

## P547UL & P627UL Installation Guide

Rev 1.0

### Desktop and Ceiling Mount

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#### Product Description

<b>Type:</b>	3 panel LCD Projector 0.64" p-Si TFT w/MLA	<b>Dimensions:</b> 18.9" (W) x 5.6" (H) x 16.0" (D)
<b>Resolution:</b>	1920 x 1200	<b>Weight:</b> 20.7 lbs
<b>Fan Noise:</b>	P547UL: 26dB / 22dB @ 1 meter P627UL: 27dB / 22dB @ 1 meter	<b>Brightness:</b> P547UL: 5400 Lumens P627UL: 6200 Lumens
<b>Power Consumption:</b>	P547UL : 303W (max) P627UL : 328W (max)	<b>BTU's:</b> P547UL: 1034 BTU/hour P627UL: 1119 BTU/hour

#### Lens Specifications

<b>Throw Ratio:</b>	1.23 – 2.0:1 (for 100" diagonal)	<b>Focal Length:</b> 17.2mm – 27.7mm
<b>Offset Angle:</b>	10.7° - 17.1° (for 100" diagonal)	<b>F/#:</b> 1.5 - 2.1
<b>Screen Sizes:</b>	30" - 300" diagonal (16:10)	<b>Manual Focus / Manual Zoom / Manual Shift</b>

#### Screen/Aspect Ratio

4:3, 16:9 and 16:10 screens are fully supported with proper aspect ratio control for both type sources using NEC developed scaling technology. Menu selections have settings for each screen type and aspect ratio control for each source type.

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#### Formulas for P547UL/P627UL

The Projection Formulas use the image width for calculation. Image width is the same for all aspect ratios, only vertical image size varies. For proper projection placement, determine the image width for the desired screen size. Use the Screen Formulas below to calculate all screen dimensions. Plug in the width for "W" in the Projection Formulas. Refer to the diagrams and charts for popular screen sizes on page 3:

#### Projection Formulas:

$$C \text{ (wide)} = 1.237W - 1.394$$

$$C \text{ (tele)} = 1.999W - 1.326$$

$$\text{Vertical Lens Shift: Max} = 0.6H$$

$$\text{Horizontal Lens Shift: Max} = 0.29W, \text{ Min} = -0.29W$$

#### Definitions:

W = Image Width

H = Image Height (size)

