AM255360031, AM305660031, AM305690031

e:cue
SYMPL pro Node (e:pix)

Information for Use

Downloads and more information at:
www.ecue.com

Table of Contents

1   Security instructions

Please read and follow the safety instructions, provided in a separate manual, carefully. Make sure that the environmental, mounting, and installation prerequisites are met. This manual should be kept at a safe place and in reach of the device.

1.1   Symbols

⚠️ The exclamation mark warns about possible damage of the device itself, to connected devices, and to the user.

ℹ️ The information symbol gives general hints and informs about handling and procedures for use of the device.

1.2   General security instructions

⚠️
— Connect cables and data only when the device is powered down.

— Ground the Ethernet and DMX connection cables for outdoor installations (optional for indoor only). Connect the SYMPL pro Node (e:pix) to Protective Earth when at least one connected cable runs outdoor.

— The device must be supplied by a separate power supply that is certified according to the local regulations (e.g. SELV, Class 2).

ℹ️
— If safety instructions are missing, please contact Traxon e:cue to receive a new copy.

2   General device description

e:cue SYMPL Nodes are a system of interfaces for e:cue SYMPHOLIGHT only. They provide various connection types like DMX/RDM, DALI, digital inputs and outputs etc. SYMPL Nodes always operate in online mode, as a device interface for SYMPHOLIGHT. All interactions are initiated and controlled by SYMPHOLIGHT. Connections between servers, Cores and Nodes are always made with e:net via Ethernet.

The SYMPL pro Node (e:pix) is the dedicated output device for a high amount of controllable channels. It comes with 8 x DMX/RDM*) universes or 8 x e:pix/RDM*) universes over screw terminal plugs.

The SYMPL pro Node (e:pix) is especially designed for the control of medium to large size DMX/RDM*) installations. Within SYMPHOLIGHT the SYMPL pro Node makes it possible to run up to 4096 DMX/ RDM channels (= 1360 RGB pixels, 170 pxl/universe) over Ethernet, with bidirectional communication and all benefits from RDM. The e:pix version runs up to 16,348 DMX/ RDM channels (= 5456 RGB pixels, 682 pxl/universe).

With an extended operating temperature of -40 ... 70°C (max 1 hour/day; continuous operation at max. 60 °C) the SYMPL pro Node (e:pix) is suited for projects in tough outdoor environments. In addition to embedded temperature and humidity sensors*) whose data is readable in SYMPHOLIGHT, a backup on data loss and test modes add to the features of the SYMPL Node.

The SYMPL Node is powered by an external power supply or via Power-over-Ethernet. It is

easily mounted on standard 35 mm DIN rails, or with a key hole in the housing base on walls or on any stable vertical surface.

*) e:pix and the sensors are not available in all product versions:

	DMX	RDM	e:pix	sensors
SYMPL pro Node	x	x	-	x
SYMPL pro Node e:pix	x	x	x	x

Please refer to your product version for the applicable features throughout this manual.

> **i**
> — To operate the SYMPL pro Node (e:pix) a SYMPHOLIGHT version 3.0 or higher or a Lighting Application Suite version 7.0 SR2 or higher is mandatory.
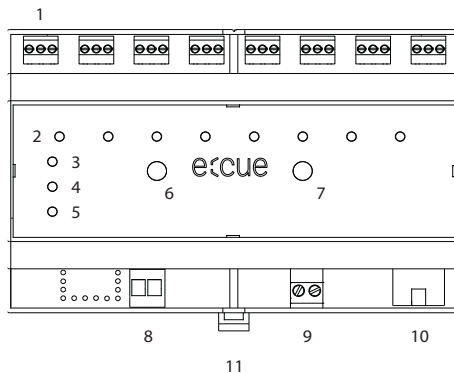> — e:cue SYMPL Noes are not hot-pluggable.

2.1 Delivery content

Delivery content of the e:cue SYMPL pro Node (e:pix) -
Product number AM255360031, AM305660031, AM305690031
1. SYMPL pro Node (e:pix)
2. Safety instructions
3. Installation guide

2.2 Connectors and Interfaces

View from top:

1	DMX output 1 ... 8 (GND, DMX-, DMX+ left to right)
2	DMX/RDM status LEDs
3	Test / Error LED
4	e:net LED (Ethernet, LAN activity)
5	Status LED (Device status)
6	Identify button
7	Test button
8	Protective Earth
9	Power supply (Vcc+, Vcc- left to right)
10	e:net / Ethernet
11	DIN rail handle

2.3 User interface: LEDs

The SYMPL pro Node (e:pix) has 11 LEDs on the front panel. The 11 LEDs show the basic states of the SYMPL pro Node (e:pix).

