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USBIF-DCI12

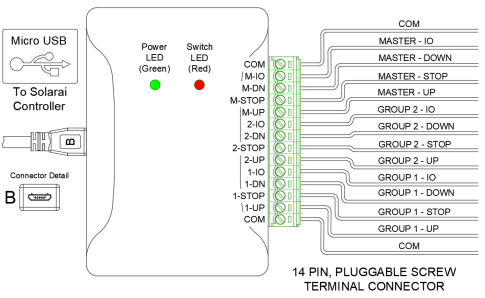
USB Dry Contact Input (12 Inputs)

Package Contents

- 1 x USB Dry Contact Input (12 Inputs) with the following removable component:
  - 1 x Pluggable 14-Position Terminal Block
- 1 x 0.5m (1.6ft) Micro-A to Micro-B USB Cable

Overview

The functionality of each contact can be reconfigured using the Embedia InSight app. The drawing below shows the Out-of-the-Box Simple-Switch™ configuration:



Before You Begin

You will need the following tools and accessories:

- Precision Screwdriver
- Wire Stripper
- Low Voltage Cable(s) (Max 16 AWG) with enough wires for each contact and "COM". (CAT5 or above typical)
- Dry Contact (Contact Closure) Device(s) such as the SW7-CC line of switches
- Embedia Group or Plus Motor Controller

Mounting Details

The USBIF-DCI12 can be placed inside the same junction box as the motor controller it is connected to or anywhere outside of the junction box as it is a low voltage DC device.

Wiring Details

The USB cable that is included has 2 types of connectors: Micro-A (rectangular-shaped) and Micro-B (trapezoidal-shaped). The micro-A connector connects to any Embedia Group or Plus motor controller that has a USB port and will not fit into the USB port of the USBIF-DCI12. The Micro-B connector will fit into either USB port, but it must be connected to the USBIF-DCI12 for proper operation. The length of the included cable is selected based on typical usage but can be replaced with a cable of a different length. Various USB cable lengths are available for optional purchase. The USBIF-DCI12 should be located no further than 5m (15 ft) from the controller, which is the maximum cable length supported by USB.

Embedia Motor Controller USB Port	Micro-A Connector	Micro-B Connector	USBIF-DCI12 USB Port
 Micro-AB	 Micro-A	 Micro-B	 Micro-B

Any low voltage cable (Max 16 AWG) with enough conductors may be used for wiring switches to a USBIF-DCI12 with cable termination determining default operation (see Default Switch Operation). CAT5 or above cable is commonly used. Switch locations can be up to 1500m* (5000ft*) from a USBIF-DCI12.

conductors required = # of switch buttons + 1 (COM)

Multiple switches can be wired to a single USBIF-DCI12. Two (2) interchangeable COM terminals are provided to facilitate terminating multiple cables from different switch locations.

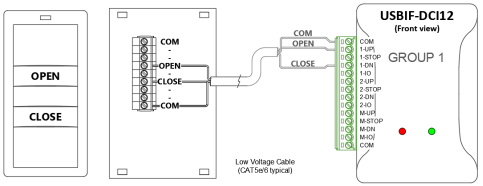
*exact distance depends on cable selection

Default Switch Operation

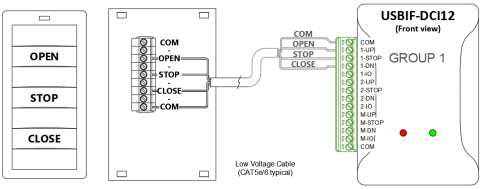
Out-of-the-Box, the 12 onboard contact closure (dry contact) inputs are set up to allow three (3) two or three-button contact closure (dry contact) switches to control motors 1 and 3, motors 2 and 4, and all motors respectively, on any controllers that have those numbered motor outputs connected on the same network.

Any dry contact / contact closure switch (such as the SW7-CC line) will work with the USBIF-DCI12. The following push-button switches offered by Embedia have customized labeling that work with the USBIF-DCI12 Out-of-the-Box Simple-Switch™ functionality:

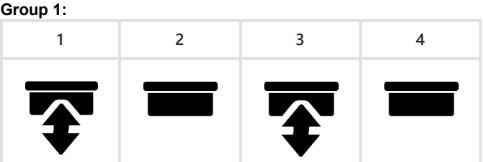
SW7-S2-CC-OC



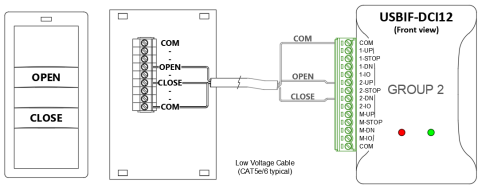
SW7-S3-CC-OSC



Group 1:



SW7-S2-CC-OC



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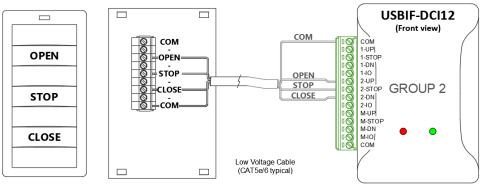

