

NP41/61/62 Installation Guide

Ceiling Mounted and Desktop

Rev 1.1

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Product Description

| | | | |
|--------------------|--|-------------|---|
| Type: | .55 DDR DMD™ projector | Dimensions: | 9.7”(W) x 3.9”(H) x 7.1”(D) |
| | | Weight: | NP41/NP61: 3.5 lbs NP62: 3.7 lbs |
| Resolution: | 1024 x 768 | Brightness: | NP41: 2300 Lumens NP61: 3000 Lumens NP62: 3000 Lumens |
| Fan Noise: | 37 dB / 32 dB @ 1 meter | BTU's: | NP41: 900 BTU/hour NP61: 970 BTU/hour NP62: 1020 BTU/hour |
| Power Consumption: | NP41: 265W (max) NP61: 285W (max) NP62: 300W (max) | | |

Lens Specifications

| | | | |
|---------------|-----------------------------------|---------------|---------------------------------------|
| Throw Ratio: | 1.8 – 2.2 (for 100” diagonal) | Focal Length: | 20.4 –24.5mm |
| Offset Angle: | 12.3° - 14.8° (for 100” diagonal) | F/#: | 2.2 – 2.34 |
| Screen Sizes: | 30” - 300” diagonal (4:3) | | Manual Zoom/Power Focus (w/autofocus) |

Notes

- For screen sizes not indicated on the projection tables, use the formulas below. If the figures on the tables do not match the results of formulas, use the figures in the table.
- All calculations are based on a 4:3 aspect ratio.
- Distances are in inches, for millimeters multiply by 25.4.
- Distances may vary ±5%.

Formulas

The Projection Formulas use the image width for calculation. 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 2:

Definitions:

W = Image Width
H = Image Height (size)
B = Vertical distance between lens center and screen center
C = Throw distance
D = Vertical distance between lens center and screen top
(screen bottom for desktop application)

4:3 Screen Formulas:

W = H x 4/3
H = W x 3/4
Screen Diagonal = W x 5/4

Projection Formulas:

B = 0.481W
C (wide) = 1.830W – 0.600
C (tele) = 2.203W – 0.800
D = 0.115W
 α (wide) = \tan^{-1} (B/C(wide))
 α (tele) = \tan^{-1} (B/C(tele))

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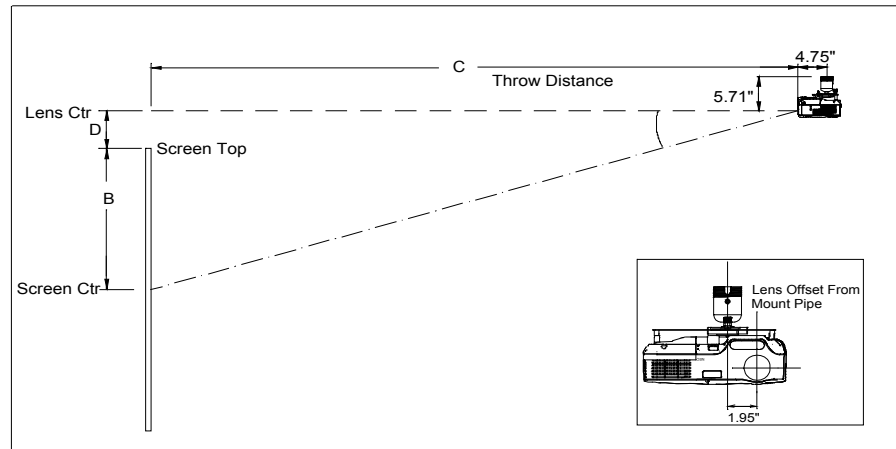
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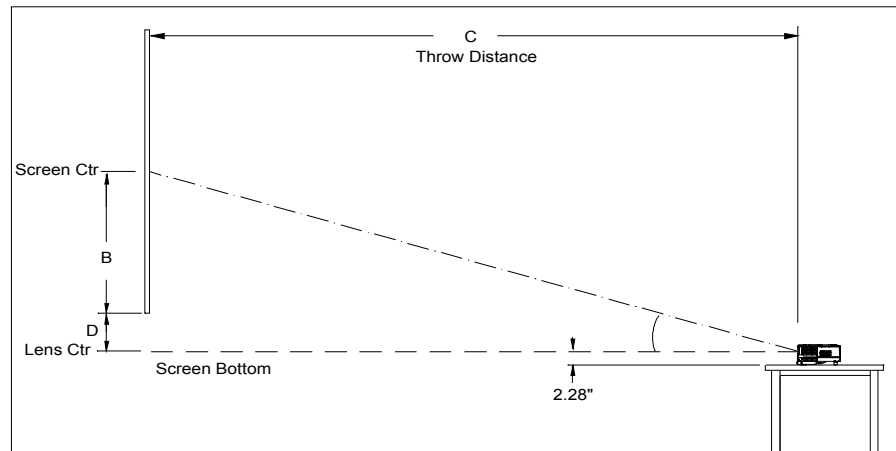
Diagrams and Distance Charts

