

6-Button Wall Controller

Datasheet

Stock#	Description
6BUT-CONT-TP-AS	6-Button Wall Controller

Description

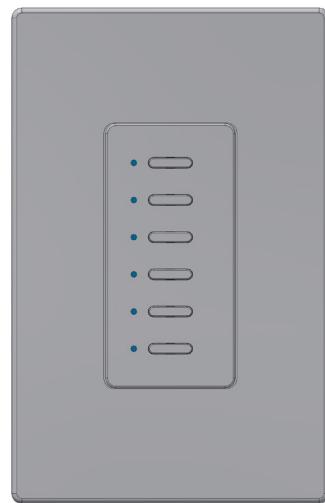
The 6-button Wall Controller provides an incredible lighting experience. It is designed to work seamlessly with SPICEbox™ and is effortless to customize. The users can customize the button functions to manage any NuSPICE™ load (fixture) with scenes and fade times through management software. This means that every user can enjoy optimal lighting experiences every time and easy programming through the NuPAC software.

With its seamless integration with NuLEDs PoE lighting system, users can experience the ease of smooth dimming to less than 1% while creating personalized lighting scenes. This innovative solution offers a more comfortable and tailored environment for any space. It provides customizable lighting scenes that cater to individual preferences and needs.

The system also allows for the effortless integration of various sensors, including ALS and PIR sensors, making it a valuable addition to any lighting system. It can be easily installed with our plug-and-play CAT5 cables.

The 6-button Wall Controller is designed with dedicated buttons, making it incredibly easy for users to adjust lighting levels or activate pre-set scenes. Additionally, it has precise dimming capabilities that help optimize energy usage. Users can set lighting levels at the perfect intensity for their task or ambiance, reducing unnecessary energy consumption and making our system eco-friendly.

Overall, the 6-button wall controller is the ultimate device for managing lighting environments. It offers endless possibilities with smooth dimming, customizable scenes, precise control, energy efficiency, seamless integration, and scalability.



Features

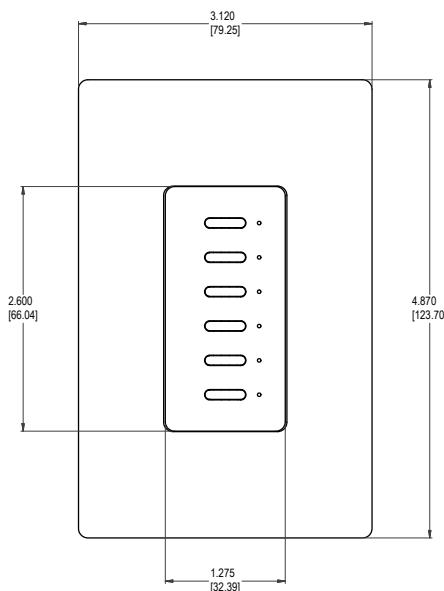
- Optimized Energy Efficiency:** The controller's precise dimming capabilities optimize energy usage by allowing users to set appropriate lighting levels, reducing consumption.
- Easy to Install and Manage:** Effortless powering the system through Cat5 cables
- Seamless Integration:** Integration with NuLEDs PoE lighting ensures seamless communication and can include sensors like ALS and PIR.
- Customization and Personalization:** Allow personalized lighting scenes, contributing to a comfortable environment.

6-Button Wall Controller

Datasheet Specifications

Equipment Kit	
6-Button Wall Controller, Installation Guide	
Hardware	
Standby Power	<1 Watt
Power Supply	SPICEbox™ PoE
Input Power	NuLINK™ Bus
Input Voltage	5VDC
RJ45 Ports	2 X RJ45 ports connecting to SPICEbox™ (Only need to plug-in one)
Protocols	NuSPICE™, CoAP
Continuous Load	22AWG Conductor Cable
Maximum Wiring Length	50 ft. low baud rate and no terminations
Mechanical	
Dimensions (L X W)	4.87 in. (123.7 mm) x 3.12 in. (79.25 mm)
Weight	27 gm.
Mounting	NOTE: Mounting hardware not supplied. Wall mounted with screws and wall anchors or industry standard low voltage ring or mud ring.
Dimming	Programmable with NuSPICE™
Environmental	
Operating Temperature	32° to 104°F (0° to 40°C) ambient
Humidity	10-80% Non-Condensing
Agency Listings and Compliance	
UL Listed UL60950-1 (As SPICEbox™ accessory)	
FCC Class A Compliant	
CE Compliant	
RoHS	

