Light Layers
PDA1024-01	24 VDC Power Supply for DIN Rail

Notes

- This MOD supplies the Light / Horn and Reset Button. The enclosure comes pre-drilled with holes for Light / Horn and Reset Button and the user performs the installation and wiring. Meter and enclosure are sold separately. The Light / Horn hole is in the back left corner of the enclosure and the Reset Button is centered on the cover of the enclosure below the meter about an inch off the bottom of the cover except on the PDA3400 series where it is mounted on the side of the enclosure.
- Specify PDA-LH model to order the Light / Horn to be mounted by the user in user-drilled hole.
- Specify PDA-BUTTON1R to order Reset Button to be mounted by the user in user-drilled hole.

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