

casDMX

USA & Canada

DMX Engineering LLC

<http://dmx.engineering>



Casambi CBM003 Multi-Channel DMX Master

with Long Range Radio

Product Description

casDMX is a Bluetooth controllable, Casambi enabled, 12 channel DMX-512 master dimmer that generates a single DMX Universe. The casDMX connects DMX enabled lighting devices and fixtures to a Casambi network to gain full color control. The casDMX is connected between a 12-24 VDC Class 2 power supply and provides a non-isolated DMX-512 universe.

casDMX can control luminaires using Casambi color widgets, and up to 12 DMX channels utilizing Casambi sliders in Evolution mode. The casDMX is an ideal DMX controller for RGBW and tunable white (TW) applications since a user choice of multiple Casambi Profiles allow for selection of four, eight and 12 slider channels and standard Casambi 4-channel color controls.

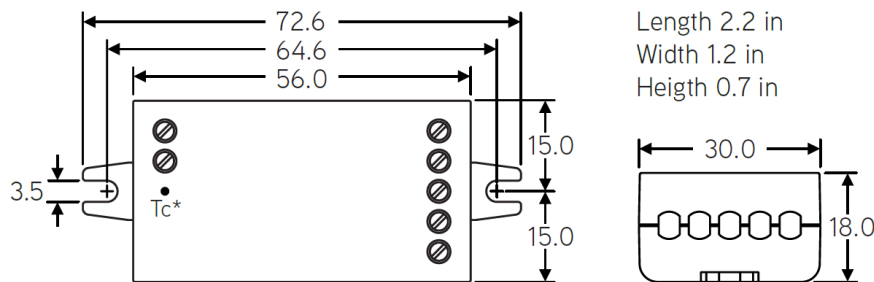
casDMX can be controlled with Casambi app which can be downloaded free of charge from the Apple App Store and Google Play Store.

Different Casambi enabled products can be used from a simple one luminaire direct control to a complete and full featured light control system where up to 250 units form automatically an intelligent Casambi 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

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Certifications

FCC ID: 2ALA3-CBM002A

IC: 22496-CBM002A

Conforms to UL STD 916

Certified to CSA STD C22.2#205



Compatible devices:



iPhone 4S or later

iPad 3 or later

iPod Touch 5th gen or later



Android 4.4 or later devices

produced after 2013 with full BT 4.0 support

Technical Data

Casambi Channels

4-channel: standard Casambi color functions

8-channel: standard Casambi slider function

12-channel: sliders available in Evolution mode

Input

Voltage range: 12-24 VDC, Class 2

No-load input current: 30 mA

DMX-512 Output

3-wire non-isolated DMX-512

Radio transceiver

Casambi CBM003B Radio Module

Operating frequencies: 2.401-2.483 Ghz

Maximum output power: typ. +8 dBm

-103 dBm RX sensitivity in long-range mode

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.

Screw Terminal Connectors

Wire range, solid & stranded: 0.5 - 1.5 mm²

14 - 22 AWG

Wire strip length: .25" (6 - 7 mm)

Tightening force: 0.4 Nm / 2.6 Lb-in

Installation

Connect a Class 2 power supply with 12-24 VDC output voltage to the input connector of casDMX. Make sure to **not** use a constant current LED driver and make sure that the cable polarity is correct.

The product has one DMX universe, with a DMX+ and DMX– connections, plus a ground. Connect the DMX load wires accordingly, ground must be used!

casDMX can be configured having different types of Casambi controlled channels, such as 4 channel RGBW (color picker), 4 individual channels, and 8 individual channels and 12 individual channels in Evolution mode. DMX addresses start address 1, and are sequential. These configurations can be made by the end user from Casambi App using Profiles. As default, casDMX is delivered with RGBW configuration.

casDMX 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 be installed into a junction box, make sure to use a plastic junction box.

casDMX 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 100 VA. The product can be installed outside of junction box. Make sure to comply with National Electric Code in installation and when selecting installation wires.

Range

The range between two casDMXs or between a casDMX and a smart phone can vary depending on obstacles and surrounding material. In open air the range between two casDMXs 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 highly suggested.