C = Throw distance

#### 16:10 Screen Formulas

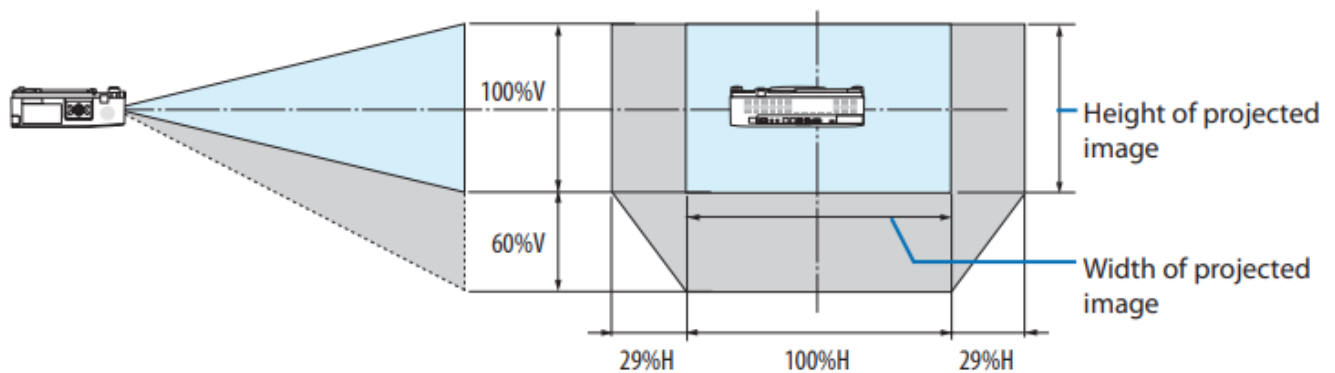
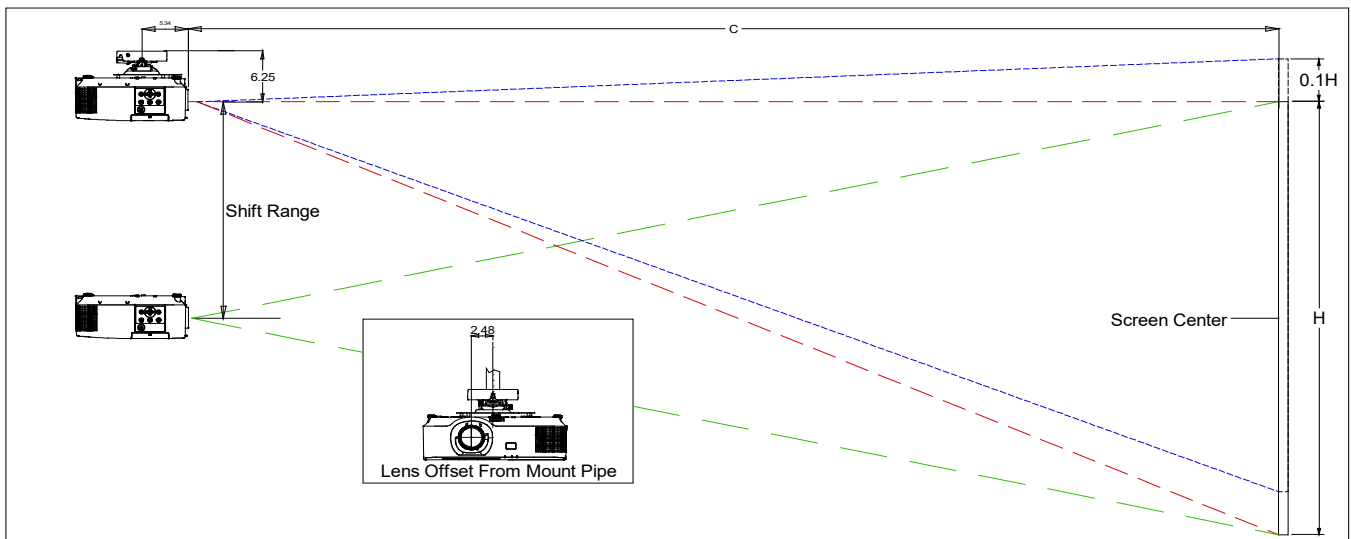
$$W = H \times 16/10$$

$$H = W \times 10/16$$

$$\text{Diagonal} = W \times 18.868/16$$

#### Diagrams and Distance Charts for P547UL/P627UL

The following shows the proper relative positions of the projector and screen. Refer to the table to determine the position of installation.

