NEC

NEC Display Solutions of America, Inc.

UM361X & UM351W Installation Guide
Desktop and Ceiling Mount

Contents

Product Description

Type:	0.59 inch LCD with MLA (UM351W)	Dimensions:	14.9"(W) x 6.5"(H) x 16.9"(D)
	0.63 inch LCD with MLA (UM361X)	Weight:	12.4 lbs
Native Resolution:	1280 x 800 (UM351W)	Screen Range:	58.0" – 110.0"" Diagonal (16:10)
	1024 x 768 (UM361X)	Screen Range:	61.5" – 116.0"" Diagonal (4:3)
Brightness:	3500 lumens (UM351W)	Fan Noise:	38 dB / 28dB @ 1 meter
	3600 lumens (UM361X)		
Power Consumption:	337W (max)	BTU's:	1149.90 BTU/hour

Screen/Aspect Ratio

Both 4:3 and 16:9 screens are fully supported with proper aspect ratio control for both type sources using NEC developed scaling technology. By selecting the screen type in the menus, Aspect Ratio control is reconfigured for that screen type.

Notes

- For screen sizes not indicated on the projection charts, 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 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. Image width is the same for all aspect ratios, only vertical image size varies. For proper projector placement, determine the image width for a desired screen size. Use the Screen Formulas below to calculate all screen dimensions. Plug the screen width in for "W" in the Projection Formulas.

Refer to the diagrams and charts for popular screen sizes on page 2 and 3.

Definitions:
W = Screen width
H = Screen height
A = Distance between projector cabinet and screen
B = Vertical distance between projector foot and screen center
C = Throw distance
D = Vertical distance between projector foot and screen bottom
    (screen top for ceiling mounted application)

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

16:10 Screen Formulas:
W = H x 16/10
H = W x 10/16
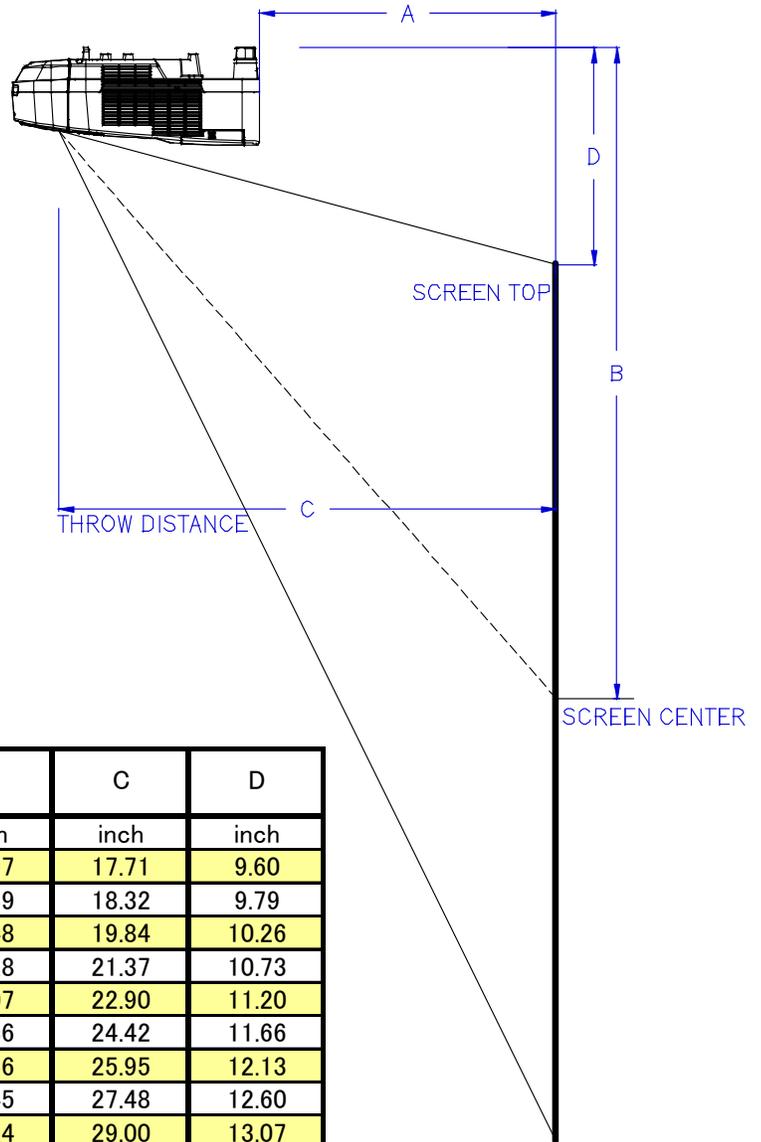**Screen Diagonal** = W x 18.868/16

