

# SYMPL Fusion



## e:cue SYMPL Fusion

Whatever setup your project requires, the SYMPL Fusion always has the right configuration at hand. The modular slot card concept allows the freedom to compose your individual demands. The SYMPL Fusion can be used as a simple standalone controller, expandable in a network with other e:cue devices, or as a decentralized control unit linked to multiple others. The SYMPL Fusion is the right choice for all lighting control requirements, functional lighting, dynamic lighting control or if needed the combination of both!

## Highlights

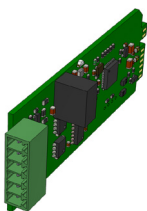
- 4 x Modular slot cards per device, different options available:

DMX512 Module

DALI-2 Module

0 ... 10 V / 1 ... 10 V

SPI, Relay, Serial (coming soon)



- Free configuration and combination of slot cards
- 2 x Ethernet for daisy chaining or independent operation
- 4 x Digital inputs
- 2 x Freely assignable versatile buttons
- 2 x Buttons for direct test mode – no software needed
- Integrated RTC including astronomical clock and daylight savings
- Expandable with additional SYMPL devices via network
- Art-Net or sACN output
- BACnet / KNX interface via additional Gateway

## SYMPL FUSION

### Delivery scope

- e:cue SYMPL FUSION Base Device
- Welcome note, safety instructions

### Identcode

CL24100603935

### Optional accessories

- SYMPL FUSION DMX512 Module 1 Port  
(details on page 3) CL24100604135
- SYMPL FUSION DMX512 Module 2 Ports  
(details on page 3) CL24100604235
- SYMPL FUSION DALI-2 Module 1 Port  
(details on page 3) CL24100604035
- SYMPL FUSION 0/1-10V Module 4 Ports  
(details on page 4) CL25100005335
- SPI Pixel Module (coming soon) tba
- Relay Module (coming soon) tba
- RS232 / RS485 Module (coming soon) tba
- Power supply 30W 24V DIN rail AM1884200HA

### Product specifications

Dimensions (W x H x D)	160 x 90 x 60 mm / 6.3 x 3.54 x 2.36 in (excl. fastening clip) Width: 9 units
Weight	250 g / 0.55 lb
Power supply input	24 V DC on terminal plug, wire gauge: 0.2 ... 1.3 mm <sup>2</sup>
Power consumption	max. 30 W @ 4x DALI-2 modules @ full load 7 W @ no modules
Operating temperature	-20 ... 40 °C / -4 ... 104 °F
Storage temperature	-20 ... 70 °C / -4 ... 158 °F
Op. / Stor. humidity	0 ... 80% RH, non-condensing
Cooling	Fanless, convection

Protection class	IP20
Electrical safety	SELV
Housing	Self extinguishing blend PC/ABS
Mounting	On 35 mm DIN rail (EN 60715)
Certificates	CE, UKCA, ETL