Dimensions



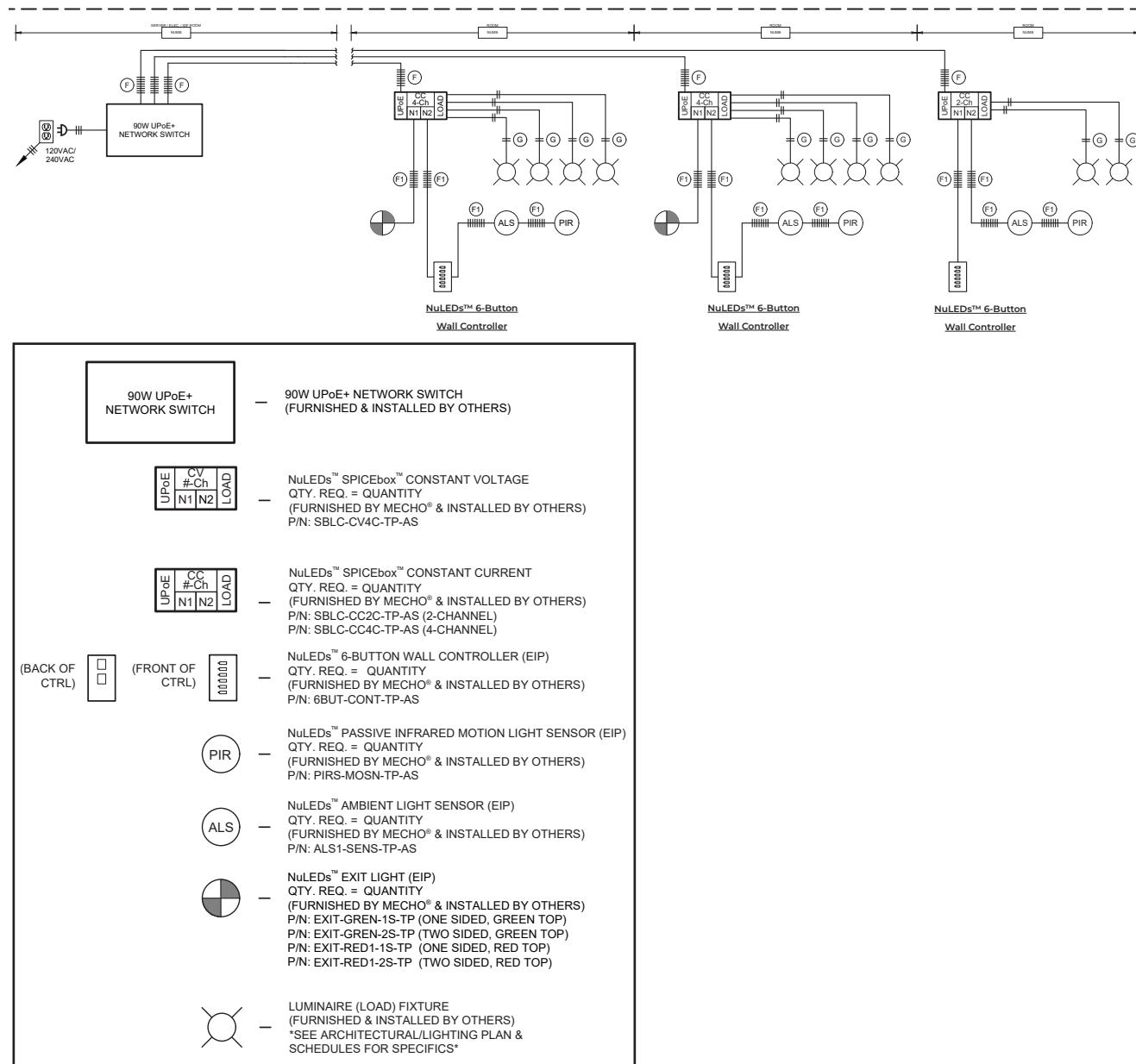
Warning

- **Caution** - Observe precautions for handling electrostatic sensitive devices.
- Case to the SPICEbox™ should not be earth grounded.
- Do not use outdoors.
- **Warning** - Risk of Electric Shock. Do not handle energized module with wet hands or when standing on wet or damp surfaces.
- Use only with Class 2 Power Unit - 60VDC maximum.
- Conforms to CE, FCC standards
- **Warranty** - Voided if device has been modified from its original configuration.

6-Button Wall Controller

Datasheet

NuLINK™ Network Wiring Diagram - Constant Current

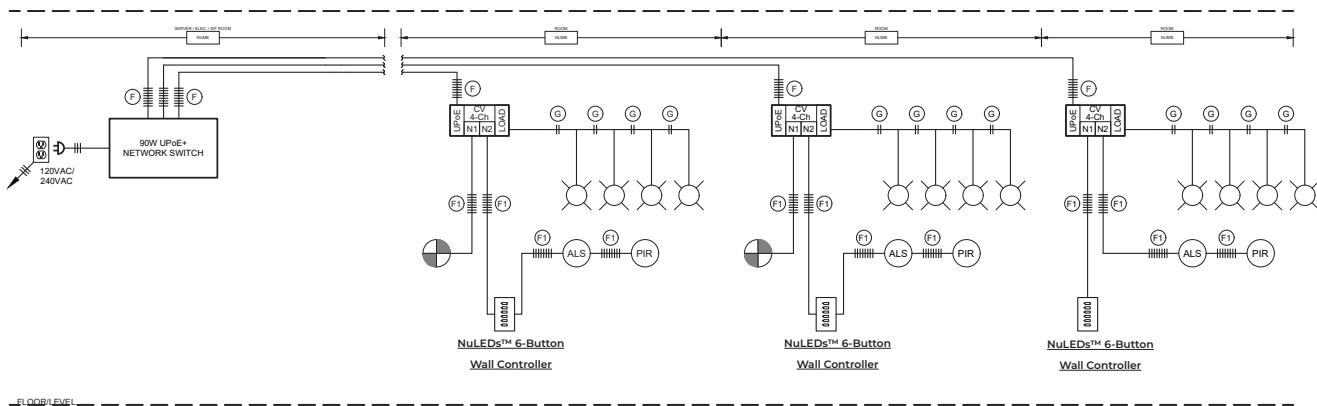


NOTE: Refer to pages 11 for the Low Voltage Cable Legend and Crimping Instructions.