Ceiling Mounted Installation

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

Projection Formulas:
A = C-13.52
B = 0.4229W+4.174
C = 0.360W
D = 0.1104W+4.174

Distance Chart for Popular 16:10 Screen Sizes

Screen Size			A	B	C	D
Diagonal	Width	Height				
inch	inch	inch	inch	inch	inch	inch
58.0	49	31	4.19	24.97	17.71	9.60
60.0	51	32	4.80	25.69	18.32	9.79
65.0	55	34	6.32	27.48	19.84	10.26
70.0	59	37	7.85	29.28	21.37	10.73
75.0	64	40	9.38	31.07	22.90	11.20
80.0	68	42	10.90	32.86	24.42	11.66
85.0	72	45	12.43	34.66	25.95	12.13
90.0	76	48	13.96	36.45	27.48	12.60
95.0	81	50	15.48	38.24	29.00	13.07
100.0	85	53	17.01	40.04	30.53	13.54
105.0	89	56	18.53	41.83	32.05	14.00
110.0	93	58	20.06	43.62	33.58	14.47

Note: For screen sizes not indicated in the distance charts, use the formulas on page 1.

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Desktop Setup

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

Distance Chart for Popular 4:3 Screen Sizes

Screen Size			A	B	C	D
Diagonal	Width	Height				
inch	inch	inch	inch	inch	inch	inch
61.5	49	37	4.19	28.02	17.71	9.57
65.0	52	39	5.20	29.38	18.72	9.88
70.0	56	42	6.64	31.32	20.16	10.32
75.0	60	45	8.08	33.27	21.60	10.77
80.0	64	48	9.52	35.21	23.04	11.21
85.0	68	51	10.96	37.15	24.48	11.65
90.0	72	54	12.40	39.09	25.92	12.09
95.0	76	57	13.84	41.03	27.36	12.53
100.0	80	60	15.28	42.97	28.80	12.97
105.0	84	63	16.72	44.92	30.24	13.42
110.0	88	66	18.16	46.86	31.68	13.86
115.0	92	69	19.60	48.80	33.12	14.30
116.6	93	70	20.06	49.42	33.58	14.44

Projection Formulas:

