SOLARAI **EB1 GROUP**

# Flexible 1-Motor BACnet MS/TP Controller

## HARDWARE FEATURES

- Universal: 110-240VAC
- 1 Motor Output
- 2 Contact Closure Inputs
  - Simple-Switch™ default bindings for onboard/network motors
  - Flexible Control Groups
  - Network Mappable*
  - Configurable Responses including Scene Control
- Pluggable Switch and Network Connectors for Easy Installation
- Optional programming through network or on-board MicroUSB

*requires optional network

## WORKS WITH...

- Most 4-Wire AC Motors
- Roller Shades
- Venetian Blinds*
- Louvers
- Rack Arm Systems
- Skylights
- Operable Windows
- And more...

* The EB1 GROUP cannot be programmed to control the tilt of Venetian Blinds that the other GROUP controllers can

## NATIVE BACnet

- No gateway device required for BMS integration

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## PRODUCT HIGHLIGHTS

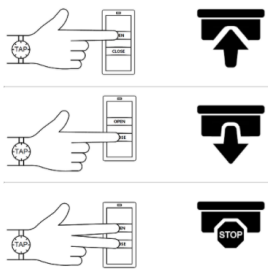
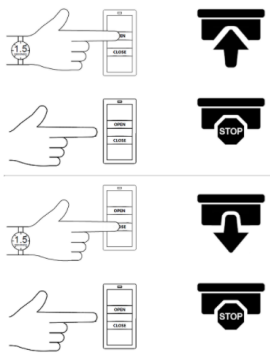
- OUT-OF-THE-BOX FUNCTIONALITY
  - ZERO-CONFIG SIMPLE-SWITCH™ DEFAULTS
- CONFIGURABLE WITH MOBILE APP (ADD-ON REQ'D)
  - SENSOR RESPONSE
  - PRIORITIES
  - EXTERNAL INPUTS / CONTROLS INTEGRATION
- BACNET MS/TP INDUSTRY-STANDARD NETWORK
- SCALABLE (STANDALONE TO WHOLE BUILDING)
- UPGRADEABLE FEATURES (IN-FIELD UPGRADES)

Embedia's Solarai™ EB1 GROUP is a BACnet MS/TP device capable of independent or grouped control for one motorized system. It is designed for response based automation and out-of-the-box low voltage control of roller shades, venetian blinds, operable louvers, and other devices using any standard 4-wire AC motor.

An optional BACnet MS/TP communication network, often not required for smaller installations, adds flexibility through additional programming and interface options. By implementing the same unique distributed intelligence architecture pioneered by Embedia's premium PLUS level controls. The GROUP controller is both scalable and reliable. The 2 and 4-Motor versions of the GROUP can be upgraded in the field to PLUS level functionality.

Each controller has 1 pair of contact closure inputs with fully programmable, priority based, response profiles. Each input can be reconfigured to control any group of motors on the entire network (where available). A simple dry contact switch, or any other device capable of closing a contact, can be used for advanced group and scene control.

By default, the onboard input pair provides forward/reverse switch control for the attached motor as well as networked motors on Simple-Switch™ channel 1 and 3:

| Closing a contact momentarily will start the motors moving in the corresponding direction. Closing both contacts will stop the motors. | Holding a contact closed for more than 1.5 seconds will move the motors in the corresponding direction until the contact is released. |
|---|---|
|  |  |

Embedia

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# SOLARAI EB1 GROUP

## SIMPLE-SWITCH™ DEFAULTS

| MOTOR CHANNEL | | SWITCH INPUT ↕1 | ↕2 | ↕3 | ↕4 | ↕5 |
|---|---|---|---|---|---|---|
| | 1 | ⟳ | N/A | N/A | N/A | N/A |
| | 2 | | N/A | N/A | N/A | N/A |
| | 3 | ⟳ | N/A | N/A | N/A | N/A |
| | 4 | | N/A | N/A | N/A | N/A |

## COMPANION PRODUCTS

SW7 (Simple-Switch™, multiple options)

- Push Button Switches
- Contact Closure, USB, or RF
- Standard "Decorator" Styling
- Custom Engraving Available

USB Addons

- USBIF-AV - serial integration
- USBIF-DCI12 - dry contact inputs
- USBIF-RF-Z - RF (mesh) receiver for wireless switches
- USBIF-WiFi - WiFi network

ControlPoint

- Sensor Inputs
- AV/BMS Integration
- BACnet MS/TP-IP Router (optional)

Control Panel Software

- Graphical User Interface for Advanced system Management (network requried)

Third-Party Devices/Switches

- Contact Closures
- Dry Contact Outputs
- Off-the-Shelf Switches
- A/V / BMS Outputs

