e:cue

TRAXON | e:cue
MEMBER OF PROSPERITY GROUP

AB444190035

e:cue
SYMPL relay Node

Information for Use

Read the Information for Use and the Safety Instructions carefully. Subject to modification without prior notice. Typographical and other errors do not justify any claim for damages. Modification of the product is prohibited.
This manual is designed for electricians, system administrators, and product users.
All product names and trademarks mentioned in this manual are trademarks of their respective owners.
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Downloads and more information at:
www.ecue.com

Table of Contents

1   Safety instructions

Please read 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 instructions

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

— The maximum length of each connected cable is 30 m.

— When using a power supply unit, 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 DMX512, 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 e:cue SYMPL relay Node is a switching interface for use with e:cue's lighting control solution SYMPHOLIGHT. It provides three relay interfaces in single-pole double-throw configuration. The e:cue SYMPL relay Node can be 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. The e:cue SYMPL relay Node is a simple, reliable and easy to use interface solution for e:cue lighting control solutions with SYMPHOLIGHT.

ℹ️
— To operate SYMPL Nodes a SYMPHOLIGHT version 2.0 or higher is mandatory. Earlier versions do not support the SYMPL Nodes. SYMPL Nodes are not supported by the e:cue Lighting Application Suite.

— Connections to the SYMPL relay Node are not hot-pluggable.

2.1   Delivery content

Delivery content for the e:cue SYMPL relay Node (AB444190035):

1. e:cue SYMPL relay Node
2. Safety instructions
3. Welcome note

2.2   Product specifications

Dimensions (W x H x D)	53.5 x 90.5 x 62 mm/ 2.1 x 3.6 x 2.4 in (excl. fastening clip)
Weight	125 g / 0.27 lb
Power supply	24 V DC (terminal plug) wire gauge: 0.21 ... 3.31 sqmm; or PoE IEEE 802.3af on RJ45
Power consumption	2.8 W
Operating temperature	-20 ... 50 °C / -4 ... 122 °F
Storage temperature	-20 ... 70 °C / -4 ... 158 °F
Electrical safety	SELV
Op./storage humidity	0 ... 80% non-condensing
Protection Class	IP20
Installation	Indoor installation only, intra building communication only
Housing material	Self extinguishing blend PC/ABS UL document E140692
Mounting	on 35 mm DIN rail (EN 60715), 3 units or with key hole on any stable vertical surface
Certification	CE, ETL, UKCA

Interface specifications

Interfaces	3 x SPDT relays, 3-pin terminal plug wire gauge: 0.21 ... 3.31 sqmm
Interface specifications	Contact ratings per relay: UL approved: 3 A @ 250 V AC / 3 A @ 30 V DC VDE approved: 5 A @ 250 V AC (resistive load) / 2 A @ 250 V AC ; cos(phi)=0.5 Reinforced isolation contact/control system: 5 kV (1.2/50µs) Isolation between contacts:1 kV (AC)
Ethernet-Port	1 x e:net 10/100 Mbit/s, RJ-45
User interface	LEDs for error, Ethernet activity, device status, relay status Identify button

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content

2.3   Connectors and interfaces

View from top:
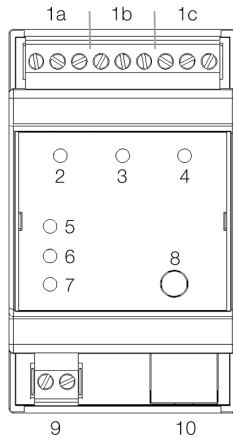
1a	Relay output 1 (NO/NC/COM left to right *)	„4.4 Load connection" on page 08
1b	Relay output 2 (NO/NC/COM left to right *)	
1c	Relay output 3 (NO/NC/COM left to right *)	
2	Relay 1 status LED	„2.4 User interface: LEDs" on page 05
3	Relay 2 status LED	
4	Relay 3 status LED	
5	Test / Error LED	
6	e:net LED (Ethernet, LAN activity)	
7	Status LED (Device status)	
8	Identify button	„2.5 Identify button: Identification & Reset" on page 06
9	Power supply (Vcc+, Vcc– left to right)	„4.5 Power supply" on page 08
10	e:net / Ethernet	„4.3 Ethernet connection" on page 08