The following diagrams show the relationship between projector position and the screen. Refer to the chart below for data. Distances are in inches. For millimeters multiply by 25.4.

Ceiling Mounted



Desktop



Distance Chart for popular 4:3 screens

| Screen Size | | | B inch | C | | D inch | α | |
|------------------|---------------|----------------|-----------|--------------|--------------|-----------|----------------|----------------|
| Diagonal inch | Width inch | Height inch | | wide inch | tele inch | | wide degree | tele degree |
| 33 | 26 | 20 | 13 | - | 57 | 3 | - | 12.6 |
| 60 | 48 | 36 | 23 | 87 | 104 | 5 | 14.9 | 12.4 |
| 72 | 58 | 43 | 28 | 104 | 126 | 6 | 14.9 | 12.4 |
| 84 | 67 | 50 | 32 | 122 | 147 | 7 | 14.8 | 12.4 |
| 90 | 72 | 54 | 35 | 131 | 157 | 8 | 14.8 | 12.4 |
| 100 | 80 | 60 | 38 | 145 | 175 | 8 | 14.8 | 12.3 |
| 120 | 96 | 72 | 46 | 174 | 210 | 10 | 14.8 | 12.3 |
| 150 | 120 | 90 | 58 | 219 | 263 | 13 | 14.7 | 12.3 |
| 180 | 144 | 108 | 69 | 263 | 317 | 15 | 14.7 | 12.3 |
| 200 | 160 | 120 | 77 | 292 | 352 | 17 | 14.7 | 12.3 |
| 260 | 208 | 156 | 100 | 380 | 458 | 22 | 14.7 | 12.3 |
| 300 | 240 | 180 | 115 | 439 | 529 | 25 | 14.7 | 12.3 |

Note: For screen sizes not indicated on the projection table, use the formulas on page 1.

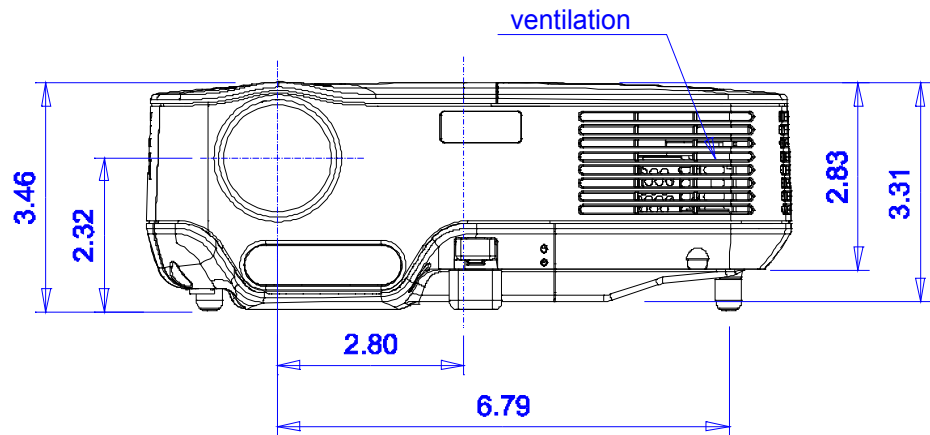
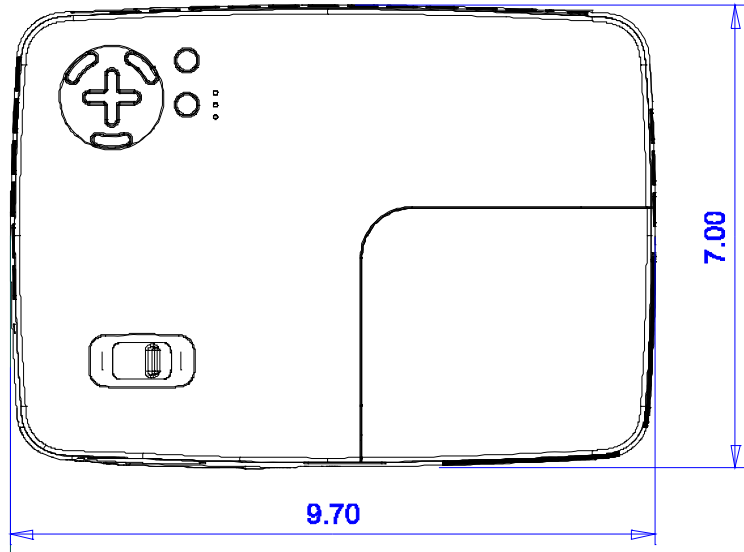
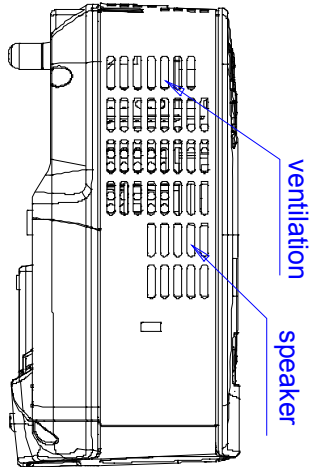
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Cabinet Dimensions