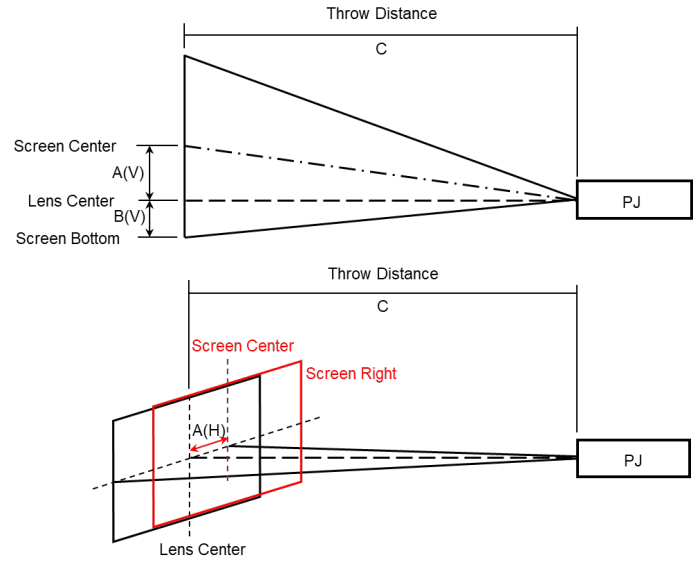


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Screen Size (16:10)			C wide - tele inches	Vertical Lens Shift inches	Horizontal Lens Shift inches
Diagonal	Width(W)	Height (H)			
inches	inches	inches	inches	inches	inches
30	25	16	30 - 50	0.0 - 9.5	-7.4 - 7.4
60	51	32	62 - 100	0.0 - 19.1	-14.8 - 14.8
80	68	42	83 - 134	0.0 - 25.4	-19.7 - 19.7
90	76	48	93 - 151	0.0 - 28.6	-22.1 - 22.1
100	85	53	104 - 168	0.0 - 31.8	-24.6 - 24.6
110	93	58	114 - 185	0.0 - 35.0	-27.1 - 27.1
120	102	64	125 - 202	0.0 - 38.2	-29.5 - 29.5
130	110	69	135 - 219	0.0 - 41.3	-32.0 - 32.0
150	127	79	156 - 253	0.0 - 47.7	-36.9 - 36.9
200	170	106	209 - 338	0.0 - 63.6	-49.2 - 49.2
300	254	159	314 - 507	0.0 - 95.4	-73.8 - 73.8



### Notes

- For screen sizes not indicated on the projection tables, use the formulas on page 2.  
If the figures in the table do not match the results of formulas, use the figures in the table.
- Distances are in inches, for millimeters multiply by 25.4.
- Distances may vary  $\pm 5\%$ .

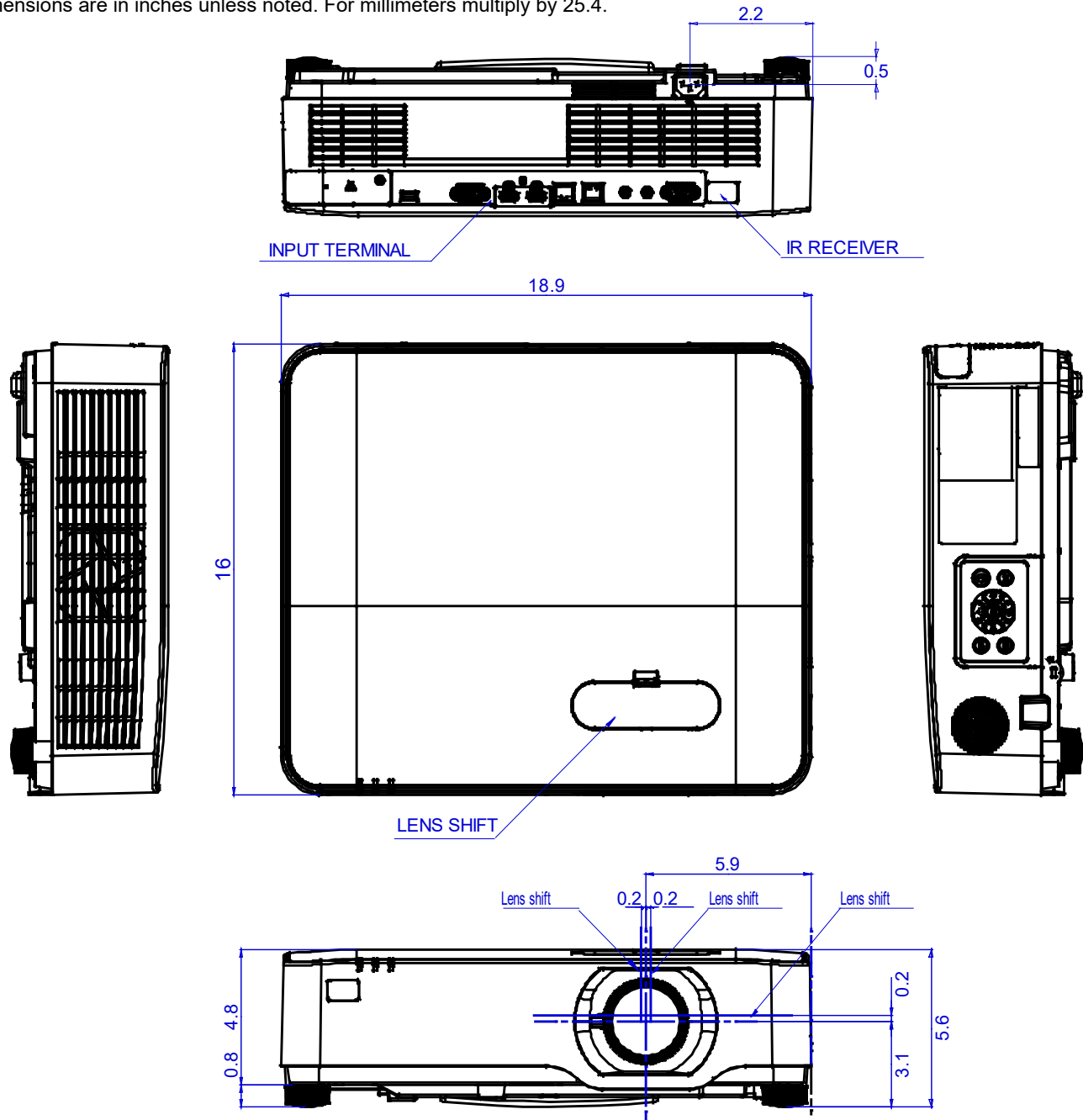
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### Cabinet Dimensions (P547UL/P627UL)