6-Button Wall Controller

Datasheet

NuLINK™ Network Wiring Diagram - Constant Voltage



EQUIPMENT KEY FOR NuLEDs/NuLINK SYSTEM

	— 90W UPoE+ NETWORK SWITCH (FURNISHED & INSTALLED BY OTHERS)
	— NuLEDs™ SPICEbox™ CONSTANT VOLTAGE QTY. REQ. = QUANTITY (FURNISHED BY MECHO® & INSTALLED BY OTHERS) P/N: SBL-CV4C-TP-AS
	— NuLEDs™ SPICEbox™ CONSTANT CURRENT QTY. REQ. = QUANTITY (FURNISHED BY MECHO® & INSTALLED BY OTHERS) P/N: SBL-C-C4C-TP-AS (2-CHANNEL) P/N: SBL-C-C4C-TP-AS (4-CHANNEL)
(BACK OF CTRL)	— NuLEDs™ 6-BUTTON WALL CONTROLLER (EIP) QTY. REQ. = QUANTITY (FURNISHED BY MECHO® & INSTALLED BY OTHERS) P/N: 6BUT-CONT-TP-AS
	— NuLEDs™ PASSIVE INFRARED MOTION LIGHT SENSOR (EIP) QTY. REQ. = QUANTITY (FURNISHED BY MECHO® & INSTALLED BY OTHERS) P/N: PIRS-MOSN-TP-AS
	— NuLEDs™ AMBIENT LIGHT SENSOR (EIP) QTY. REQ. = QUANTITY (FURNISHED BY MECHO® & INSTALLED BY OTHERS) P/N: ALS1-SENS-TP-AS
	— NuLEDs™ EXIT LIGHT (EIP) QTY. REQ. = QUANTITY (FURNISHED BY MECHO® & INSTALLED BY OTHERS) P/N: EXIT-GREN-1S-TP (ONE SIDED, GREEN TOP) P/N: EXIT-GREN-2S-TP (TWO SIDED, GREEN TOP) P/N: EXIT-RED1-1S-TP (ONE SIDED, RED TOP) P/N: EXIT-RED1-2S-TP (TWO SIDED, RED TOP)
	— LUMINAIRE (LOAD) FIXTURE (FURNISHED & INSTALLED BY OTHERS) *SEE ARCHITECTURAL/LIGHTING PLAN & SCHEDULES FOR SPECIFICS*

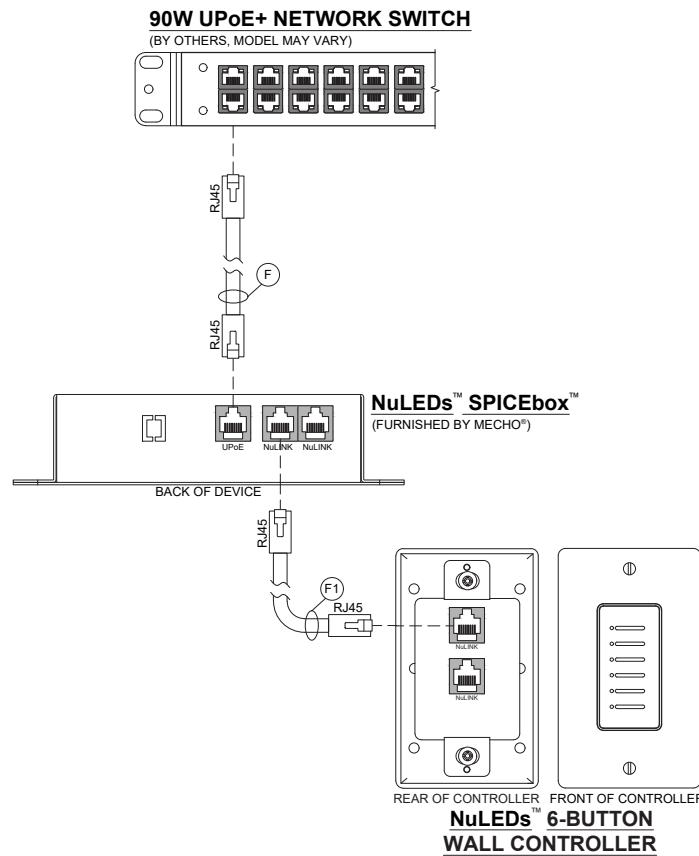
NOTE: Refer to pages 11 for the Low Voltage Cable Legend and Crimping Instructions.

6-Button Wall Controller

Datasheet

Point-to-Point Diagram - 6-Button Wall Controller PoE Integration & NuLINK™ Network

NOTE: Only one 6-Button Wall Controller can be connected per SPICEbox™.