A = C-13.52
B = 0.4854W+4.142
C = 0.360W
D = 0.1104W+4.142
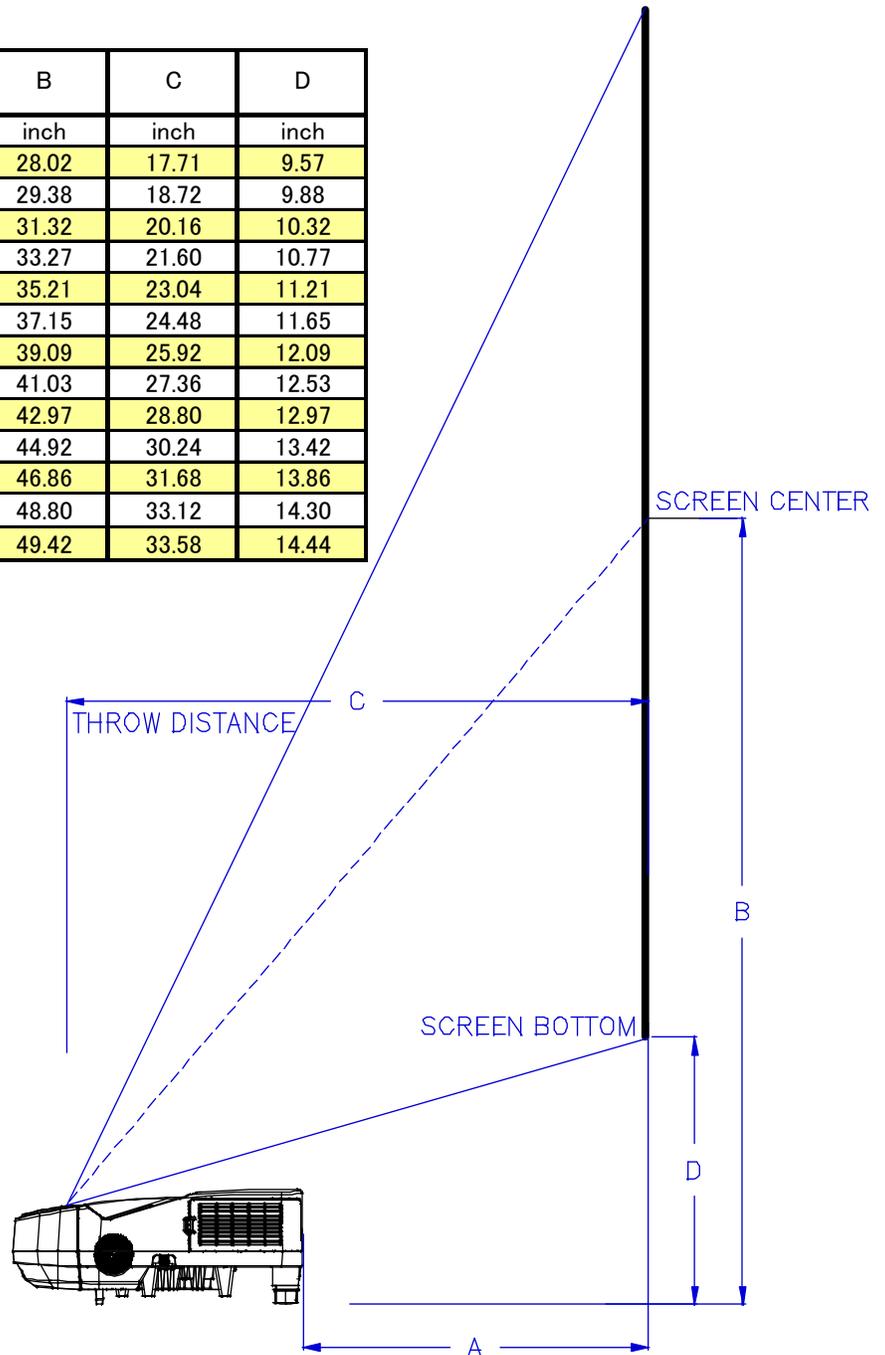
SCREEN CENTER