The following drawings show the cabinet dimensions.  
Dimensions are in inches unless noted. For millimeters multiply by 25.4.



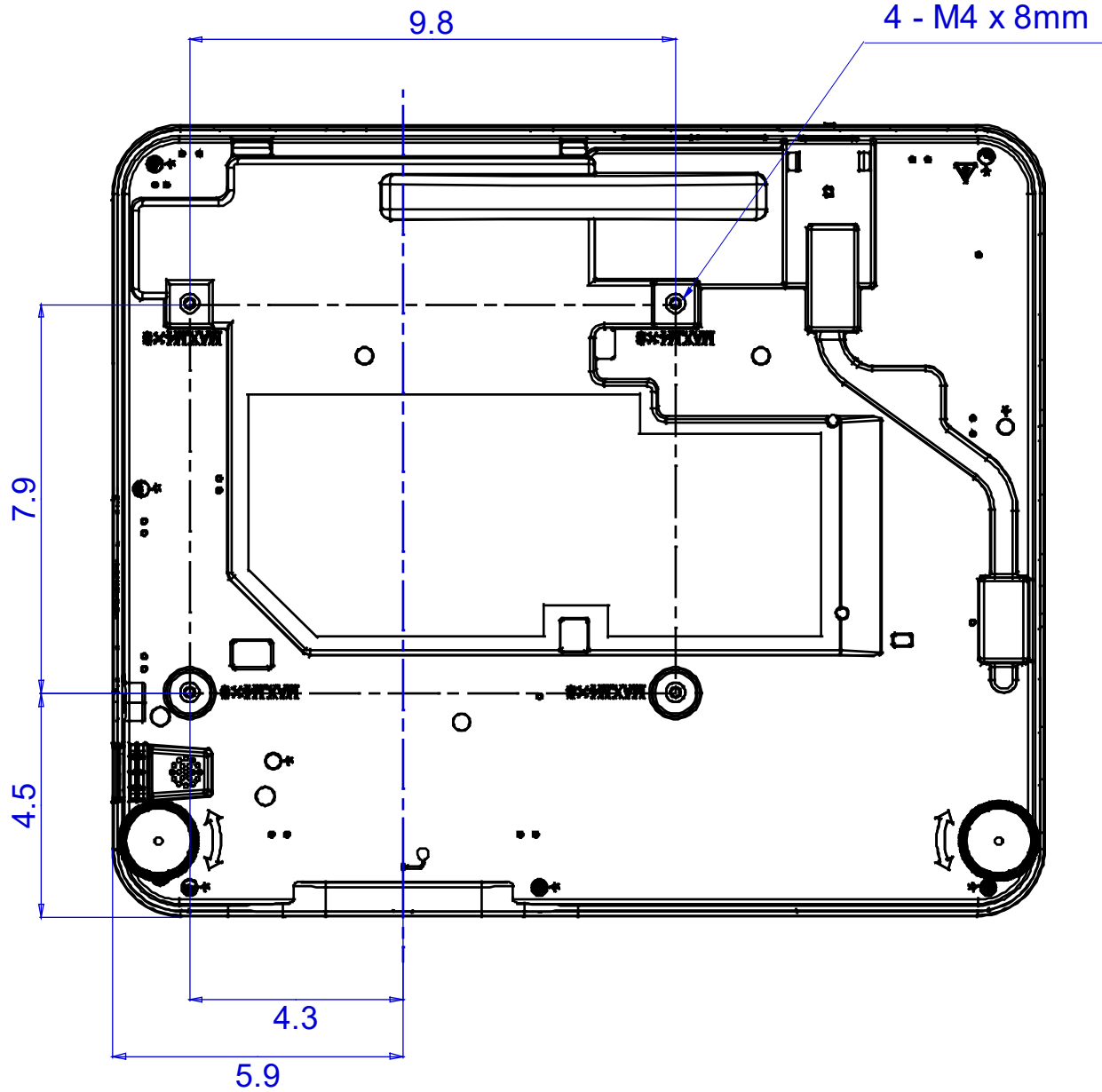
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### Cabinet Dimensions (continued)

The following drawing shows the mounting hole locations with mount pattern dimensions.