Casambi uses mesh network technology so each casDMX acts also as a node repeater. When testing the network, it is important to test that each unit can be controlled from any point of the network coverage area.

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.



Constant voltage - non dimmable Konstantspannung - nicht dimmbar

DC Output with constant voltage of 12 or 24 V
Built-in driver with double / reinforced insulation
Compact round case
Average lifetime 50.000 h
5 years guarantee

Protection

- Short- & open circuit proof
- Auto. overheat regulation or cut off
- Overload protection
- SELV

DC Ausgang mit konstanter Spannung von
12 oder 24 V
Einbaugerät mit doppelter / verstärkter Isolierung
Kompaktes rundes Gehäuse
Durchschnittliche Lebensdauer 50.000 h
5 Jahre Garantie

Sicherheit

- Kurzschluss- & leerlauffest
- Autom. Rückregelung o. Abschaltung bei Übertemperatur
- Überlastschutz
- SELV

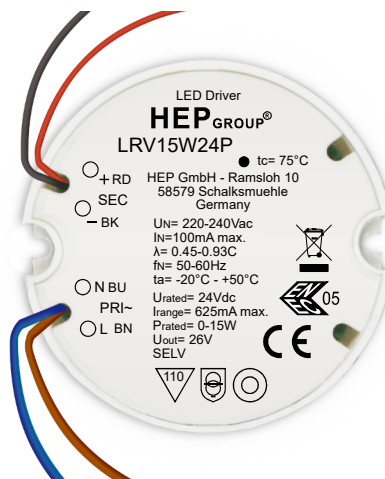


Image may differ
Abbildung kann abweichen

Constant voltage - non dimmable Konstantspannung - nicht dimmbar

Main technical data

Allgemeine technische Daten

Rated supply voltage Netzspannungsbereich	220–240 V	Operating ambient temp. Betriebsumgebungtemp.	-20 – +50 °C
AC voltage range Wechselspannungsbereich	198–264 V	Max. case temp. (tc) Max. Gehäusetemperatur (tc)	75 °C
Mains frequency Netzfrequenz	50–60 Hz	Max. case temp. in fault condition Max. Gehäusetemp. im Fehlerfall	110 °C
Input current Eingangsstrom	100 mA max.	Operating humidity Betriebsluftfeuchtigkeit	10–95 %
THD ¹ THD	< 20 %	Storage temperature range Lagertemperatur	-40 – +85 °C
Start delay Startverzögerung	< 0.5 s	Max. number of switching cycles Max. Anzahl an Schaltzyklen	> 100.000
Inrush current Einschaltstrom	15 A / 250 µs	Type of protection Schutzart	IP20
Output voltage tolerance Ausgangsspannung Toleranz	± 5 %	Environmental rating Umgebungsbedingung	Indoor Innenraum
Output P _{st} ^{LM} Ausgang P _{st} ^{LM}	≤ 1	Surge transient protection Stoßspannungsfestigkeit	1.0 kV (L–N)
Output SVM Ausgang SVM	≤ 0.4	Dimension (L x W x H) ¹ Abmessung (L x B x H)	55 Ø x 22 mm

Product technical data

Produkt technische Daten

Type Typ	Output voltage Ausgangsspannung	Output power Ausgangsleistung	Output current Ausgangsstrom	Output voltage LF ripple ² Aus.-spannung NF Restwelligkeit	No load voltage Leerlaufspannung	Power consumption Leistungsaufnahme	Current consumption Stromaufnahme	Power factor ^{1,2} Leistungsfaktor	Efficiency ¹ Effizienz
LRV15W12P	12 Vdc	0–15 W	1250 mA max.	± 6 %	13 Vdc	17.4 W	84.3 mA	0.35–0.93C	86 %
LRV15W24P	24 Vdc	0–15 W	625 mA max.	± 8 %	26 Vdc	17.1 W	82.3 mA	0.45–0.93C	88 %

All data for / Alle Angaben für U_{mains} = 230Vac, 50 Hz, full load / Vollast, without Dimmer / ohne Dimmer