THROW DISTANCE

C

B

SCREEN BOTTOM

D

A

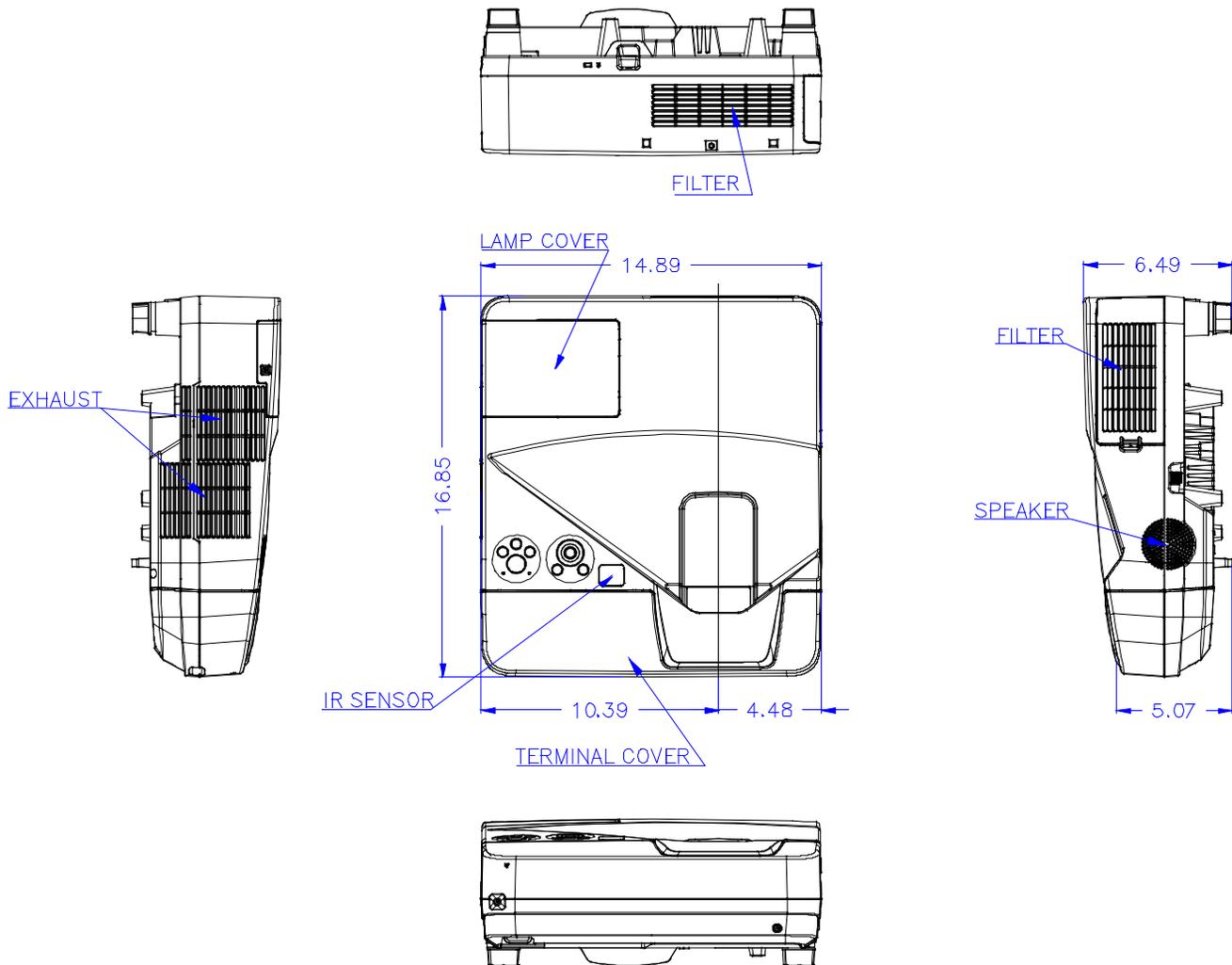***Note:*** *For screen sizes not indicated in the distance charts, use the formulas on page 1.*