LEDs

Status	On: If constantly on, the device is online. Server application is in operation. Blinking: If blinking in one second intervals, the device is offline, no connection to a SYMPHOLIGHT server or Core is available. If blinking more rapidly, the device is in bootloader mode.
e:net	Off: no link available. On: link established. Blinking: e:net traffic.

Test / Error	Off: no error detected.
	Short-short-long sequence: Test mode active.
	On: If constantly lights in red, an error occurred. This can be an internal error or malfunction of the device, or an external error, e.g. a shortcut of interface connections or alien power supply. Switch the device off and on. If the error persists, check the wiring or contact Traxon e:cue Service.
Status + Test / Error	The Status and Test / Error LED blink simultaneously to identify the SYMPL Node (enabled "Identify Interface Mode" in SYMPHOLIGHT).
DMX 1 ... 8	Orange: DMX/RDM data outgoing.
	White: e:pix data outgoing.
	Blue: data incoming.
	Orange + White: port error.

2.4 Identify button: Identification & Reset

The Identify button has three functions: to send an Identify message (A), to reset the Node (B), and to exit the error state (C). For the e:pix version, the Identify button additionally switches protocol during Test mode (D).

(A) Only available with e:net: A short press during operation in online mode sends an Identify message to the server. This helps to assign the Node in the Setup tab in SYMPHOLIGHT.

(B) The Identify button can also be used to reset the device to factory state or to stay in bootloader mode. With a reset you restore the password and device settings by using the Identify button. Please note that the device name is not reset:

- Keep the Identify button pressed while powering up, Status and Test / Error LEDs light up at first. Bootloader mode is signaled by a fast blinking Status LED. Release the button now. The device stays in bootloader mode to download a new firmware.
To exit the bootloader mode, short press the Identify button again.

- Press the Identify button during operation until Status and Test / Error LEDs blink alternating, then blink together. Releasing the button now resets the device to its factory settings. The password and network settings are reset to their default values. Please note that the device name cannot be reset.

- Keeping the button pressed further on, the device proceeds to normal operation. No changes apply.

(C) Short press the Identify button if an error occurs and you want to exit the error mode. The device will switch back to normal activity if the cause of error is eliminated. The Node might reboot.

(D) e:pix version only: During test mode, single press the Identify button to switch between e:pix and DMX protocol in the test.

3   General remarks

3.1 Transport

Only transport the device in its original packaging. This protects the device from damage.

3.2 Unpacking

Only unpack the device at its installation location. To protect the device against condensation water, unpack it and wait until all moisture remaining in the device has evaporated. Condensation can occur when the device is moved from a cold to a warm location. Keep the packaging for use in case of further transport. Inspect all parts for completeness regarding chapter "2.1 Delivery content" (page 04). If there is apparent damage to the device or parts are missing from the delivery scope, please contact the Traxon e:cue support service.

3.3   Warranty regulations

Depending on the product, warranty regulations are of different duration. The warranty time is usually noted in the quote and in the order confirmation. See www.traxon-ecue.com/terms-and-conditions for details. Legal warranty regulations apply in any case.

3.4   Maintenance and Repair

This device requires no maintenance.

⚠️ — Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

— Do not try to repair the device. Return it to your Traxon e:cue distributor for replacement or repair.

To update the firmware see „8 Firmware Update" on page 12.

3.5   Disposal

Batteries and technical appliances must not be disposed of with domestic waste, but should be handed in at the appropriate collection and disposal points.

The proper disposal of packing materials and of the device is the responsibility of the respective user and for his account; in all other matters, the retrieval obligation for packing materials and the device is subject to the statutory regulations.

3.6   Support

In case of technical problems or questions regarding installation and repair please contact:

Traxon Technologies Europe GmbH

Customer Service

Karl-Schurz-Str. 38

33100 Paderborn, Germany

+49 (5251) 54648-0

support@ecue.com

4   Installation

The installation of the SYMPL pro Node (e:pix) consists of mounting the device, connections to power supply, to e:net, and to the DMX (e:pix) devices.
The sequence of cabling is not defined. Supply the device with power after all cabling is completed; it starts booting.