¹ See diagrams below / Siehe Diagramme unten

² Power factor/Leistungsfaktor: U_{mains}max/Pratedmin – U_{mains}min/Pratedmax

Constant voltage - non dimmable Konstantspannung - nicht dimmbar

Standards / Conformity Normen / Konformität

Safety Sicherheit	Performance Arbeitsweise	EMC EMV	ECO-Design ECO-Design	RoHS RoHS
EN 61347-1 EN 61347-2-13 EN 62493	EN 62384	EN 55015 EN 61000-3-2 EN 61000-3-3 EN 61547	EN 62442-3	EN IEC 63000

Lifetime Lebensdauer

Type Typ	ta	40 °C	50 °C
LRV15WxxP	tc	65 °C	75 °C
	Lifetime Lebensdauer	100.000 h	50.000 h

According to the nominal operating conditions listed in the datasheet and a failure rate of less 10 %.
Entsprechend der im Datenblatt aufgeführten Nennbedingungen und einer Ausfallrate von kleiner 10 %.

Miniature circuit breaker Leitungsschutzschalter

Type Typ	B10	B13	B16	B20	C10	C13	C16	C20	Inrush current Einschaltstrom
LRV15WxxP	22	28	35	44	36	47	58	73	15 A / 250 µs

Insulation Isolierung

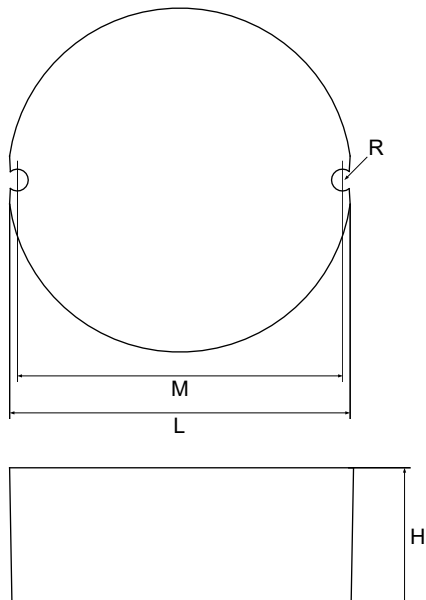
	Mains Netz	LED Output LED Ausgang	Case Gehäuse
Mains Netz	–	Double / reinforced Doppelt / verstärkt	Reinforced Verstärkt
LED Output LED Ausgang	Double / reinforced Doppelt / verstärkt	–	Reinforced Verstärkt
Case Gehäuse	Reinforced Verstärkt	Reinforced Verstärkt	–

Ordering information Bestellinformationen

Article no. Artikelnr.	Type Typ	Packing unit carton Verpackungseinheit Karton	Gross weigh carton Bruttogewicht Karton	Net weight carton Nettogewicht Karton	Dimension carton L x W x H Abmessungen Karton B x T x H
11005000030	LRV15W12P	35 pcs / Stk.	7.0 kg	6.0 kg	385 x 310 x 260 mm
11005000031	LRV15W24P				

Constant voltage - non dimmable Konstantspannung - nicht dimmbar

Physical Parameter Abmessungen



L:	55.0 mm	M:	52.0 mm	Tolerance:	
H:	22.0 mm	R:	1.75 mm	Toleranz:	
				0~100	± 0.5 mm
				100~	± 1 mm

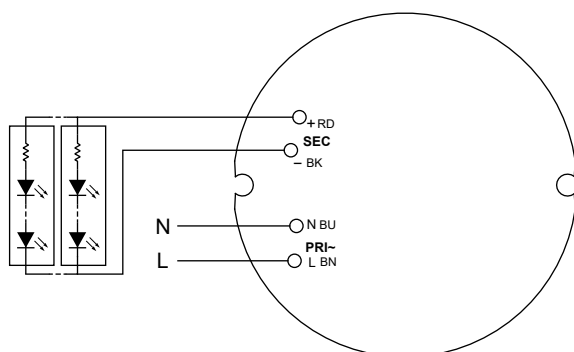
Housing material: Gehäusematerial:	Polycarbonate, potted Kunststoff, vergossen
Soldering: Lötung:	Lead-free, comply with RoHS Bleifrei, RoHS konform
Label: Etikett:	Surface print Oberfläche bedruckt
Weight: Gewicht:	171.4 g 171,4 g