**Interface specifications**

Output interfaces	4 x Modular slot card, types: DMX512 Module DALI-2 Module coming soon: 0 ... 10 V / 1 ... 10 V Module SPI Pixel Module Relay Module RS232 / RS485 Module
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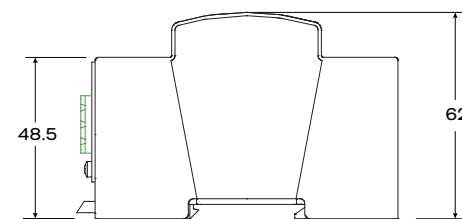
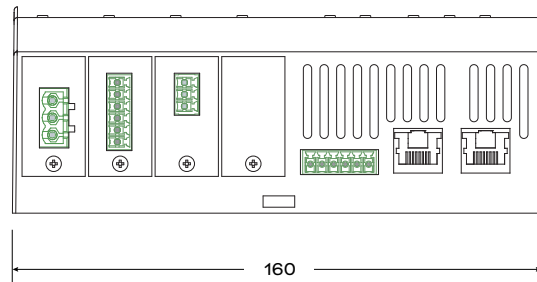
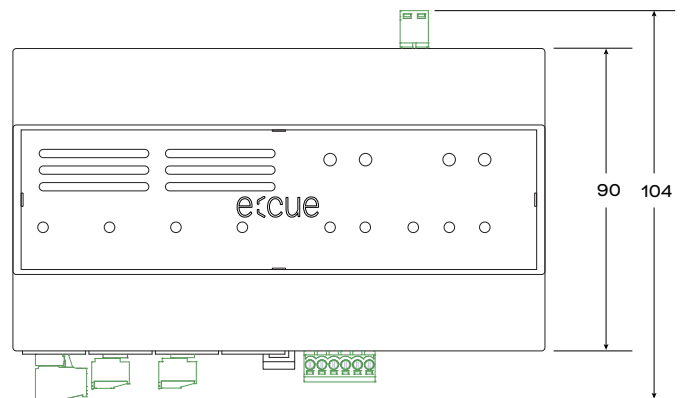
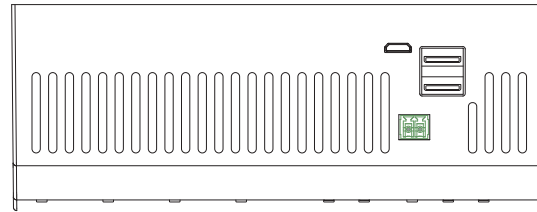
Input interfaces	4 x Digital input common ground connector terminal plug row wire gauge: 0.08 ... 1.31 mm <sup>2</sup> max. input voltage 24 V DC								
	<table border="1"> <thead> <tr> <th>Input voltage</th> <th>Input current</th> </tr> </thead> <tbody> <tr> <td>5 V DC</td> <td>2 mA</td> </tr> <tr> <td>12 V DC</td> <td>6 mA</td> </tr> <tr> <td>24 V DC</td> <td>12 mA</td> </tr> </tbody> </table>	Input voltage	Input current	5 V DC	2 mA	12 V DC	6 mA	24 V DC	12 mA
Input voltage	Input current								
5 V DC	2 mA								
12 V DC	6 mA								
24 V DC	12 mA								
	12 V source: max. output current 50 mA								
	high level input threshold: 3 ... 24 V low level input threshold: 0 ... 1 V								


System interfaces	2 x e:net / Ethernet, 10/100/1000 Mbit/s, RJ45, CAT shielded 2 x USB 2.0 Type A 1 x Service port (micro-USB)
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User interfaces	LEDs for Ethernet activity, device status, test pattern, power; 2 x Freely assignable versatile buttons DMX & DALI test mode accessible with device button 1 x LED per slot card
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**Dimensions**

All measures in mm




 Conforms to ANSI/UL Std. 62368-1  
 Certified to CSA Std. C22.2 NO. 62368-1

**SYMPL FUSION DALI-2 Module 1 Port**

- One DALI line
- Provides DALI bus power supply, max. 250 mA, guaranteed 220 mA
- Power supply via base device; insulated PSU
- DALI-2 certified



IC	CL24100604035
Weight	18 g / 0.04 lb
Power supply input	from SYMPL Fusion base device, isolated PSU
Operating temperature	-20 ... 40 °C / -4 ... 104 °F
Storage temperature	-20 ... 70 °C / -4 ... 158 °F
Op. / Stor. humidity	0 ... 80% RH, non-condensing
Certificates	CE, UKCA, ETL, DALI-2

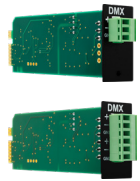
**Interface specifications**

Output interfaces	1 x DALI line 3-pin terminal plug max. supply current = 250 mA guaranteed supply current = 220 mA wire gauge: 0.5 ... 2.5 mm <sup>2</sup> conformal to IEC 62386-101, IEC 62386-103
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**SYMPL FUSION DMX512 Module 1 Port & SYMPL FUSION DMX512 Module 2 Ports**

- 1 Port (= 1 universe) and 2 Ports (= 2 universes) available
- DMX512



IC	1 Port: CL24100604135 2 Ports: CL24100604235
Weight	14 g / 0.03 lb
Power supply input	from SYMPL Fusion base device
Operating temperature	-20 ... 40 °C / -4 ... 104 °F
Storage temperature	-20 ... 70 °C / -4 ... 158 °F
Op. / Stor. humidity	0 ... 80% RH, non-condensing
Certificates	CE, UKCA, ETL