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Cabinet Dimensions

The following drawings show the cabinet dimensions for the UM361X and UM351W.
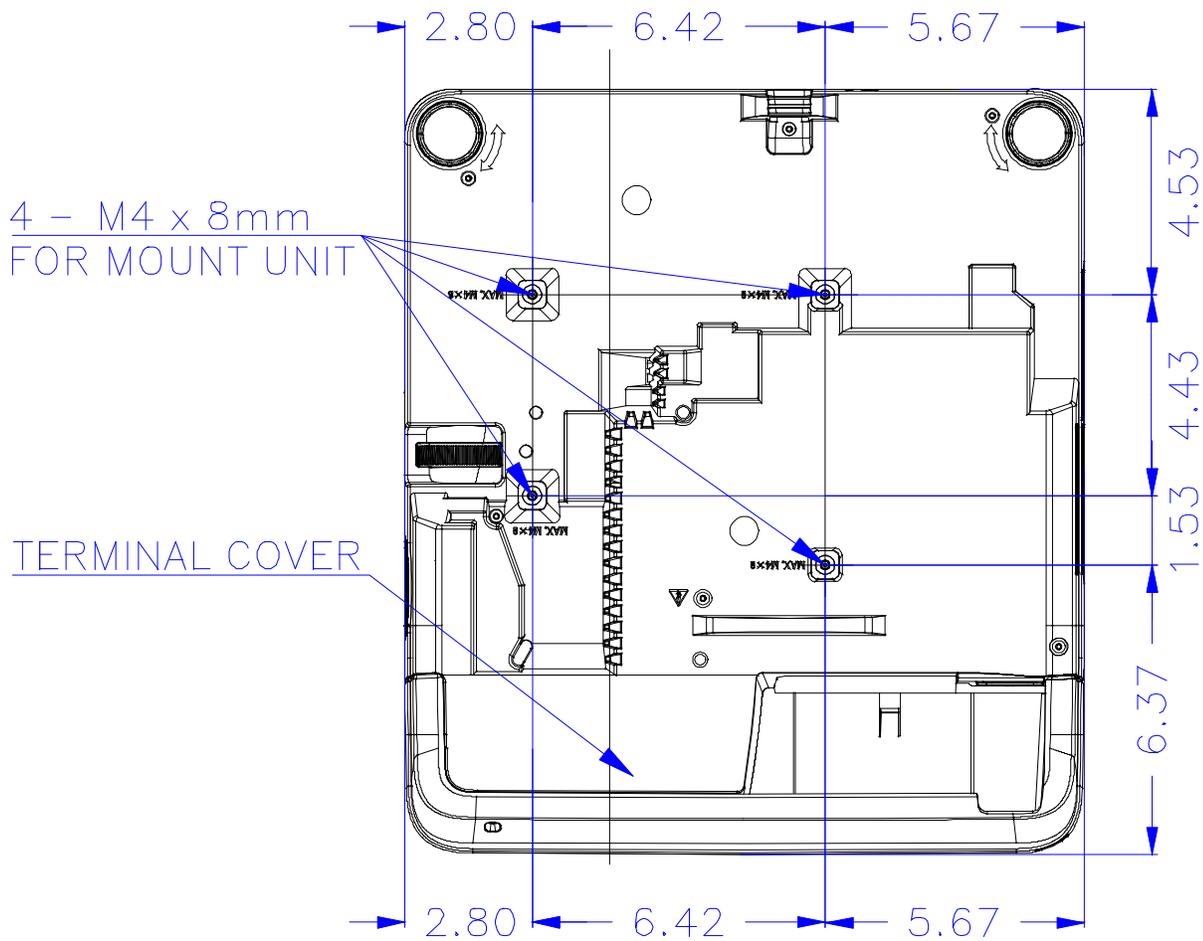Dimensions are in inches. For millimeters multiply by 25.4.

FILTER

LAMP COVER
14.89

EXHAUST

16.85

IR SENSOR   10.39   4.48

TERMINAL COVER

FILTER   6.49

SPEAKER

5.07

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Cabinet Dimensions (continued)
The following drawings show the cabinet dimensions for the UM361X and UM351W.
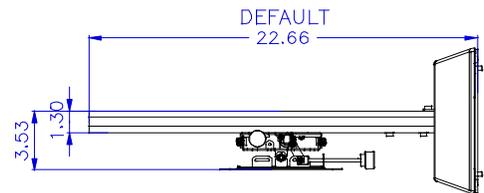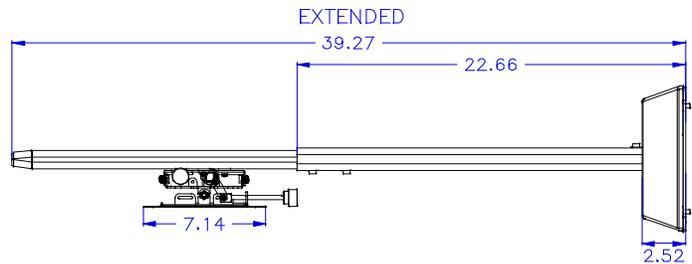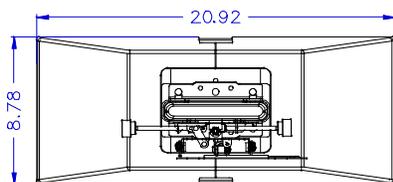Dimensions are in inches. For millimeters multiply by 25.4.

