

EB1E1A

USB I/O module with one input and one relay output



Compact
size

Easy
integration

Wear-free
switching

Flexible, compact I/O

With the USB I/O module EB1E1A, a device of the product family Symphony MX is easily expanded with an input and a relay output (normally open contact) by simply connecting the EB1E1A to an available USB port of the device. As a result, an input for floating contacts (e.g. for use with a switch, button or relay output) and a floating, galvanically-isolated output contact is available immediately (e.g. for use with a door opener). The EB1E1A module can then be comfortably configured via the station's web interface.

The EB1E1A provides a secure, cost-efficient way of integrating inputs and outputs directly into the Intercom station. The resulting solution is suitable for implementing additional inputs and outputs for the control of external components. Thanks to latest PhotoMOS technology, the EB1E1A has a very long service life. In contrast to an electromechanical design, this relay output does not age – no matter how many switching cycles it has to handle. That is why the USB I/O module is excellent for operating permanently blinking lights or similar applications. This high flexibility and the ease of integration make the EB1E1A a cost-efficient solution wherever an output to switch loads is needed.

Features and highlights

- Cost-efficient possibility to expand a device of the product family Symphony MX with an input and a relay output
- Easy to integrate in an existing system
- Tool-free cabling
- Input for floating contacts with multi-input-level detection
- Input supports piezo push-buttons
- Floating, galvanically-isolated relay output (normally open contact)
- Solid-state relay works wear-free and switches noiseless thanks to PhotoMOS technology
- Relay output can flexibly be loaded with direct or alternating current

EB1E1A

Technical specifications



Technical data

Connection:	USB 2.0 (Type A) max. 20 mA at 5 V
Input:	1 input for floating contacts, piezo push-button detection of 4 input levels
Relay output:	1 output (normally open contact, solid-state relay) max. operation current: 1 A (up to 55 °C/131 °F; from 55 °C/131 °F, the max. operation current is reduced by 0.1 A per 10 °C) max. operation voltage: 20 VAC/30 VDC
Cabling:	spring-clamp terminal stripping length: 6 mm conductor cross-section solid: min. 0.14 mm ² , max. 0.5 mm ² conductor cross-section flexible: min. 0.2 mm ² , max. 0.5 mm ² conductor cross-section flexible, with ferrule and without plastic sleeve: min. 0.25 mm ² , max. 0.5 mm ² wire diameter: min. AWG 26, max. AWG 20
Operating temperature range:	−40 °C to +70 °C (−40 °F to +158 °F) ¹⁾
Storage temperature range:	−40 °C to +70 °C (−40 °F to +158 °F)
Relative humidity:	up to 90 %, not condensing
IP rating:	IP20 (acc. EN 60529)
Approvals and compliances:	EN 61000-6-2, EN 61000-6-3, EN 55032 Class B, EN 55024, EN 55035 IEC/EN/UL 62368-1, IEC/EEB CB Scheme (by UL) UL LISTED, FCC Part 15 Class B, ICES-003 Class B
Weight incl. package:	82 g (0.18 lbs)

¹⁾ Temperature range for cULus (USA and Canada):
−40 °C to +65 °C (−40 °F to +149 °F).

Extent of supply

- USB I/O module
- Short reference

System requirements

- Symphony MX (firmware version min. 2.7)

EB1E1A

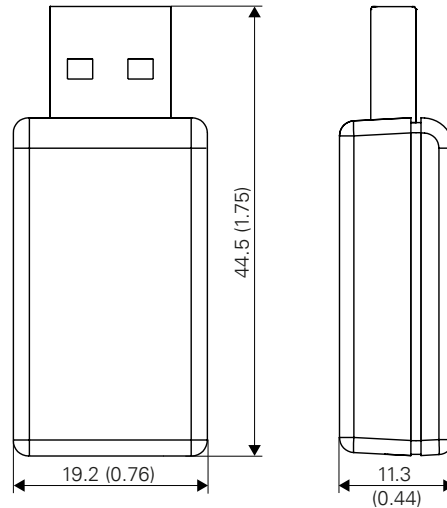
Installation instructions

Mounting instructions

- This device shall be installed or replaced by trained and qualified personnel only.
- Do not place the device in areas where it may become wet or damp, and avoid dusty environments.
- In case the EB1E1A device gets connected via USB extension cable, the length of the cable used may not exceed 5 m. To comply with UL 62368-1 (cULus) the USB extension cable length shall not exceed 3.05 m.
- Max. permitted length of cables on inputs and outputs is 30 m.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

Dimensions

Measuring units in mm (in), not to scale!

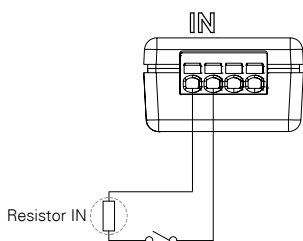


Safety instructions

- All connected circuits shall fulfil the requirements for ES1, PS2 circuits and Annex Q (Limited Power Source) as per IEC/EN/UL 62368-1.
- Before using the device, ensure all cables are connected correctly and not damaged.
- Do not make any unauthorised modifications to the device.

Connections

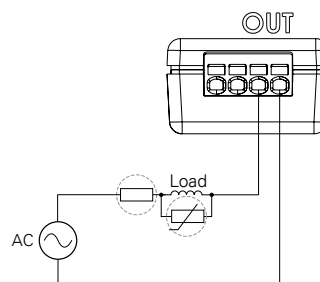
Input



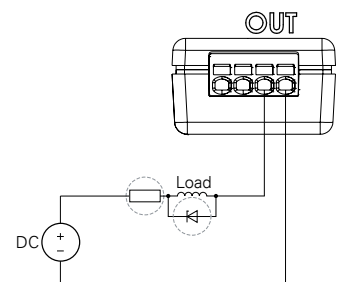
Input level	Resistor IN
1	0Ω (short circuit)
2	3k3 ± 5%
3	15k ± 5%
4	open

Output

AC power supply



DC power supply



It is recommended to include an external overvoltage protection (especially for inductive loads) and an external overcurrent protection in the load circuit.

Quality tested. Reliable. Smart.

COMMEND products are developed and manufactured by Commend International in Salzburg, Austria.

The development and manufacturing processes are certified in accordance with **EN ISO 9001:2015**.



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