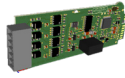
**Interface specifications**

Output interfaces	1 x DMX512 or 2 x DMX512 3-pin terminal plug wire gauge: 0.3 ... 1.3 mm <sup>2</sup>
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**SYMPL FUSION 0/1-10V Module 4 Ports**

- 4 outputs
- 0...10 V or 1...10 V
- Select sink or source mode for each output
- Provides max. 60 mA (source mode) / max. 80 mA (sink mode)
- Accommodates both rigid and flexible cables



IC	CL25100005335
Weight	tba
Power supply input	from SYMPL Fusion base device, isolated PSU
Operating temperature	-10 ... 50 °C / 14 ... 122 °F
Storage temperature	-40 ... 80 °C / -40 ... 176 °F
Op. / Stor. humidity	0 ... 80% RH, non-condensing
Certificates	CE, UKCA, ETL pending

**Interface specifications**

Output interfaces	4 x 0/1 ... 10 V 6-pin terminal plug sink or source mode per output max. current = 80 mA (sink mode) / 60 mA (source mode)
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System diagram

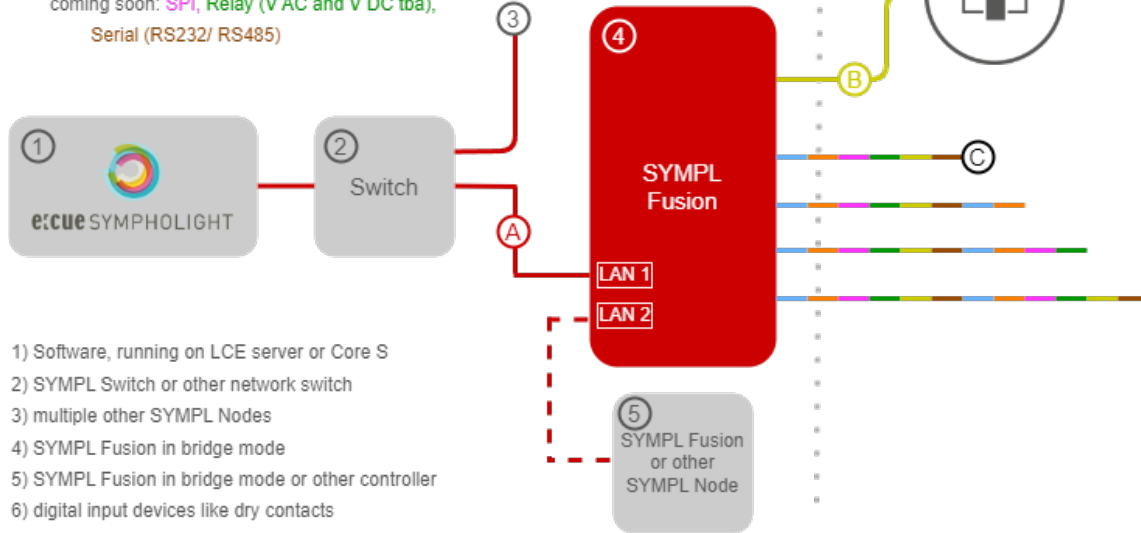
As interface:

A) e:net (ethernet based protocol) / Art-Net / sACN

B) 4 x digital input

C) 4 x modular slot cards,

available types: **DMX512, DALI-2, Output for 0 ... 10 V or 1 ... 10 V**  
 coming soon: **SPI, Relay (V AC and V DC tba),**  
 Serial (RS232/ RS485)



As standalone server:

A) e:net (ethernet based protocol) / Art-Net / sACN

B) 4 x digital input

C) 4 x modular slot cards,

available types: **DMX512, DALI-2, Output for 0 ... 10 V or 1 ... 10 V**  
 coming soon: **SPI, Relay (V AC and V DC tba),**  
 Serial (RS232/ RS485)