4 – M4 x 8mm
FOR MOUNT UNIT

TERMINAL COVER

2.80   6.42   5.67

4.53   4.43   1.53   6.37

2.80   6.42   5.67

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Optional Wall Mount Dimensions (Model #: NP04WK)

The following drawings show the ceiling mount dimensions for the UM361X and UM351W.
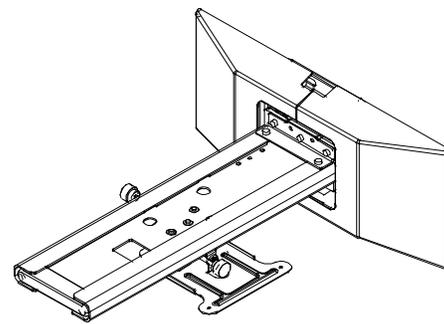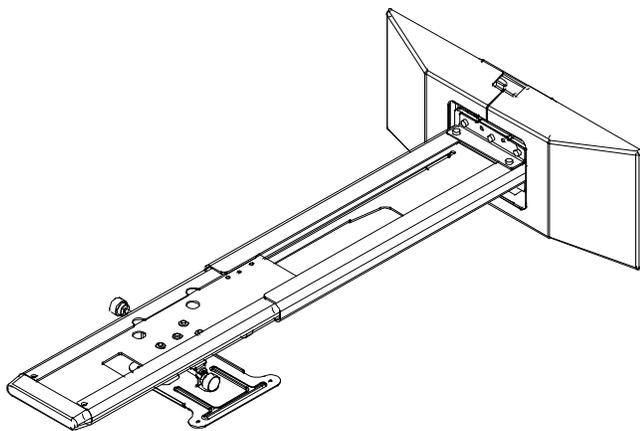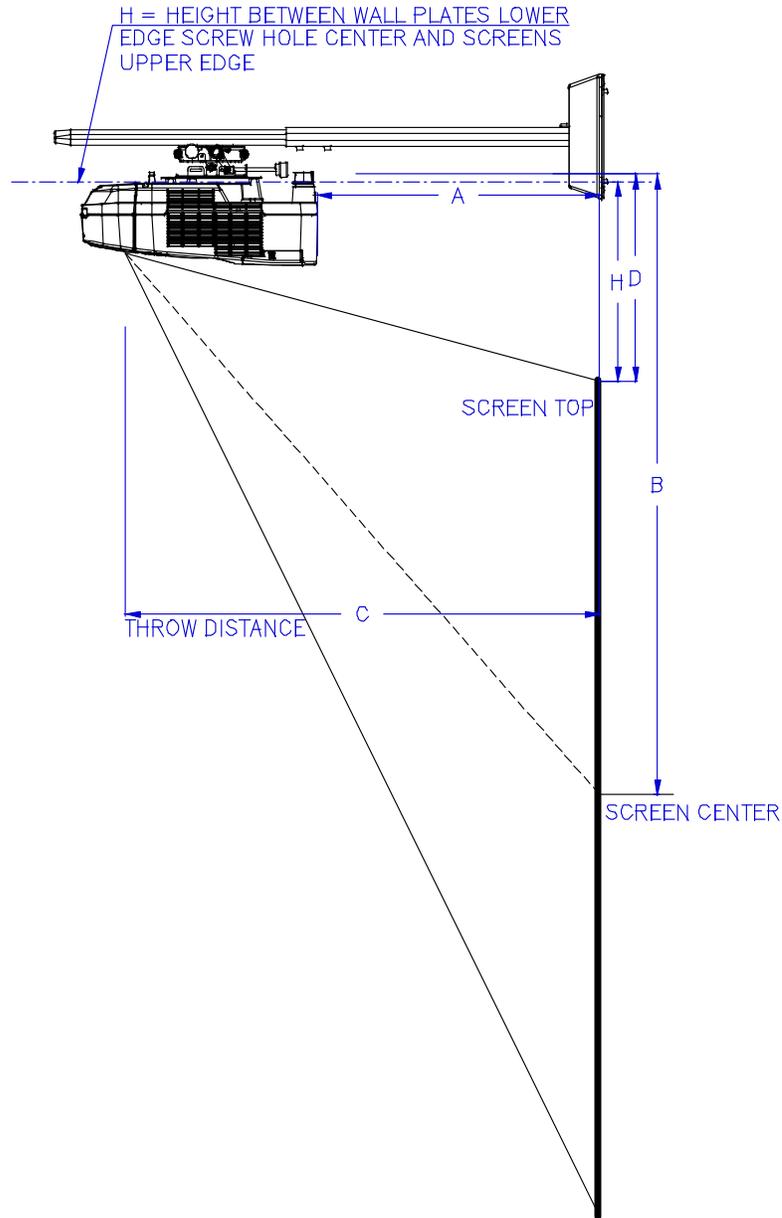Dimensions are in inches. For millimeters multiply by 25.4.