⚠️ Connect cables and data only when the device is powered down.

4.1   Installation conditions

Installation position	Terminals on top and bottom
Horizontal spacing	On both sides 18 mm
Minimum vertical rail grid spacing	115 mm (90 + 25 mm) (excluding conduit)
Recommended vertical rail grid spacing	160 mm (with 40 mm conduit)

4.2   Mounting process

The SYMPL pro Node (e:pix) is designed to mount onto a 35mm DIN rail (EN 60715) in a horizontal position.
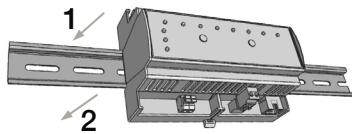
1.   Clip the device to the rail from top.

2.   Apply gentle pressure to the top front to snap it in place. The device has been mounted successfully.

You can also mount the device on any flat surface. Use a 3 to 3.5mm screw for the hanger hole.

For mechanical stability, mounting on a rail is recommended.

4.3   Ethernet connection

The pin-assignment of the Ethernet port corresponds to RJ45 standards. You can use every common Ethernet component, like cable, splitters, and switches. Connect the SYMPL pro Node (e:pix) at the designated Ethernet interface with a patch cable (RJ45, CAT5).

⚠   — Ground the Ethernet cable for outdoor installations (optional for indoor only).

ℹ   — Never connect more than one SYMPL pro Node (e:pix) in factory state to a network. The identical IP addresses will conflict and disturb proper communication.

4.4   DMX connection

The SYMPL pro Node (e:pix) can control eight DMX (e:pix) universes with its eight DMX ports. Connect DMX (e:pix) devices to the SYMPL Node using 3-pin terminal plugs at the DMX interface of the SYMPL Node.

The appropriate pin assignment is defined as follows:
        From left to right: GND, DMX-, DMX+
It is recommended to use twisted pair cabling.
Use shielded cables for outdoor installations.

⚠   Ground the DMX connection cable for outdoor installations (optional for indoor only). Ground each cable seperately.

4.5   Power supply

The e:cue SYMPL pro Node (e:pix) can be powered by an external power supply or via Power-over-Ethernet.

PoE:
For PoE, simply connect an Ethernet connection from a power sourcing device.

External power supply:
Connect the SYMPL pro Node (e:pix) to a certified NEC Class 2 24 V DC power supply unit. Present power supply equates to the status "On" or running of the SYMPL Node.

To connect the device to a power supply unit, use the provided 2-pole terminal and lay the wires as stated on the front label. The voltage assignment is left V+ and right V-.

Turn the power on when all cables are connected to the SYMPL pro Node (e:pix). The device starts booting. During the booting process all DMX/RDM LEDs turn on consecutively. The device has finished booting and is in operation when the LED Status is flashing.

ℹ   The SYMPL pro Node (e:pix) is not suited for powering over a DC power supply network. The device must be supplied by a separate power supply that is certified according to the local regulations (e.g. SELV, Class 2).
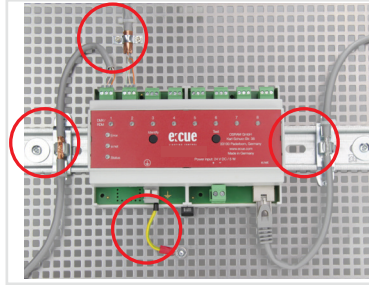
content

4.6   Protective Earth

⚠️ Connect the SYMPL pro Node (e:pix)'s Portective Earth to earth when at least one connected cable runs outdoors.

Grounding of the SYMPL pro Node (e:pix)
Use Protective Earth where applicable.
Ground the DMX connection
cable and the Ethernet cable.
Ground each cable separately.

5   Network configuration

The configuration of the e:cue SYMPL pro Node (e:pix) is completely done via e:cue SYMPHOLIGHT. See the SYMPHOLIGHT System Manual for details on configuration, available at www.ecue.com.

The network properties of the device are preconfigured. The successful installation of the power supply is required for changing the network configuration. You can either adjust the network settings with SYMPHOLIGHT or using the web interface of the device. Via the web interface extended DMX / RDM settings are configurable.

