casDouglas

USA & Canada

DMX Engineering LLC
http://dmx.engineering

Casambi Power Relay Controller with Programmable Dry Contact In and Out

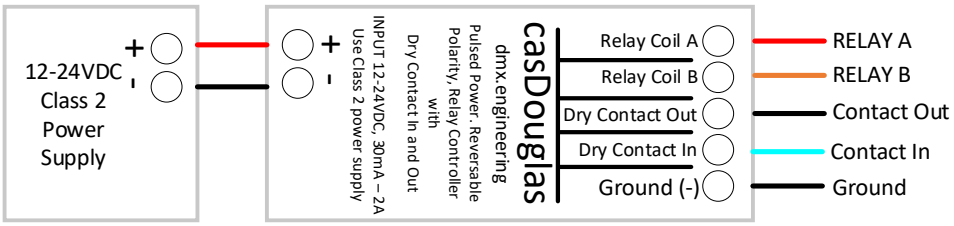
Product Description

casDouglas is a Casambi Bluetooth controllable single channel high-power relay driver that allows connection to reversable DC voltage relays under control of a Casambi network without the need for a separate power driver. The casDouglas is connected between a 12-24 VDC Class 2 power supply and can generate forward and reverse DC voltages up at the input voltage DC value. Two digital, dry contacts (no external voltages!), one programmable input and one output are supported with 3-way operational modes.

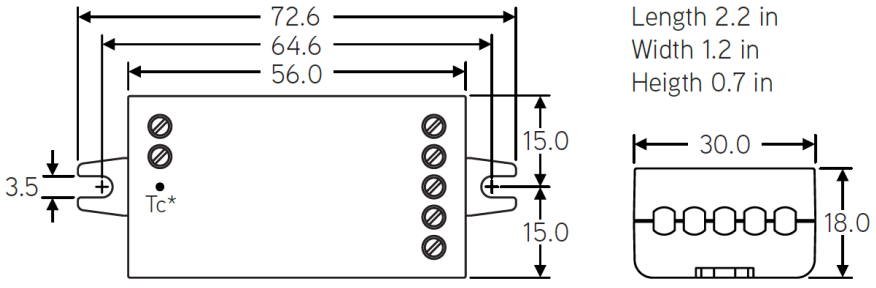
casDouglas connects directly to Douglas branded or equivalent circuit breakers (relays), allowing for remote control. Multiple casDouglas devices can be used in the same network to control different circuit breakers (relays), and can be used for other power control needs that fit the same Douglas relay electrical specifications. The digital I/O's can be utilized as needed, as a input pushbutton and a dry contact output.

casDouglas can be configured with the Casambi app which can be downloaded free of charge from the Apple App Store and the Google Play Store. Different Casambi enabled products can be used from a simple single luminaire direct control to a complete and full featured light control system where many units automatically form an mesh network.

Typical Connection Diagram



Mechanical Data



Dimensions are in mm. * Tc point is on bottom side

Dimensions: 2.2 x 1.2 x 0.7 inch
72.6 x 30.0 x 18.0 mm
Weight: 0.8 oz (23 g)

DMX Engineering LLC
1908 N 101st Place
Mesa, AZ 85207

Certifications

FCC ID: X8WBT40F
TELECC: 201-210217/01

Conforms to UL STD 916
Certified to CSA STD C22.2#205

Intertek

Technical Data

DC Voltage Input
Voltage range: 12-24 VDC, Class 2
No-load input current: 30 mA, max 2000mA when relay active. Load current dependent on driven device.

casDouglas Relay Control Output
Relay Aand Relay B form the two-wire connection (not ground)
Up to 2A if current across the Relay A and B connections
Relay A and B reverse DC voltage to trigger the Douglas relay
Pulsed duration programmable from 250ms to 3000ms

Digital Input and Output
Both Digital I/O's are dry contacts only! Do not drive with voltage!
Input: Connect to dry switch to the ground terminal. In mode can be set to Normal, Inverted, or Multi-Switch to allow for switch gang operation.
Output: Connect to dry sensor to the ground terminal. Out mode can be set to Normal or Inverted. **Caution!** This input should not be powered, and only used as a dry contact between the two connections.

Radio transceiver
Fanstel BT840 Radio Module
Operating frequencies: 2.401-2.483 Ghz
Maximum output power: typ. +3.4dBm
-103 dBm RX sensitivity in long-range mode

Antenna Options
Both external and internal (shown above) antenna models are available

Operating conditions
Ambient temperature, ta: -13...+113°F (-25...+45°C)
Max. case temperature, tc: +167°F (+75°C)
Storage temperature: -13...+167°F (-25...+75°C)
Max. relative humidity: 0...80%, non-cond.

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Storage temperature: -13...+167°F (-25...+75°C)
Max. relative humidity: 0...80%, non-cond Tightening force: 0.4 Nm / 2.6 Lb-in

Connectors
Wire range, solid & stranded: 0.5 - 1.5 mm_2
14 - 22 AWG, Wire strip length: .25" (6 - 7 mm)

****RATED FOR INDOOR USE ONLY****

Installation

Connect a Class 2 power supply with 2A max of output current to the input connector of casDouglas. Make sure not to use a constant current LED driver and make sure that the cable polarity is correct. The product has one pulsed relay drive output channel, a common ground, and two dry contact connections. Connect Relay A and Relay B directly to the coil of the Douglas circuit breaker and instantly power cycle your Casambi lighting network **as the circuit breaker panel**. Note that multiple Casambi Vendor Parameter are present to give your system a wide control operation.

casDouglas's digital input can be mapped just like **Pushbuttons** are mapped in the Casambi application. Once you add the casDouglas to your Casambi network, navigate to the "More" button at the bottom of the app. Then press "Switches", where the casDouglas will be shown. Press on the casDouglas that you want to configure and select which Element(s) that you wish to control as a digital control. The digital input is dry contact, do not power it! Simply open or short that to ground terminal provided. Normal, inverted and MultiSwitch operations are offered. Normal wants a short to go "on", inverted a short to go "off", while MultiSwitch allows multiple casDouglas units to be used in tandem to work like 3-way switches. The 10 gang sets allow for up to 10 difference pairing of casDouglas units in this mode.

The digital output is also a dry contact, and can switch another dry contact input. The control for this will be on the Luminare screen, long press there to show the control at the bottom of the widget area.

Range

The range between two casDouglas's or between a casDouglas and a smart phone can vary depending on obstacles and surrounding material. In open air the range between two casDouglas can be in excess of 200 ft, but if the unit is encapsulated into a metal structure, the range can be only few feet. Therefore, thorough testing is high suggested. Casambi uses mesh network technology so each casDouglas acts also as a repeater. When testing the network, it is important to test that each unit can be controlled from any point of the network covered area.

casDouglas should not be placed in a metal enclosure, such as metal junction boxes. Metal will attenuate radio signals which are crucial to the operation of the product. If the product will have to installed into a junction box, make sure to use a plastic junction box. casDouglas is an ETL Listed Open-Type device which means that it will have to be used together with a Class 2 power supply with maximum output power of 100VA. The product can be installed outside of junction box. Make sure to comply with National Electric Code in installation and when selecting installation wires.

Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Warning

Changes or modifications not expressly approved by DMX Engineering and Design LLC could void the user's authority to operate the equipment.

FCC Interference Statement

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 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.

Radiation Exposure Statement for Canada

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment is exempt from the routine RF exposure evaluation requirements of RSS-102. This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage;

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

⚠ **WARNING:**
Cancer and Reproductive Harm
www.P65Warnings.ca.gov.

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