EXTENDED
39.27
22.66
7.14
2.52

20.92
8.78

DEFAULT
22.66
3.53
1.30

Optional Wall Mount Dimensions (Model #: NP04WK)

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H = HEIGHT BETWEEN WALL PLATES LOWER
EDGE SCREW HOLE CENTER AND SCREENS
UPPER EDGE

A

H D

SCREEN TOP

B

THROW DISTANCE

C

SCREEN CENTER

Screen Size			A	B	C	D	**H**
Diagonal	Width	Height					
inch	inch	inch	inch	inch	inch	inch	inch
58.0	49	31	4.19	24.97	17.71	9.60	8.39
60.0	51	32	4.80	25.69	18.32	9.79	8.58
70.0	59	37	7.85	29.28	21.37	10.73	9.49
80.0	68	42	10.90	32.86	24.42	11.66	10.43
90.0	76	48	13.96	36.45	27.48	12.60	11.38
100.0	85	53	17.01	40.04	30.53	13.54	12.32

Input Panel

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/MHL	02H	03H	00H	00H	02H	01H	1AH	22H
INPUT SELECT HDMI2	02H	03H	00H	00H	02H	01H	1BH	23H
INPUT SELECT VIDEO	02H	03H	00H	00H	02H	01H	06H	0EH
INPUT SELECT USB-A	02H	03H	00H	00H	02H	01H	1FH	27H
INPUT SELECT LAN	02H	03H	00H	00H	02H	01H	20H	28H
INPUT SELECT USB-B	02H	03H	00H	00H	02H	01H	22H	2AH
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	

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
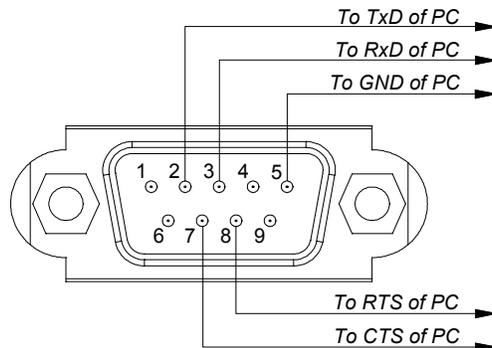
NOTE 1: It is recommended to set the projector to "Idle Mode" in the Setup menu for best Power ON response.
NOTE 2: Pins 2, 3, 5, 6 and 8 are used inside the projector.
NOTE 3: For long cable runs it is recommended to set communication speed in the Setup menu to 9600 bps.