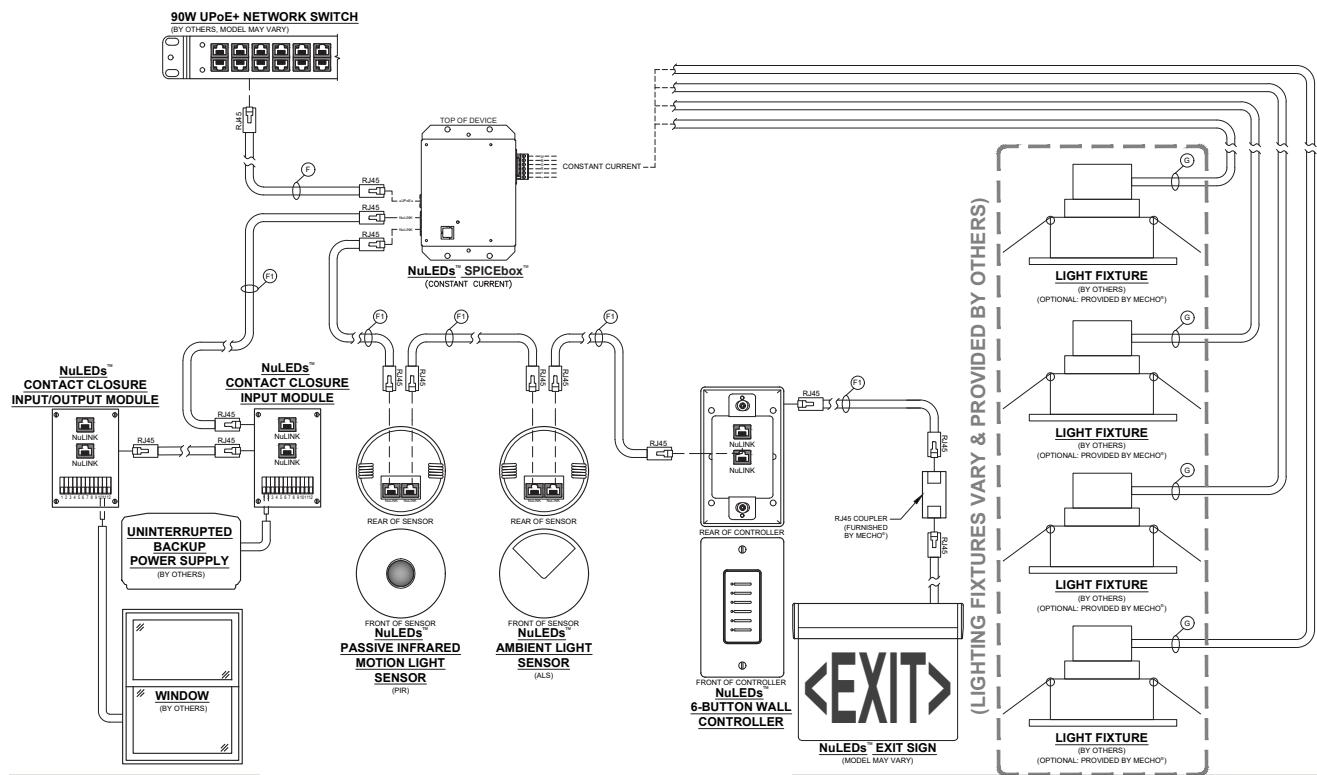


NOTE: Refer to pages 11 for the Low Voltage Cable Legend and Crimping Instructions.

6-Button Wall Controller

Datasheet

Point-to-Point Diagram



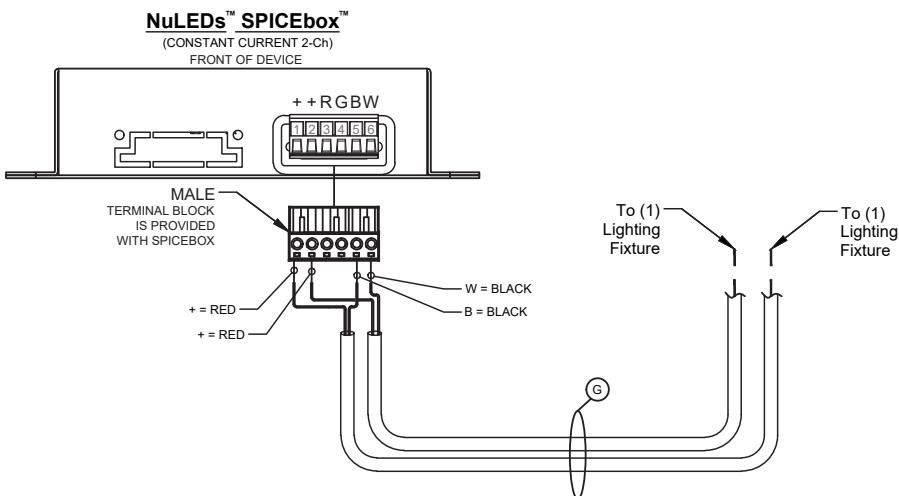
NOTE: Refer to pages 11 for the Low Voltage Cable Legend and Crimping Instructions.

6-Button Wall Controller

Datasheet

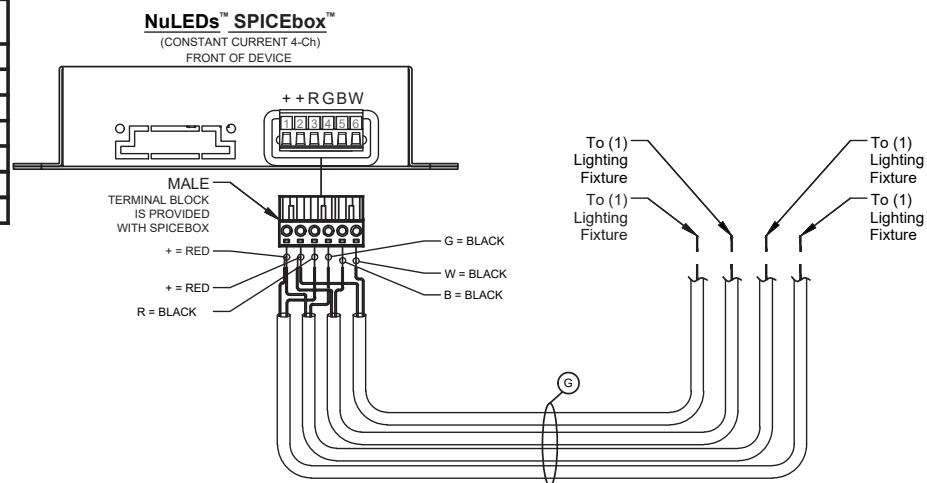
Point-to-Point Diagram - Constant Current 2 Channel Port Connections

