INSPEXTOR

**PRODUCT SERIES SPEC SHEET**

# MHTi-NODE-90


The Inspextor platform is a **PoE Lighting Management System** that enables building automation and data collection. It utilizes Power over Ethernet (PoE) technology for safe and efficient low voltage operation. The MHTi-NODE-90 product family supports a variety of applications, offering options for Constant Current (CC) or Constant Voltage (CV) lighting and other DC power needs from 12V to 48VDC. These network nodes receive power and data from the PoE switch and seamlessly integrate with other devices in the network, such as sensors, shades, and wall switches, all controlled by the Inspextor system. They support advanced lighting controls features such as dimming and tunable white lights. They are designed for easy installation and setup, automatically obtaining an IP address from the local network.

## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| MHT PD Interface | IEEE 802.3bt PD Type 4, Class 8 compliant input with LLDP extensions for negotiating power above 30W using all four pairs |
| Input Voltage | 40-60Vdc |
| Peak Operating Power | 80W max |
| Nominal Standby Power | 1.35W |
| PoE Input Connection | Unshielded female RJ45 jack for CAT5e/6/6A cable to PoE PSE device |
| Device Type | Class 2 electrical device |

## OUTPUT CHANNEL SPECIFICATIONS

| | |
|---|---|
| Output Channels | Flexible power and control options are available for either up to eight individual fixtures using the *MHTi-SPLT-1×4* splitter or for two-channel fixtures. |
| Driver Design | The LED driver design varies depending on the node version. It can be common anode constant current (**CC**), or constant voltage (**CV**), or a combination of constant current and constant voltage (**CCCV**). |
| Output Voltage Range | **CC:** 34V-44VDC for constant current version |
| | **CV:** 12V-48VDC for constant voltage version |
| | **CCCV:** 34V-44VDC and 12-48VDC for constant current/constant voltage version |
| Rated Output Power | 72W with Dual Channel loading and 60W Single Channel loading on the CC Variant. |
| | 70W with Dual Channel loading or Single Channel loading @ 36V or 48V constant voltage driver configuration. |
| | 60W with Dual Channel loading or Single Channel loading 24 constant voltage driver configuration.<br>40W with Dual Channel loading or Single Channel loading 12V constant voltage driver configuration. |
| Protection | Each individual LED driver channel has current limit and short circuit protection |
| Connections | Unshielded female RJ45 jack for CAT5e/6/6A cable to PoE PSE device. |


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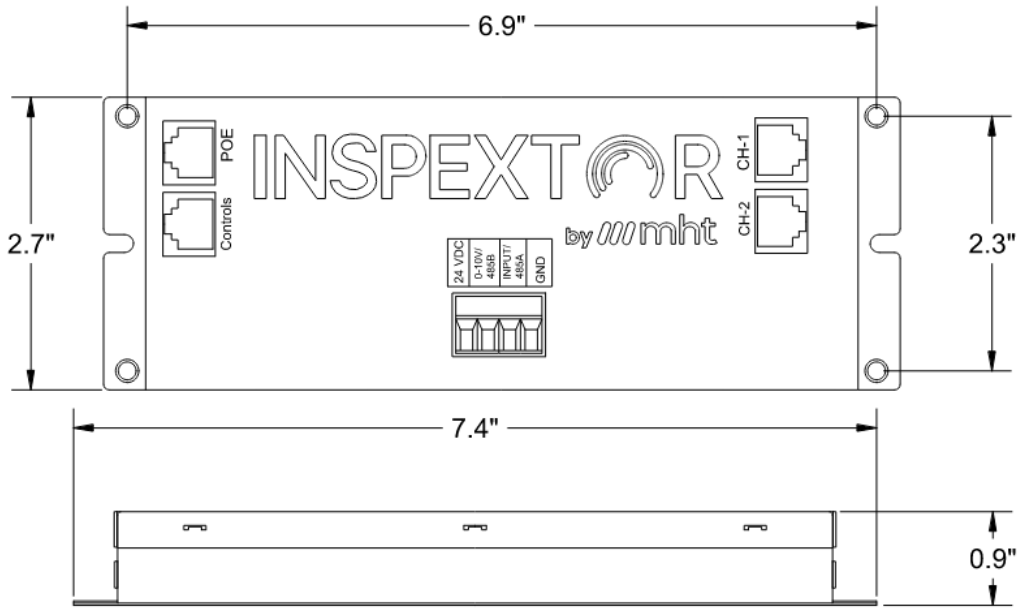
## PRODUCT DIMENSION