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



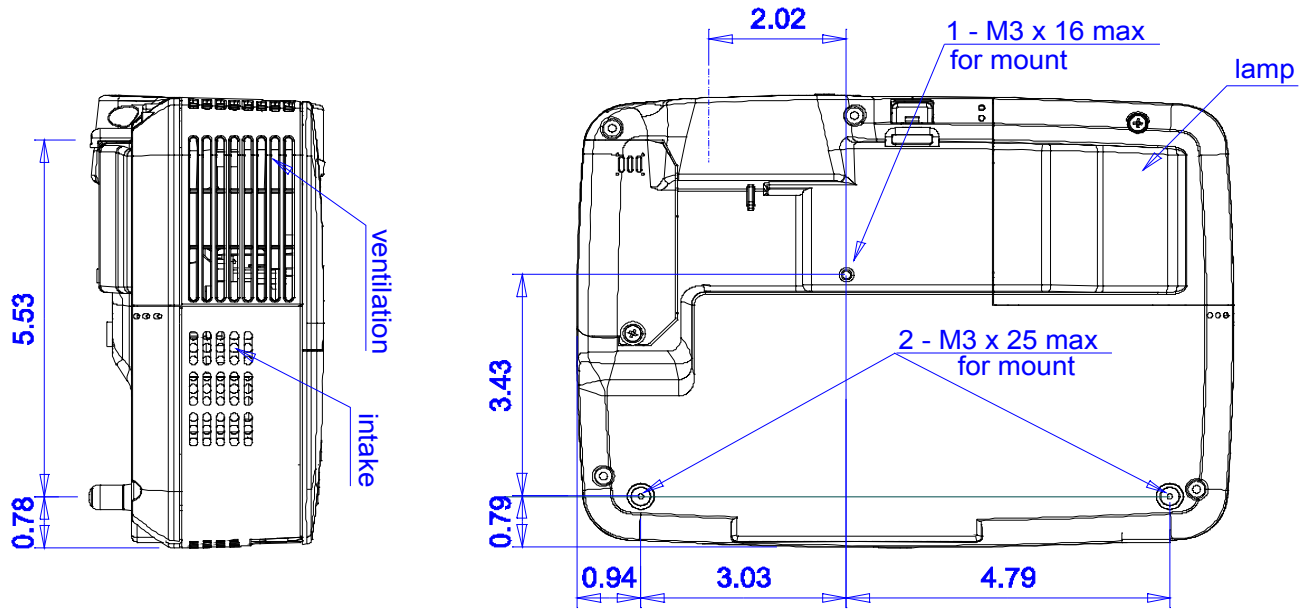
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Cabinet Dimensions (continued)