SPICEBOX LOAD PORT WIRING PIN OUT		
PIN#	FUNCTION	PIN#
1	POWER (+)	1
2	POWER (+)	2
3	R CHANNEL	3
4	G CHANNEL	4
5	B CHANNEL	5
6	W CHANNEL	6



Point-to-Point Diagram - Constant Current 4 Channel Port Connections

SPICEBOX LOAD PORT WIRING PIN OUT		
PIN#	FUNCTION	PIN#
1	POWER (+)	1
2	POWER (+)	2
3	R CHANNEL	3
4	G CHANNEL	4
5	B CHANNEL	5
6	W CHANNEL	6



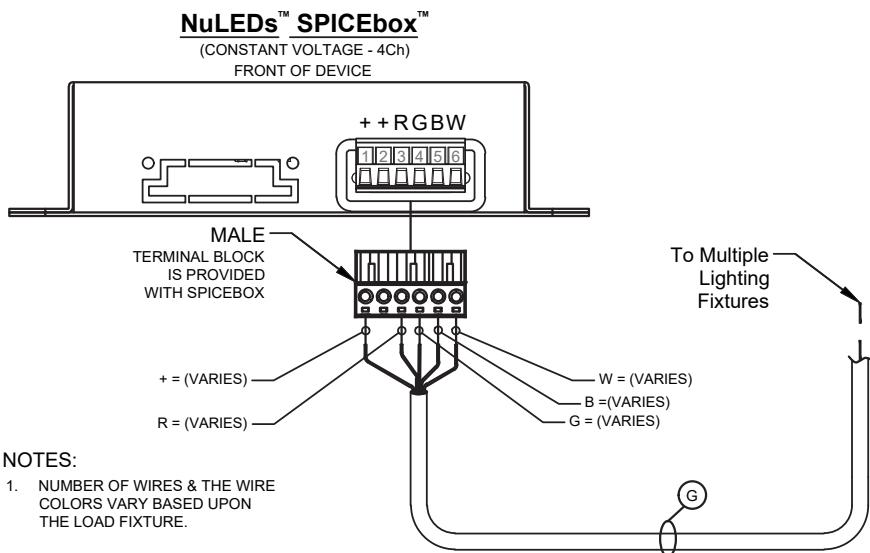
NOTE: Refer to page 11 for the Low Voltage Cable Legend and Crimping Instructions.

6-Button Wall Controller

Datasheet

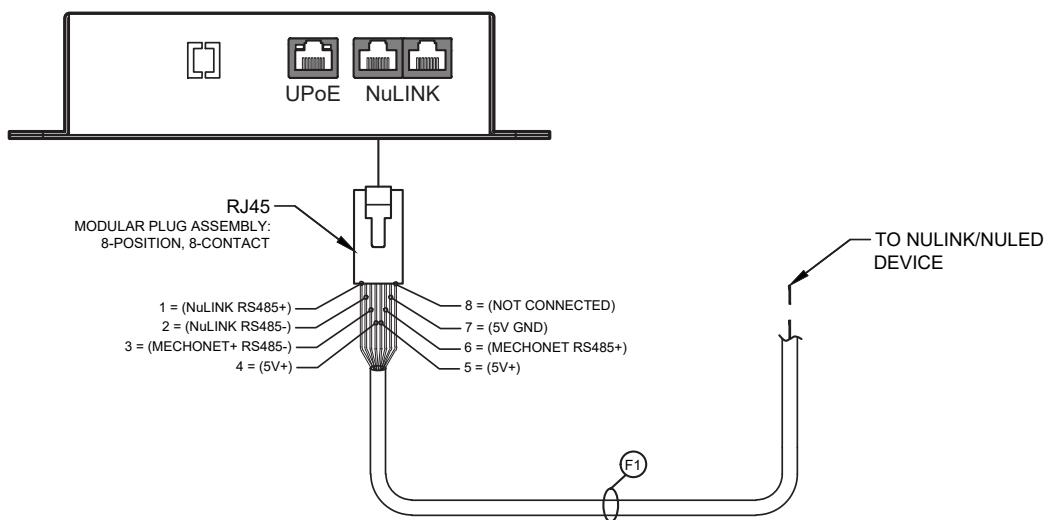
Point-to-Point Diagram - Constant Voltage Port Connections

SPICEBOX LOAD PORT WIRING PIN OUT		
PIN#	FUNCTION	PIN#
1	POWER (+)	1
2	POWER (+)	2
3	R CHANNEL	3
4	G CHANNEL	4
5	B CHANNEL	5
6	W CHANNEL	6



NuLINK MECHONET+ (RS485) PINOUT		
CABLE TYPE: CAT5/CAT5e/CAT6		
PIN#:	WIRE COLOR:	FUNCTION:
1	ORANGE/WHITE STRIPE	NuLINK RS485+
2	ORANGE SOLID	NuLINK RS485-
3	GREEN/WHITE STRIPE	MECHONET+ RS485-
4	BLUE SOLID	5V+
5	BLUE/WHITE STRIPE	5V+
6	GREEN SOLID	MECHONET RS485+
7	BROWN/WHITE STRIPE	5V GND
8	BROWN SOLID	N/C

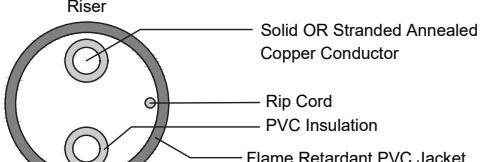
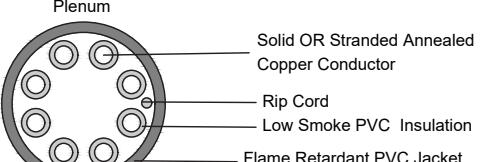
Point-to-Point Diagram - NuLINK Port Connections