5.1   Default network properties

The SYMPL pro Node (e:pix) has as factory setting the default IP address 192.168.123.1.
Subnet mask: 255.255.255.0.
DHCP is enabled by default.

Login credentials for the web interface of the SYMPL pro Node (e:pix):
The default password is: **ecue**

To change the network configuration use either SYMPHOLIGHT or the web interface of the device:

5.2   Network configuration with SYMPHOLIGHT

1. Open the context menu of the SYMPL pro Node (e:pix) in the Setup tab of SYMPHOLIGHT by a right-click on the device.

2. Select "Configure Network":
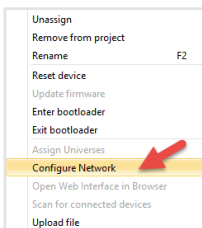
3. Define the IP address, the subnet mask and the DHCP settings to your needs:
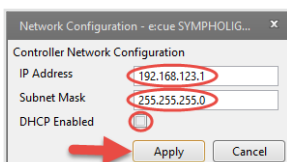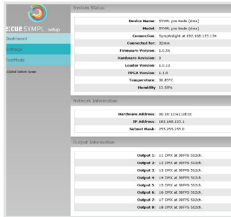
4.   Click "Apply" to submit the changes.

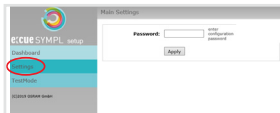The network configuration of the device is completed.

5.3   Network configuration with the web interface

1.   Open a common web browser on a connected PC. Enter the SYMPL pro Node (e:pix)'s IP address into the address bar:
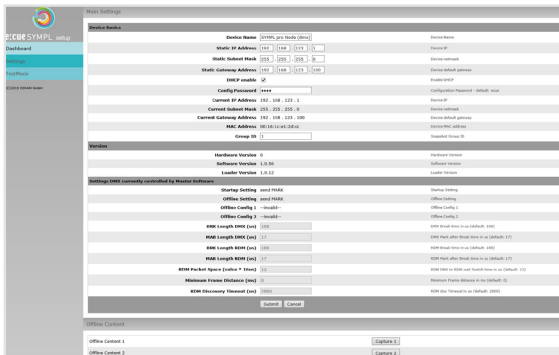e.g. http://192.168.123.1.
The web interface of the device is displayed:

2.   On the left side, select "Settings" and enter the default password **ecue**:

3.   Click "Apply". The Settings page is displayed:

4.   Define the network settings at "Device Basics" to your needs. You can also change the password for entry to the web interfaces of the device here. Entering an empty value disables the password protection.

5.   Click "Submit" to apply the settings.

The network configuration of the device is completed.

ℹ — The employment of a discrete network is recommended.

 — Note down all employed and, if applicable, reserved IP addresses. Keep the information for future network configurations.

 — You can change the login password to the SYMPL pro Node (e:pix)'s configuration page and its device name at "Settings" page. Do not forget the new password.

 — The SYMPL pro Node (e:pix) should be only accessed from one browser tab at a time.
 In case there is no response please wait a while or reopen the browser to end pending connections.

 — Please note that after changing the IP address, the device currently will lose its connection and needs to be reconnected under the new IP address.

6   Extended DMX/RDM settings

DMX/RDM settings are configured via SYMPHOLIGHT at the properties of the SYMPL pro Node (e:pix) in the Setup Tab. Is the Node not connected to SYMPHOLIGHT, extended DMX/RDM settings take effect.

Over the web interface of the SYMPL pro Node (e:pix) you can define the DMX/RDM properties for

- the period of powering up until a show takes over (Startup Setting)

- the time of no e:net connection (Offline Setting) - after prior connection to a show

- DMX and RDM Break time and Mark

- DMX to RDM wait Switch time (RDM Packet Space)

- minimum frame distance

- RDM discovery timeout (RDM DISC Timeout).

These properties are only configurable when the device is not assigned to a show. SYMPHOLIGHT must have had control once over the Node for the settings to take effect.

To access the web interface, open a common web browser on a connected PC. Enter the device's IP address into the address bar:
e.g. http://192.168.123.1.

At Startup Setting and Offline Setting, the setting "send MARK" sends a MARK (a logical one) on the bus: no data are sent to the fixtures and the DMX port awaits further commands.