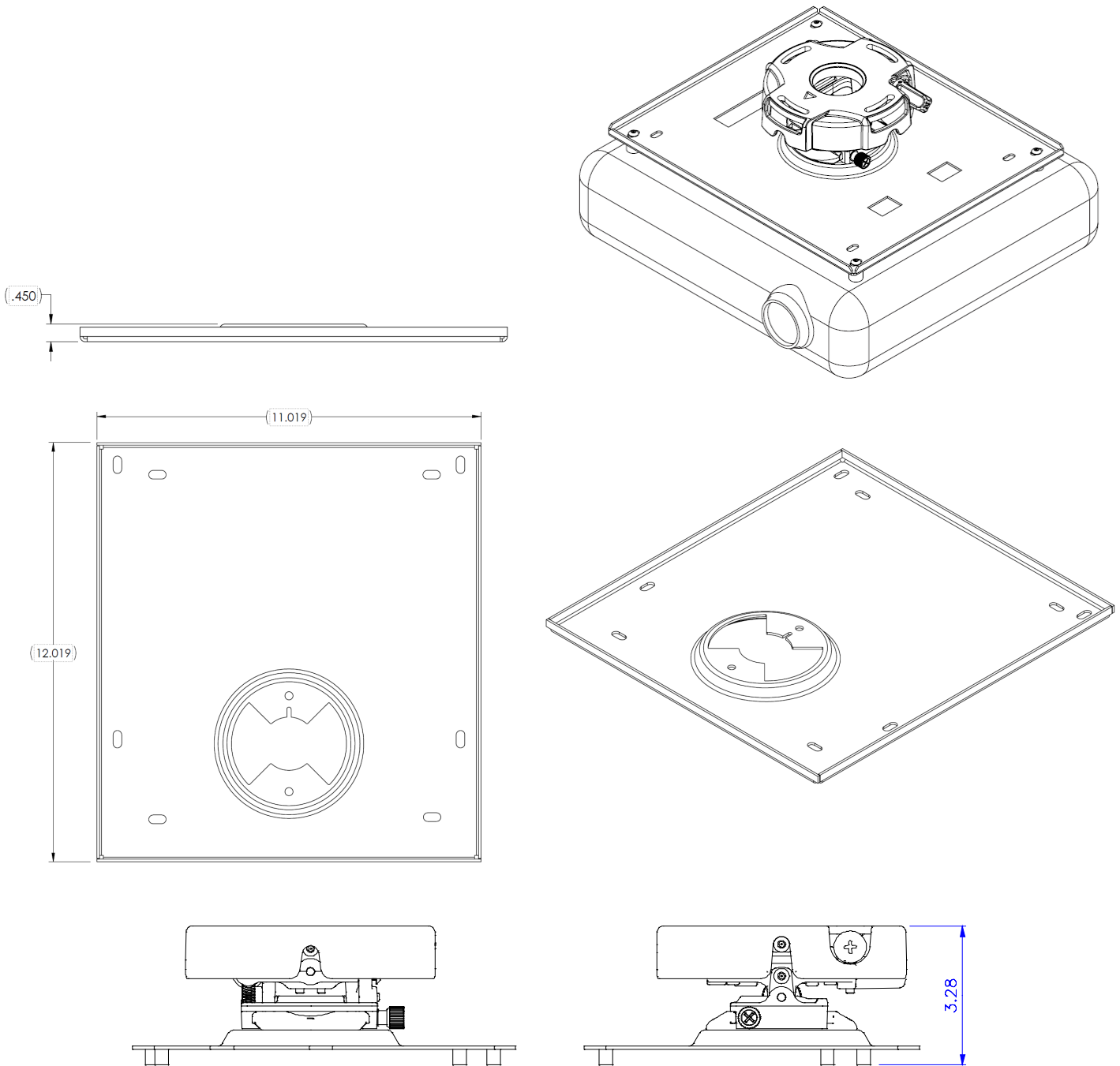
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### Optional Ceiling Mount Dimensions (Model #: PA600CM)

The following drawings show the ceiling mount dimensions. Dimensions are in inches. For millimeters multiply by 25.4.