6-Button Wall Controller

Datasheet

Cable Reference Drawing

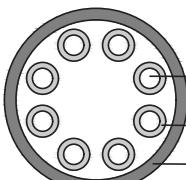
CABLE G REFERENCE DRAWING								
 <p>Riser</p> <p>Solid OR Stranded Annealed Copper Conductor</p> <p>Rip Cord</p> <p>PVC Insulation</p> <p>Flame Retardant PVC Jacket</p> <p>Drawing not to scale</p>				 <p>Plenum</p> <p>Solid OR Stranded Annealed Copper Conductor</p> <p>Rip Cord</p> <p>Low Smoke PVC Insulation</p> <p>Flame Retardant PVC Jacket</p> <p>Drawing not to scale</p>				
SPECIFICATIONS:								
CONDUCTOR COUNT: 2 THRU 12 CONDUCTORS				PERFORMANCE COMPLIANCE: NEC ARTICLE 725 NEC ARTICLE 800 NEC ARTICLE 760 UL®13 CL3R/CL3P UL 444 CMR/CMP* UL 1424 FPLR/FPLP UL 1666 NFPA 262				
CONDUCTOR: FULLY ANNEALED, SOLID OR STRANDED BARE COPPER				CALIFORNIA STATE FIRE MARSHALL RoHS-COMPLIANT/RoHS 2-COMPLIANT				
AWG (mm): 18 (1.16)				NRTL PROGRAMS: UL LISTED CL3R, CMR, FPLR UL LISTEN CL3P, CMP, FPLP				
INSULATION: LOW SMOKE PVC								
INSULATION COLORS: CONDUCTOR 1: BLACK CONDUCTOR 2: RED CONDUCTOR 3: WHITE CONDUCTOR 4: GREEN CONDUCTOR 5: BROWN CONDUCTOR 6: BLUE CONDUCTOR 7: ORANGE CONDUCTOR 8: YELLOW CONDUCTOR 9: VIOLET CONDUCTOR 10: GRAY CONDUCTOR 11: PINK CONDUCTOR 12: TAN								
JACKET: RISER: GRAY, FLAME RETARDANT (FR) PVC PLENUM: WHITE, LOW SMOKE PVC								
PACKAGE: BLACK, RIBBED, PLASTIC RECYCLABLE SPOOL, REEL-IN-A-BOX OR WOOD REEL								
Part Numbers and Physical Characteristics:								
Listing	Part Number ¹	Conductor Count	AWG (mm)	Conductor Type	Jacket Color ²	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	
CL3R/CMR/FPLR	2F-C1x-31	2	18 (1.16)	7 x 26 AWG	GRAY	0.16 (4.1)	17 (25)	
CL3R/CMR/FPLR	2F-C2x-31	3	18 (1.16)	7 x 26 AWG	GRAY	0.17 (4.3)	22 (9)	
CL3R/CMR/FPLR	2F-C3x-31	4	18 (1.16)	7 x 26 AWG	GRAY	0.19 (4.8)	30 (45)	
CL3R/CMR/FPLR	2F-C4x-31	6	18 (1.16)	7 x 26 AWG	GRAY	0.23 (5.8)	43 (64)	
CL3R/CMR/FPLR	2F-C5x-31	8	18 (1.16)	7 x 26 AWG	GRAY	0.25 (6.4)	56 (83)	
CL3R/CMR/FPLR	2F-C7x-31	12	18 (1.16)	7 x 26 AWG	GRAY	0.30 (7.6)	83 (124)	
CL3P/CMR/FPLP	2F-C1x-43	2	18 (1.16)	7 x 26 AWG	WHITE	0.16 (4.1)	17 (25)	
CL3P/CMR/FPLP	2F-C2x-43	3	18 (1.16)	7 x 26 AWG	WHITE	0.17 (4.3)	22 (9)	
CL3P/CMR/FPLP	2F-C3x-43	4	18 (1.16)	7 x 26 AWG	WHITE	0.19 (4.8)	30 (45)	
CL3P/CMR/FPLP	2F-C4x-43	6	18 (1.16)	7 x 26 AWG	WHITE	0.23 (5.8)	44 (65)	
CL3P/CMR/FPLP	2F-C5x-43	8	18 (1.16)	7 x 26 AWG	WHITE	0.25 (6.4)	57 (85)	
CL3P/CMR/FPLP	2F-C7x-43	12	18 (1.16)	7 x 26 AWG	WHITE	0.30 (7.6)	85 (126)	
Packaging Options:								
	Plastic Spool		Reel-in-a-Box		Wood Reel	Shrink Wrap		
	1,000'	500'	1,000'	500'	1,000'	250'	500'	
¹ Replace "x" with:	2	3	4	5	6	7	8	

6-Button Wall Controller

Datasheet

Cable Reference Drawing

CABLE F REFERENCE DRAWING



Drawing not to scale

SUPERIOR ESSEX (www.superioressex.com)

PART No. PW52-H46-X5 (NON-PLENUM) & PW52-H46-X8 (PLENUM)

SPECIFICATIONS (SOLID): CATEGORY 5E+

PAIR COUNT: 4

CONDUCTOR: SOLID ANNEALED COPPER

AWG (mm): 22 (0.51)