*) LED is off: relay is inactive

      NO (normally open) = not connected to COM

      NC (normally closed) =connected to COM

      COM = common

LED is on: relay is active

      NO (normally open) = connected to COM

      NC (normally closed) = not connected to COM

      COM = common

2.4   User interface: LEDs

The SYMPL relay Node has six LEDs on the front panel. The six LEDs show the basic states of the SYMPL relay Node.

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).
Status relay 1 to 3	Off: relay inactive (=open). Orange: relay active (=closed).

2.5 Identify button: Identification & Reset & Test

The Identify button has four functions: to send an Identify message (A), to reset the Node (B), to test the installation (C), and to exit the error state (D)

(A) A short press during operation in online mode sends an Identify message to the server. This allows the Node of the installation to be associated with the indicated Node 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 other properties by using the Identify button. Please note that the device name and the offline content are 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 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 other settings are reset to their default values. Please note that the Offline Content cannot be reset. To employ a reset Startup behavior, a restart of the device is required.

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

(C) Use the Identify button also to test the connected fixtures to ensure their correct installation.

- Access the Test mode of the SYMPL Node by double-pressing the Identify button during operation. The Test / Error LED signals the Test mode by blinking short-short-long repeatedly.

- Single-press the Identify button to switch between the following Test patterns:
  - Each relay closed (=active) consecutively.
  - All relays closed (=active).
  - All relays open.

- Exit the Test mode any time by double-pressing the Identify button again. The device proceeds to normal operation. The Test / Error LED is off.

(D) 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.

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 e:cue SYMPL relay Node 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"

. 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 „7 Firmware Update" on page 11.

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

> ⚠️ — Connect cables and data only when the device is powered down.
>
> — Each cable should not exceed a length of 30 m.

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

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4.1 Installation conditions

Installation position	Terminals on top and bottom
Horizontal spacing	No spacing necessary
Minimum vertical rail grid spacing	115 mm (90 + 25 mm) (excluding conduit)
Recommended vertical rail grid spacing	160 mm (with 40 mm conduit)
Installation location	Indoor

4.2 Mounting process

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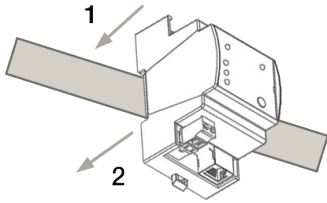
1. Clip the device to the rail from top.

2. Gentle pressure is then applied to the top front to snap it in place. The SYMPL relay Node has been mounted successfully.

You can also mount the e:cue SYMPL relay Node on any flat vertical surface. Use 3 to 3.5 mm screws for the hanger hole.

i For mechanical stability, mounting on a rail is recommended.

4.3 Ethernet connection

⚠ — Never connect more than one SYMPL Node in factory state to a network. The identical IP addresses will conflict and disturb proper communication.

— The Ethernet port of the SYMPL Node is not designed for inter-building connections with power and lighting transients. Use only intra-building networks to connect the SYMPL Nodes and Cores.

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

4.4 Load connection

The SYMPL relay Node can control three loads with its three relay interfaces. Connect loads to the SYMPL Node using 3-pin terminal plugs at the relay interfaces of the SYMPL Node.

The appropriate pin assignment is defined as follows:
From left to right: NO, NC, COM.

4.5 Power supply

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

PoE:
Connect an Ethernet connection from a power sourcing device.

External power supply:

Connect the SYMPL relay Node to a 24 V DC power supply unit that complies with the local regulations. Present power supply equates to the status "On" or running of the SYMPL relay 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 relay Node. The device starts operating. The device is in operation when the LED Status is flashing.

⚠️ The SYMPL relay Node 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).