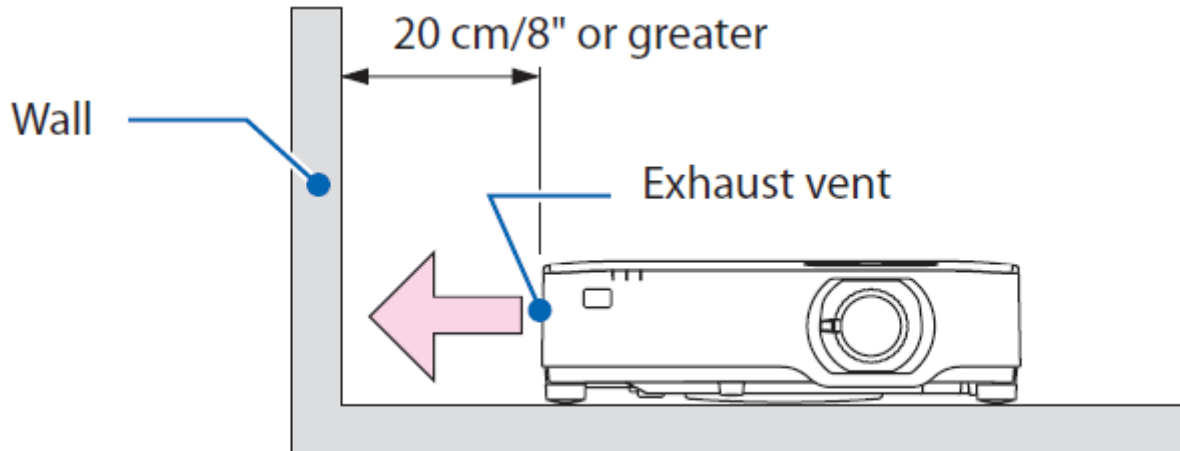


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### Ventilation Requirements



### Input Panel



### Control Panel



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### PC Control Codes

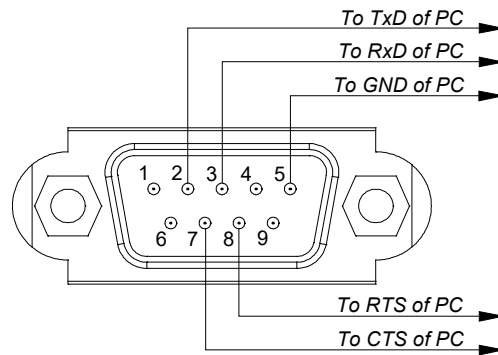
Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT Computer	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT HDMI1	02H 03H 00H 00H 02H 01H A1H A9H
INPUT SELECT HDMI2	02H 03H 00H 00H 02H 01H A2H AAH
INPUT SELECT HDBaseT	02H 03H 00H 00H 02H 01H BFH C7H
INPUT SELECT USB-A	02H 03H 00H 00H 02H 01H 1FH 27H
INPUT SELECT LAN	02H 03H 00H 00H 02H 01H 20H 28H
PICTURE MUTE ON	02H 10H 00H 00H 00H 12H
PICTURE MUTE OFF	02H 11H 00H 00H 00H 13H
SOUND MUTE ON	02H 12H 00H 00H 00H 14H
SOUND MUTE OFF	02H 13H 00H 00H 00H 15H

### Cable Connection

#### Communication Protocol:

- Baud Rate: 38400 bps (for cable lengths longer than 20', it is recommended changing to 9600 bps in setup menu)
- Data Length: 8 bits
- Parity: No Parity
- Stop Bit: One bit
- X on/off: None
- Communications: Full duplex

#### PC Control Connector (D-Sub 9P)



**NOTE 1:** Pins 1, 4, 6, and 9 are not used inside the projector.

**NOTE 2:** For long cable runs it is recommended to set communication speed within the projector to 9600 bps.

**NOTE 3:** Jumper "Request to Send" and "Clear to Send" together on both ends of the cable to simplify cable connection.