INSULATION: CMR: POLYOLEFIN

CMP: FEP

INSULATION COLORS: PAIR 1: COLORTIP LIGHT BLUE, BLUE
PAIR 2: COLORTIP LIGHT ORANGE, ORANGE
PAIR 3: COLORTIP LIGHT GREEN, GREEN
PAIR 4: COLORTIP LIGHT BROWN, BROWN

JACKET: CMR: FLAME RETARDANT (FR) PVC
CMP: FR, LOW SMOKE PVC

CHARACTERISTIC IMPEDANCE Ohms: 100 ± 15

NOMINAL VELOCITY OF PROPAGATION %: CMR: 71

CMP: 74

PERFORMANCE COMPLIANCE:

UL 444

CSA C22.2 No. 214-08

UL 1666

NFPA 262

ANSI/TIA-568-C.2

ANSI/CEA S-90-661-2012

Article 800, NEC (NFPA 70)

HDBaseT Class A and B

NRTL PROGRAMS:

UL Verified CAT 5e

UL, c(UL) Listed CMR

UL, c(UL) Listed CMP

HDBaseT Certified

UL Certified EPD

HPD

USGBC® Member

RoHS-compliant/RoHS 2-compliant

REACH-compliant

Temperature cable rating: 75°C

for CMR and 90°C for CMP

SUSTAINABILITY:

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Listing	Part Number ¹	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages per Pallet
CMR	PW52-H46-x5	0.23 (4.6)	28 (25)	1,000 ft BrakeBox®	12
CMR	PW52-H72-x5	0.23 (4.6)	28 (25)	1,000 ft Plywood Reel	16
CMP	PW52-H46-x8	0.23 (4.8)	37 (28)	1,000 ft BrakeBox	12
CMP	PW52-H72-x8	0.23 (4.8)	37 (28)	1,000 ft Plywood Reel	16

JACKET COLORS

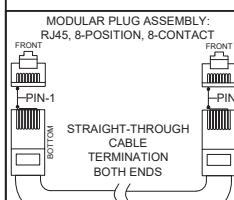
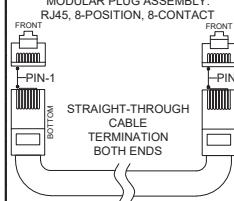
'Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5
Yellow = 6	Purple = 7	Red = 9	Black = E	

6-Button Wall Controller

Datasheet

Low Voltage Cable Legend and Crimping Instructions

LOW VOLTAGE CABLE LEGEND - EIA568B	
NOTES: 1. PARALLEL WIRING TO NEXT DEVICE PER BRANCH CIRCUIT CAPACITY. ALL CONNECTION MUST MEET NATIONAL AND LOCAL CODES AND REGULATIONS. 2. ADDRESS SCHEDULES REQUIRED. 3. MAXIMUM VOLTAGE FOR ALL UNMARKED CABLE IS 43.5 VDC. 4. LOW VOLTAGE CABLES SHOULD NOT BE ROUTED NEAR POWER LINES OR ELECTRICAL DEVICES SUCH AS LIGHTING BALLASTS, DIMMERS AND LED DRIVERS THAT MAY EXPOSE THE SYSTEM TO EXCESSIVE ELECTRICAL NOISE.	
(F)	<p>CAT5E+ - CABLE FOR UPoE NETWORK WIRING CONNECTIONS: SPECIFICATION: 22AWG 4UTP (8-CONDUCTOR SOLID UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUG CRIMPED (EIA568B) ON BOTH ENDS RECOMMENDED: SUPERIOR ESSEX (WWW.SUPERIORESSEX.COM) PART NO. PW52-H46-X5 (NON-PLENUM) & PW52-H46-X8 (PLENUM) OR COMPATIBLE CABLE</p> <p>DISTANCE LIMITATION: 328'. MAX. NODES: 1 SEE "CABLE F" REFERENCE DRAWING FOR DETAILED SPECIFICATION. (FURNISHED & INSTALLED BY OTHERS)</p>
(F1)	<p>CAT5E+ - CABLE FOR NuLED NETWORK WIRING CONNECTIONS: SPECIFICATION: 22AWG 4UTP (8-CONDUCTOR SOLID UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUG CRIMPED (EIA568B) ON BOTH ENDS RECOMMENDED: SUPERIOR ESSEX (WWW.SUPERIORESSEX.COM) PART NO. PW52-H46-X5 (NON-PLENUM) & PW52-H46-X8 (PLENUM) OR COMPATIBLE CABLE</p> <p>DISTANCE LIMITATION: 50'. MAX. EIPS: 15 SEE CABLE "F" REFERENCE DRAWING FOR DETAILED SPECIFICATION. (FURNISHED & INSTALLED BY OTHERS)</p>
(G)	<p>CABLE FOR SPICEBOX TO LIGHT (LOAD) FIXTURE WIRING CONNECTIONS: SPECIFICATION: 2 TO 12-CONDUCTOR, (18AWG UNSHIELDED) RECOMMENDED: SUPERIOR ESSEX (WWW.SUPERIORESSEX.COM 1-800-551-8948) LISTING NO. CL3R/CMR/FPLR (NON-PLENUM), & CL3P/CMP/FPLP (PLENUM)</p> <p>DISTANCE LIMITATION: VARIES PER LOAD. MAX. LOADS: VARIES BY WATTS SEE CABLE "G" REFERENCE DRAWING FOR DETAILED SPECIFICATION. (FURNISHED & INSTALLED BY OTHERS)</p>