## MODEL SELECTION TABLE

| Model Number | Variant/Mode | Output Voltage | Maximum Current | Output Power | Spring Cage Connector |
|---|---|---|---|---|---|
| MHTi-NODE-90-CC | Constant Current | 34V to 44V | 2A | 72W* | |
| MHTi-NODE-90-CC010 | Constant Current | 34V to 44V | 2A | 72W* | 0-10V, INPUT** |
| MHTi-NODE-90-CCRS485 | Constant Current | 34V to 44V | 2A | 72W* | 485B, 485A*** |
| MHTi-NODE-90-CV | Constant Voltage | 12V to 48V | 3.3A to 1.5A | 40W to 70W^* | |
| MHTi-NODE-90-CVRS485 | Constant Voltage | 12V to 48V | 3.3A to 1.5A | 40W to 70W^* | 485B, 485A*** |
| MHTi-NODE-90-CCCV^** | CC and CV Modes Programmable | **CV:** 12V to 48V<br>**CC:** 34V to 44V | **CV:** 3.3A to 1.5A<br>**CC:** 2A | **CV:** 40W to 70W^*<br>**CC:** 72W* | |
| MHTi-NODE-90-CCCV010^** | CC and CV Modes Programmable | **CV:** 12V to 48V<br>**CC:** 34V to 44V | **CV:** 3.3A to 1.5A<br>**CC:** 2A | **CV:** 40W to 70W^*<br>**CC:** 72W* | 0-10V, INPUT** |
| MHTi-NODE-90-CCCVRS485^** | CC and CV Modes Programmable | **CV:** 12V to 48V<br>**CC:** 34V to 44V | **CV:** 3.3A to 1.5A<br>**CC:** 2A | **CV:** 40W to 70W^*<br>**CC:** 72W* | 485B, 485A*** |
| MHTi-NODE-90-CV-USBC^*** | Constant Voltage | 12V to 41V | 3.3A to 1.5A | 40W to 60W^*** | 485B, 485A*** |

Note:
* 72W with Dual Channel Loading (CH1 or CH2) or 60W with Single Channel Loading (either CH1 or CH2)
** 0-10V dimming control option, event monitoring analog input
*** 485B, 485B are the RS-485 A and B pins 120 ohm termination
^* The CV node version can be configured anytime to be 12V/3.3A or 24V/2.5A or 36V/1.9A or 48V/1.5A on any channel individually
^** The CCCV node version can be configured anytime to be Constant Current or Constant Voltage on any output channel individually
^*** The CV-USBC node version can be configured anytime to be 12V/3.3A or 24V/2.5A or 29V/2.1A or 41V/1.5A on any channel individually

## OUTPUT CHANNEL POWER TABLE

| VERSION | CH1 (W) | CH2 (W) |
|---|---|---|
| CC | 60 | 12 |
| | 36 | 36 |
| | 12 | 60 |
| CV (36V/48V) | 70 | 0 |
| | 35 | 35 |
| | 0 | 70 |
| CV (24V) | 60 | 0 |
| | 30 | 30 |
| | 0 | 60 |
| CV (12V) | 40 | 0 |
| | 20 | 20 |
| | 0 | 40 |

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## CONTROL PORT CHARACTERISTICS

| | |
|---|---|
| Power Supply | 24VDC/0.5Amps for powering external sensors |
| Sensor Inputs | *MHTi-RJM-3WIRE* and *MHTi-RJF-3WIRE* adapter enables universal connections (24VDC, Trigger, GND) to Control Devices |
| MHTi-Wall Switch | *MHTi-WS-100* (4-button) and *MHTi-WS-200* (7-button) can use an unshielded female RJ45 jack with CAT5e/6/6A cable. |
| Sensor/Wall Switch | MHTi-SPLT-1X4 splitter allow to connect sensor and MHTi-WS 100 (4-button) and/or MHTi-WS-200 (7-button) |

## SPRING CAGE CONNECTOR SPECIFICATIONS

| | |
|---|---|
| 24VDC | 24VDC @ 1 Amps to power external devices such as the MHTi-EM-EXT to keep 0-10V line voltage fixture ON connected to an EM line voltage when there a PoE power lost. The power consumed from a device connected from 24VDC to GND is part of the output channels power budget. |
| 0-10V | 0-10V dimming control for line voltage fixtures |
| Input | Analog Input reads analog events from sensors or trigger devices, enabling the Node to take specific actions based on the received information. |
| 485A and B | RS-485, half-duplex, 230.4k baud, 120 ohms impedance. Allows communication with compatible devices using this protocol. |
| GND | Circuit ground connection |

## NODE ENVIRONMENTAL REQUIREMENTS

| | |
|---|---|
| Operating Temperature | -20°C to 50°C |
| Operating Environmental | For dry or damp locations |
| Operating Humidity | 10% to 80% RH non-condensing |
| Storage Temperature | -20°C to 85°C |
| Storage Humidity | 5% to 95% RH non-condensing |

## OTHER SPECIFICATIONS

| | |
|---|---|
| Dimension Overall | 7.303” (185.5mm) L x 2.755” (70mm) W x 0.846” (21.5mm) K |
| Mounting Dimensions | 4 Mounting holes Ø: .164”<br>6.948” (176.5mm) L x 2.125” (54mm) W |
| Origin | Made in USA |

## ORDERING INFO: **Sample Code** - MHTi-NODE-90-CC

| Series | Type | Description |
|---|---|---|
| MHTi-NODE-90 | CC | Constant Current |
| | CV | Constant Voltage |
| | CCCV | Programmable CC/CV |
| | CC010 | Constant Current, 0 to 10 reference |
| | CCRS485 | Constant Current, RS485 |
| | CVRS485 | Constant Voltage, RS485 |
| | CCCVRS485 | Programmable CC/CV, RS485 |
| | CCCV010 | Programmable CC/CV, 0 to 10 reference |
| | CV-USBC | Constant Voltage for USBC Module |

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