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



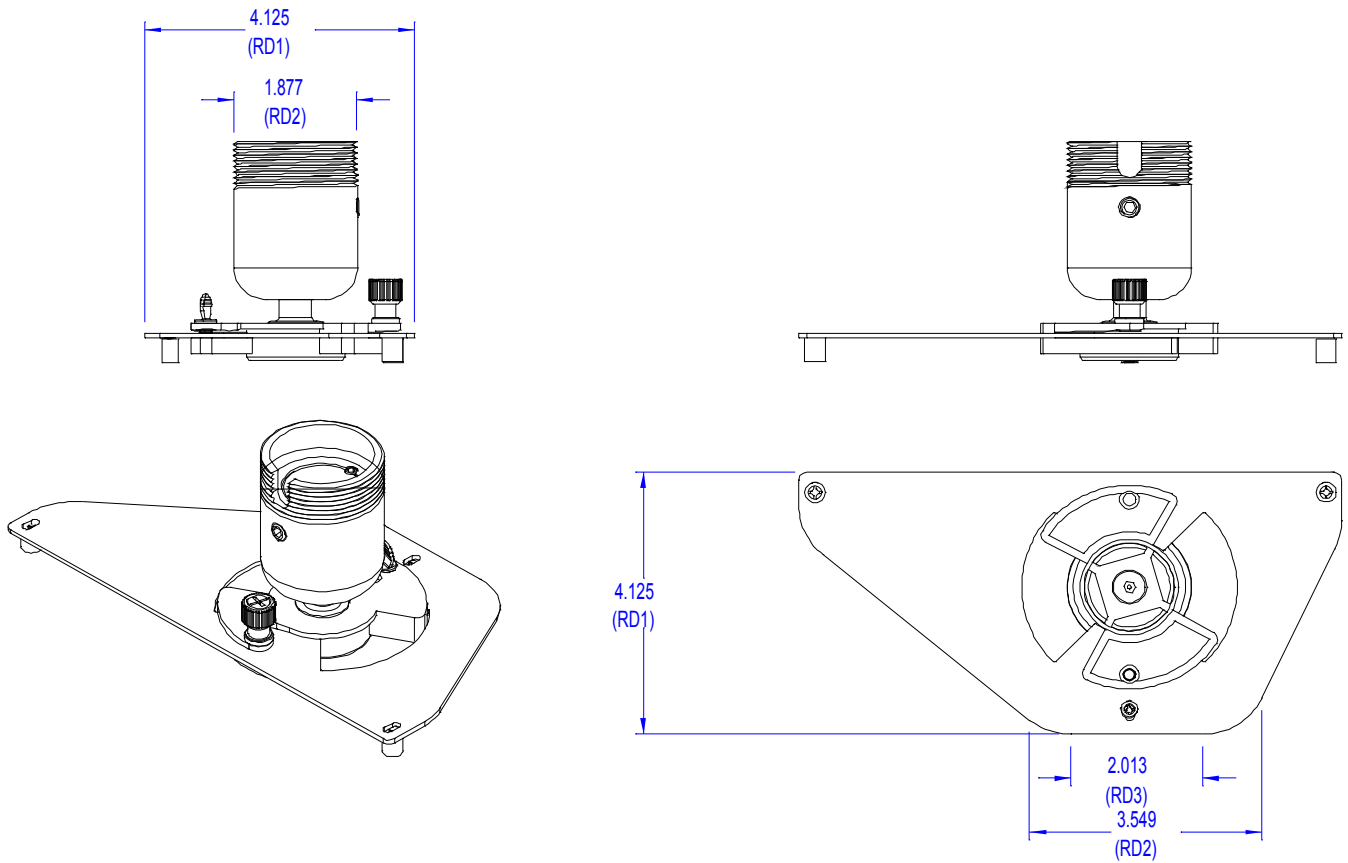
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Optional Ceiling Mount Dimensions (Model #: NP40CM)

The following drawings show the ceiling mount dimensions.
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Input Panel

NP41/ NP61



NP62



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 VIDEO | 02H 03H 00H 00H 02H 01H 06H 0EH |
| INPUT SELECT S-VIDEO | 02H 03H 00H 00H 02H 01H 0BH 13H |
| 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 |
| AUTO FUNCTIONS EXECUTE | 03H B6H 00H 00H 01H 01H BBH |
| PROJECTOR INFORMATION REQUEST | 00H BFH 00H 00H 01H 02H C2H |
| INFORMATION REQUEST | 03H 8AH 00H 00H 00H 8DH |

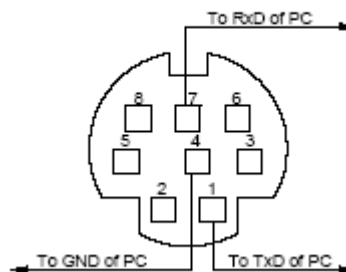
Note: Contact your NEC rep for codes not listed.

Cable Connection

Communication Protocol:

Baud Rate: 38400 bps
 Data Length: 8 bits
 Parity: No Parity
 Stop Bit: One Bit
 X on/off: None
 Communications: Full duplex

PC Control Connector (Din-8P)



NOTE 1 : Pins 2, 3, 5, and 6 are used inside the projector.

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