EIA 568B CRIMPING - 8 CONDUCTOR CABLE																													
UPoE CONNECTIONS ON UPoE NETWORK																													
MODULAR PLUG ASSEMBLY: RJ45, 8-POSITION, 8-CONTACT	CABLE TYPE: CAT5/CAT5e/CAT6																												
	<table border="1"><thead><tr><th>PIN#:</th><th>WIRE COLOR:</th><th>FUNCTION:</th></tr></thead><tbody><tr><td>1</td><td>ORANGE/WHITE STRIPE</td><td>DATA A+/POWER-</td></tr><tr><td>2</td><td>ORANGE SOLID</td><td>DATA A-/POWER-</td></tr><tr><td>3</td><td>GREEN/WHITE STRIPE</td><td>DATA B+/POWER+</td></tr><tr><td>4</td><td>BLUE SOLID</td><td>DATA C+/POWER+</td></tr><tr><td>5</td><td>BLUE/WHITE STRIPE</td><td>DATA C-/POWER+</td></tr><tr><td>6</td><td>GREEN SOLID</td><td>DATA B-/POWER+</td></tr><tr><td>7</td><td>BROWN/WHITE STRIPE</td><td>DATA D+/POWER-</td></tr><tr><td>8</td><td>BROWN SOLID</td><td>DATA D-/POWER-</td></tr></tbody></table>	PIN#:	WIRE COLOR:	FUNCTION:	1	ORANGE/WHITE STRIPE	DATA A+/POWER-	2	ORANGE SOLID	DATA A-/POWER-	3	GREEN/WHITE STRIPE	DATA B+/POWER+	4	BLUE SOLID	DATA C+/POWER+	5	BLUE/WHITE STRIPE	DATA C-/POWER+	6	GREEN SOLID	DATA B-/POWER+	7	BROWN/WHITE STRIPE	DATA D+/POWER-	8	BROWN SOLID	DATA D-/POWER-	
PIN#:	WIRE COLOR:	FUNCTION:																											
1	ORANGE/WHITE STRIPE	DATA A+/POWER-																											
2	ORANGE SOLID	DATA A-/POWER-																											
3	GREEN/WHITE STRIPE	DATA B+/POWER+																											
4	BLUE SOLID	DATA C+/POWER+																											
5	BLUE/WHITE STRIPE	DATA C-/POWER+																											
6	GREEN SOLID	DATA B-/POWER+																											
7	BROWN/WHITE STRIPE	DATA D+/POWER-																											
8	BROWN SOLID	DATA D-/POWER-																											
STRAIGHT-THROUGH CABLE TERMINATION BOTH ENDS	CATX CRIMP																												
EIA 568B CRIMPING - 8 CONDUCTOR CABLE																													
NuLED CONNECTIONS ON MECHONET+ (RS485) NETWORK																													
MODULAR PLUG ASSEMBLY: RJ45, 8-POSITION, 8-CONTACT	CABLE TYPE: CAT5/CAT5e/CAT6																												
	<table border="1"><thead><tr><th>PIN#:</th><th>WIRE COLOR:</th><th>FUNCTION:</th></tr></thead><tbody><tr><td>1</td><td>ORANGE/WHITE STRIPE</td><td>NuLINK RS485+</td></tr><tr><td>2</td><td>ORANGE SOLID</td><td>NuLINK RS485-</td></tr><tr><td>3</td><td>GREEN/WHITE STRIPE</td><td>MECHONET+ RS485-</td></tr><tr><td>4</td><td>BLUE SOLID</td><td>5V+</td></tr><tr><td>5</td><td>BLUE/WHITE STRIPE</td><td>5V+</td></tr><tr><td>6</td><td>GREEN SOLID</td><td>MECHONET RS485+</td></tr><tr><td>7</td><td>BROWN/WHITE STRIPE</td><td>5V GND</td></tr><tr><td>8</td><td>BROWN SOLID</td><td>N/C</td></tr></tbody></table>	PIN#:	WIRE COLOR:	FUNCTION:	1	ORANGE/WHITE STRIPE	NuLINK RS485+	2	ORANGE SOLID	NuLINK RS485-	3	GREEN/WHITE STRIPE	MECHONET+ RS485-	4	BLUE SOLID	5V+	5	BLUE/WHITE STRIPE	5V+	6	GREEN SOLID	MECHONET RS485+	7	BROWN/WHITE STRIPE	5V GND	8	BROWN SOLID	N/C	
PIN#:	WIRE COLOR:	FUNCTION:																											
1	ORANGE/WHITE STRIPE	NuLINK RS485+																											
2	ORANGE SOLID	NuLINK RS485-																											
3	GREEN/WHITE STRIPE	MECHONET+ RS485-																											
4	BLUE SOLID	5V+																											
5	BLUE/WHITE STRIPE	5V+																											
6	GREEN SOLID	MECHONET RS485+																											
7	BROWN/WHITE STRIPE	5V GND																											
8	BROWN SOLID	N/C																											
STRAIGHT-THROUGH CABLE TERMINATION BOTH ENDS	CATX CRIMP																												

Warranty

Mecho's warranty ensures its products against defects in materials and workmanship for up to 25 years. The warranty timeline shall vary for different products. For complete warranty information, please visit <https://www.mechoshade.com/warranty> or contact your Mecho® Representative.

Mecho® reserves the right to make improvements or changes to its products without prior notice. Every attempt is made to ensure the information herein is accurate and up to date. Verify with the Mecho® staff to confirm the product's availability, latest specifications, and suitability for your application.

Technical support

Mecho

T: +1 (800) 327-9798 (Follow prompts for Mecho® & Tech Support)

E: techsupport@mechoshade.com

W: www.mechoshade.com