5 Network configuration

The configuration of the e:cue SYMPL relay Node 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 SYMPL relay Node 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 SYMPL relay Node

5.1 Default network properties

The SYMPL relay Node 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 relay Node:

The default password is: **ecue**

To change the network configuration use either SYMPHOLIGHT or the web interface of the SYMPL relay Node:

5.2 Network configuration with SYMPHOLIGHT

1. Open the context menu of the SYMPL relay Node in the Setup tab of SYMPHOLIGHT by a right-click on the device.

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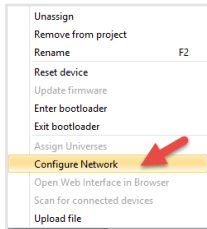
3. Define the IP address, the subnet mask and the DHCP settings to your needs:
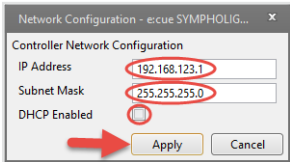
4. Click "Apply" to submit the changes.

The network configuration of the SYMPL relay Node is completed.
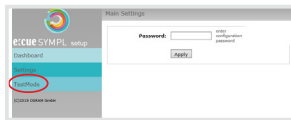
5.3   Network configuration with the web interface

1.   Open a common web browser on a connected PC. Enter the SYMPL relay Node's IP address into the address bar:
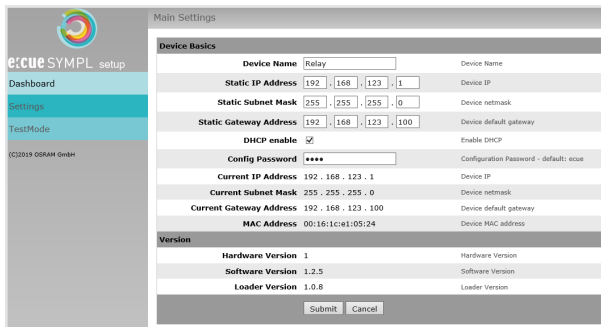e.g. http://192.168.123.1

The web interface of the SYMPL relay Node 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 SYMPL relay Node here.

5.   Click "Submit" to apply the settings.

The network configuration of the SYMPL relay Node 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 relay Node's configuration page and the device name of the SYMPL relay Node at "Settings" page. Do not forget the new password.

6   Test mode

- SYMPHOLIGHT v5.0 or higher needed-

The SYMPL relay Node provides a Test mode for the connected loads. There are two kinds: using the Identify button and using the web interface of the SYMPL relay Node.
Please note that the Test mode overwrites all relay states from running shows for the time of testing. A running show is reverted to after exiting the Test mode.
The Test mode is indicated by the blinking Test / Error LED.

6.1   Test mode via Identify button

See section (C) on page 06 at "2.5 Identify button: Identification & Reset".

6.2   Test mode via Web interface

The web interface of the SYMPL relay Node provides individual relay testing in free combination.
To access the web interface, open a common web browser on a connected PC. Enter the SYMPL relay Node'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 relay Node:
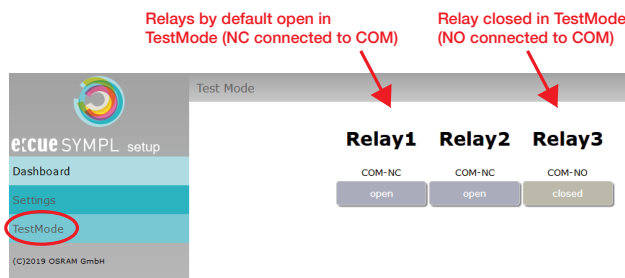
Click the "open" button of a relay to close the relay. Open it again by clicking the button (now "closed") anew.

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

7   Firmware Update

To update the SYMPL relay Node, a connection of the SYMPL relay Node 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 relay Node or click the Update button ⟳ in the head toolbar.

8   Dismounting

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

Disconnect all attached cables. Dismount the e:cue SYMPL relay Node from the rail by pulling the black DIN

rail handle and unhitching the SYMPL relay Node. The dismounting is completed.

9   Certifications

Conforms to UL Std. 62368-1

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

10   Dimensions

All dimensions in mm

53.5

62

90.5