You can also capture content (snapshots) and use it for Startup and Offline Settings:
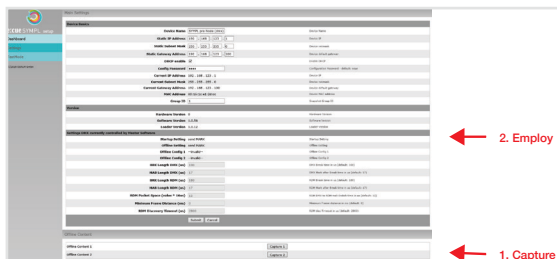
By assigning a Group ID to multiple SYMPL pro Nodes (e:pix), the content of all identically assigned SYMPL pro Nodes (e:pix) is captured and likewise displayed on these devices.

Running Startup Setting is indicated by flashing DMX/RDM status LEDs.

Please note that when you select an content image (snapshot) at these settings, the framerate of the displayed image is reduced to 20 FPS.

7   Test mode

- SYMPHOLIGHT v5.0 or higher needed-

The SYMPL pro Node (e:pix) provides a Test mode for the connected DMX devices. The Test mode is designed for DMX luminaires. There are two kinds: using the Test button and using the web interface of the SYMPL pro Node (e:pix).
Please note that the Test mode overwrites all other DMX output like running shows, Startup Setting's or Offline Setting's output for the time of testing. A running show, the Startup and the Offline output respectively are reverted to after exiting the Test mode.
The Test mode is indicated by flickering DMX/RDM LED(s) and the blinking Test / Error LED.

7.1   Test mode via Test button

The Test button allows to test the connected DMX devices directly with the SYMPL pro Node (e:pix).

- Keep the Test button pressed for about 5 seconds until the Test / Error LED flashes in the short-short-long sequence and the DMX 1 LED lights constantly. Releasing the button now starts the Test mode at the DMX port 1 with blinking lights of all channels.

- Short-press the Test button each time to switch between the following test patterns:
  DMX port 2: All channels blink.
  DMX port 3: All channels blink.
  DMX port 4: All channels blink.
  DMX port 5: All channels blink.
  DMX port 6: All channels blink.
  DMX port 7: All channels blink.
  DMX port 8: All channels blink.
  All ports: All channels blink.
  All ports: All channels to 100%.
  All ports: All channels to 0%.
  Repetition, beginning from the test pattern for DMX port 1.

- To exit the Test mode at any time, keep the Test button pressed for 5 seconds. The device proceeds to normal operation. The DMX LEDs no longer flicker and the Test / Error LED is off. The last test pattern will not be exited by the device.

- e:pix version: Press the Identify button to switch between DMX (orange port LEDs) and e:pix (white port LEDs) testing output.

7.2   Test mode via web interface

The web interface of the SYMPL pro Node (e:pix) provides four different test patterns and allows to change their properties.
To access the web interface, open a common web browser on a connected PC. Enter the
SYMPL pro Node (e:pix)'s IP address into the address bar:
e.g. http://192.168.123.1.

Open the Test mode page by selecting "TestMode" on the left side of the web interface of the SYMPL pro Node (e:pix):
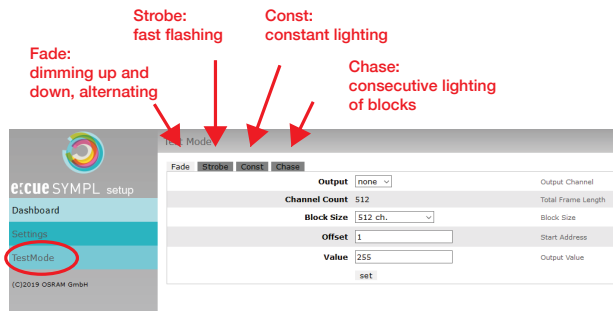
Click a button to choose a test pattern. Define the properties:

Property	Description
Output	DMX/RDM ports to run the test on.
Channel Count	Total frame length. Editable in "TestMode e:pix" on SYMPL pro Node (e:pix) only.
Block Size	Block size in which to step through the frame length in channel count.
Offset	Start address of the first test loop (first channel = 1).
Value	Luminance of the test output (0 - 255).
Step Time	Delay between steps. **Manual**: Press the Test button to move the block. Define the first channel at "Start Address".

Click "set" to run the test and to apply changes in the test settings.