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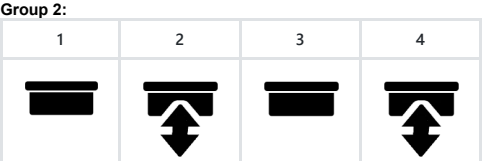
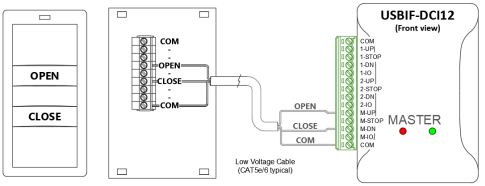
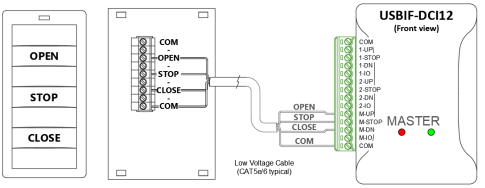


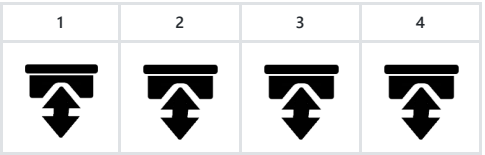
SW7-S2-CC-OC



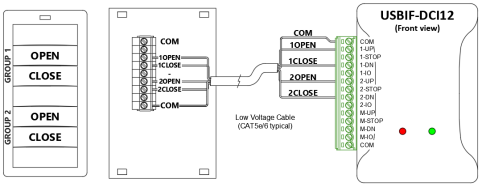
SW7-S3-CC-OSC



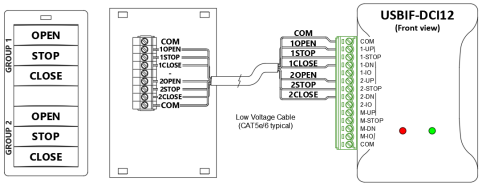
Master:



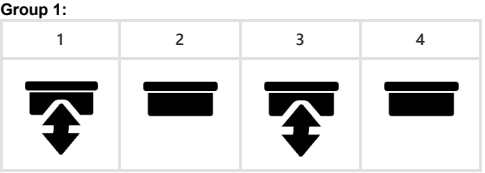
SW7-S4-CC-2OC



SW7-S6-CC-2OSC



Group 1:



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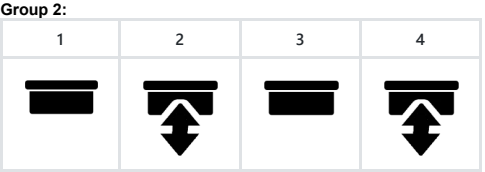
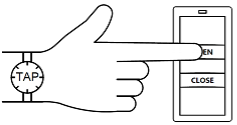
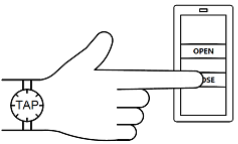
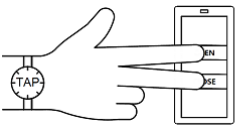


The above diagrams show example wiring. Other wiring combinations are possible.

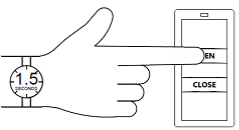
Closing a contact momentarily will start the motors moving in the corresponding direction. Closing both contacts will stop the motors.

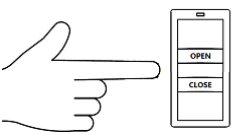


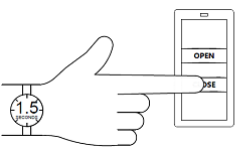


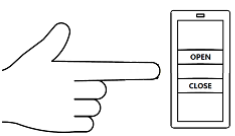


Holding a contact closed for more than 1.5 seconds will move the motors in the corresponding direction until the contact is released.

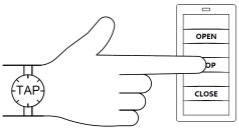








Closing a contact designated as "Stop" will stop the corresponding motors.

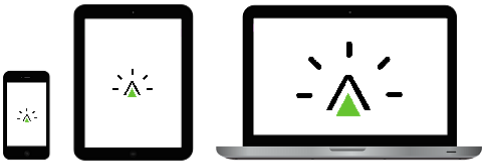


Add-on Reconfiguration

The USBIF-DCI12 can be reconfigured using the Embedia InSight App in conjunction with the USBIF-WiFi Add-on (sold separately) connected to one of the controllers on the network.

The contacts and what they do can be reconfigured as well as what motors react to them.

Embedia InSight App



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LED Indicators

Indicator	Indication
Solid Green LED	USBIF-DCI12 is powered and is communicating with the controller it is connected to
Solid Red LED	A contact is closed
Blinking Red LED	USBIF-DCI12 is waiting for or processing a firmware upgrade file

Technical Specifications

Parameter	Specification
Power and Communication	USB Micro B; 5Vdc Connect to a Solarai™ Group or Plus motor controller using a USB Micro A to Micro B cable (5m/15ft max)
Low Voltage Inputs	12 Contact Closure Inputs; Default configuration is 3 sets of Up/Stop/Down; Wiring recommended to not exceed 1500m/5000ft
Dimensions	78.50mm (3.09") x 53.10mm (2.09") x 25.40mm (1.00")
Enclosure Options	Custom Flame-retardant ABS plastic enclosure