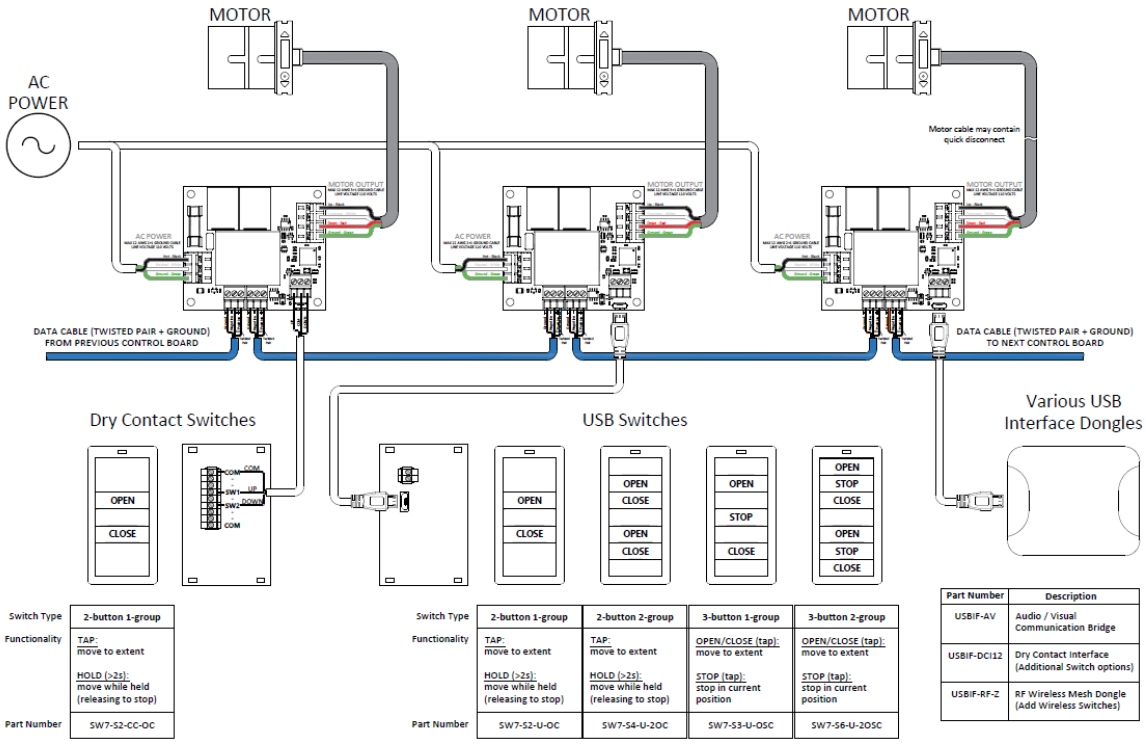
## WARRANTY

All Embedia products carry a standard 2-year product replacement warranty. Extended 5 and 10 year warranties are available.

For more information on any of our products or services, please visit us on the Web at: http://www.embedia.com

## Technical Specifications

| Parameter | Specification |
|---|---|
| Line Voltage Input | Universal 110-240 VAC at 50-60 Hz |
| Motor Outputs | 1 Motor Output; 110-240 VAC (Matched to Line Voltage Input); Max. 10A |
| Low Voltage Inputs | 2 Contact Closure Inputs (1 pair); |
| Communication Network (optional) | BACnet MS/TP; Maximum 127 Devices per Segment; Expandable using BACnet/IP Routers such as ControlPoint MS/TP-IP |
| Network Wiring (optional) | 1 x Twisted Pair + Ground suitable for RS485 Communication; 1200m / 4000ft absolute max bus Length (limiting to 600m / 2000ft recommended) |
| Dimensions | Controller Only —75.00mm (2.95") x 65.00mm (2.55") x 19.00mm (0.75") |
| Enclosure Options | Product designed to mount in a standard 2-gang or square electrical box |




| Switch Type | 2-button 1-group |
|---|---|
| Functionality | TAP: move to extent<br>HOLD (>2s): move while held (releasing to stop) |
| Part Number | SW7-S2-CC-OC |

| Switch Type | 2-button 1-group | 2-button 2-group | 3-button 1-group | 3-button 2-group |
|---|---|---|---|---|
| Functionality | TAP: move to extent<br>HOLD (>2s): move while held (releasing to stop) | TAP: move to extent<br>HOLD (>2s): move while held (releasing to stop) | OPEN/CLOSE (tap): move to extent<br>STOP (tap): stop in current position | OPEN/CLOSE (tap): move to extent<br>STOP (tap): stop in current position |
| Part Number | SW7-S2-U-OC | SW7-S4-U-2OC | SW7-S3-U-OSC | SW7-S6-U-2OSC |

| Part Number | Description |
|---|---|
| USBIF-AV | Audio / Visual Communication Bridge |
| USBIF-DCI12 | Dry Contact Interface (Additional Switch options) |
| USBIF-RF-Z | RF Wireless Mesh Dongle (Add Wireless Switches) |

## Ordering Information

| Orderable Part Number | Description |
|---|---|
| GROUP-M1-BP-B | EB1 GROUP - 1 Motor BACnet MS/TP controller with plastic backing plate |
| GROUP-M1-X-B | EB1 GROUP - 1 Motor BACnet MS/TP controller with no enclosure |

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