Exit the Test mode by leaving the Test mode page, e.g. go to "Dashboard" or double-pressing the Identify button.

8 Firmware Update

To update the SYMPL pro Node (e:pix), a connection of the SYMPL pro Node (e:pix) to SYMPHOLIGHT is required.

Updating with SYMPHOLIGHT
Use the usual update options in the Device Tree of the Setup tab in SYMPHOLIGHT: select "Update firmware" in the context menu of the SYMPL pro Node (e:pix) or click the Update button ⟳ in the head toolbar.

9 Dismounting

Disconnect all attached cables. Dismount the e:cue SYMPL pro Node (e:pix) from the rail by pulling the black DIN rail handle and unhitching the SYMPL Node. The dismounting is completed.

⚠ Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

10 Product specifications

Product	Product number
SYMPL pro Node	AM255360031
with CE only	AM305660031
SYMPL pro Node e:pix	AM305690031
Dimensions (W x H x D)	143 x 92 x 62 mm / 5.63 x 3.6 x 2.4 in (excl. fastening clip)
Weight	250 g / 0.55 lb
Power supply input	24 … 48 V DC (terminal plug) Cable cross section: 0.205 – 3.31 mm^2 reverse polarity protection or PoE IEEE 802.3af on RJ45
Power consumption	max. 8 W (incl. DMX termination)
Operating temperature	-40 … 70 °C */ -40 … 158 °F *
Storage temperature	-40 … 70 °C / -40 … 158 °F
Operating / storage humidity	0 … 80% RH, non-condensing
Protection class	IP20
Electrical safety class	SELV
Housing	Self extinguishing blend PC/ABS UL E140692
Mounting	on 35 mm DIN rail (EN 60715), or with key hole on any stable vertical surface
Certificates	CE, UKCA, ETL[1][3]

Interface specifications

Interfaces	8 x DMX512/RDM[1][2] or 8 x e:pix/RDM [3] isolated in pairs, surge protection 3-pin terminal plug Cable cross section: 0.81 – 1.31 mm^2
Interface specifications	V_{DMXmax}/V_{DMXmin} = 4.6 V/0.8 V Short circuit protected: I_{SCmax} = 100 mA
Ethernet-Port	1 x e:net 10/100 Mbit/s RJ45, surge protection
Sensors, internal	Temperature -40 … 120 °C (±0.2 °C) / -40 … 248 °F (±0.36 °F) Humidity 0 … 100% (±2%)
User interfaces	LEDs for Test / Error, Ethernet activity, device status, DMX/RDM status Identify button, Test button

*)   70 °C / 158 °F for max. 1 hour/day;
continuous operation at max. 60 °C / 140 °F.

1) e:cue SYMPL pro Node
2) e:cue SYMPL pro Node with CE only
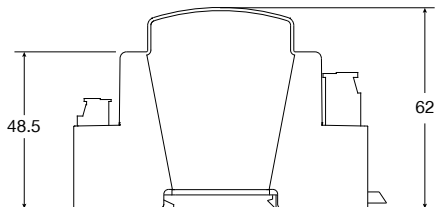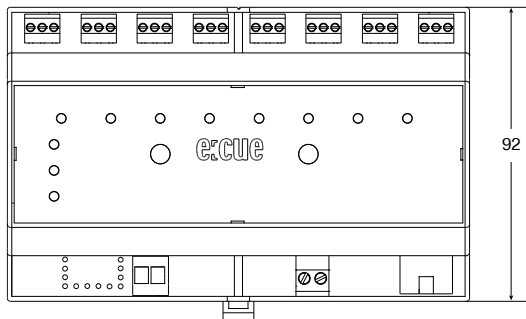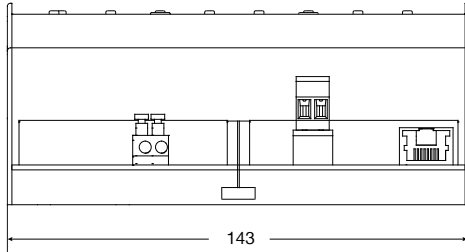3) e:cue SYMPL pro Node e:pix

content

11 Certifications

Conforms to UL Std. 62368-1

Certified to CSA Std. C22.2 NO. 62368-1

12 Dimensions

All dimensions in mm

Please check for the latest updates and changes on the Traxon website.

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www.traxon-ecue.com

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