Connection Verbindung

		Color Farbe	Cable cross section Leitungsquerschnitt	Length Länge	Stripping Abisolierung
PRI	L	Brown Braun	0.5 mm ²	142 mm	6 mm
	N	Blue Blau	0.5 mm ²	142 mm	6 mm
SEC	+	Red Rot	0.34 mm ²	142 mm	6 mm
	-	Black Schwarz	0.34 mm ²	142 mm	6 mm

Each cable can have a tolerance of ± 5 mm.
Jedes Kabel kann eine Toleranz von ± 5 mm haben.

Wiring diagram Anschaltbild



Hot plug-in or secondary switching is not permitted!
Das Anschließen im Betrieb oder sekundäres Schalten ist nicht erlaubt!

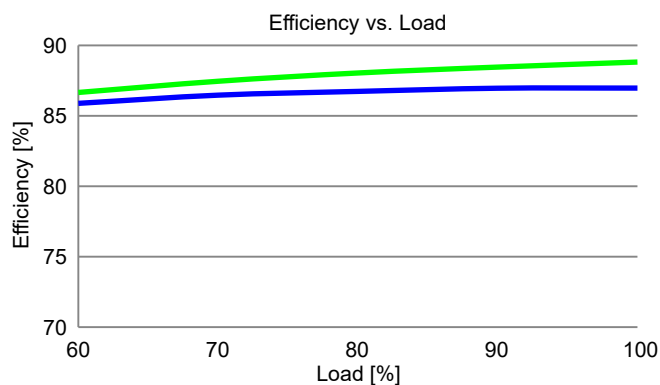
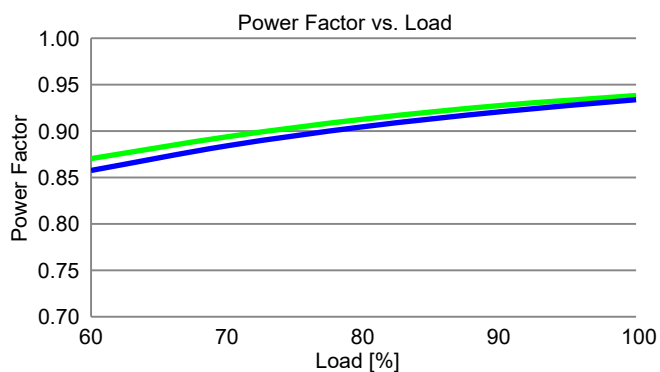
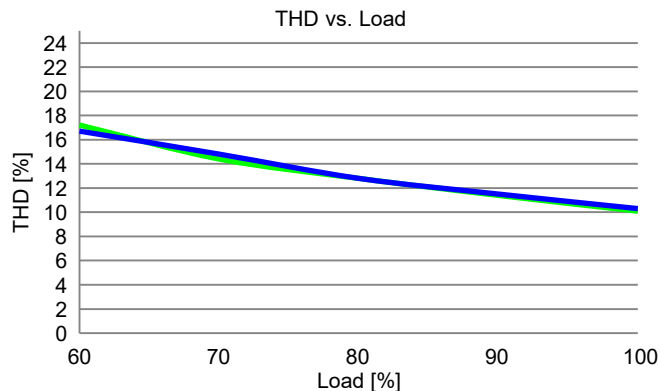
The maximum secondary wire length is 2 m.
Die maximale sekundäre Leitungslänge beträgt 2 m.

Constant voltage - non dimmable Konstantspannung - nicht dimmbar

Operating Parameter Betriebsseigenschaften

— 12 V
— 24 V

100% Load correspond to the values in the table on page 2.
100% Last entspricht den Werten aus der Tabelle auf Seite 2.





KF 0200 B | E 14 375 47



- Kabelkopplingsdosa "Väderbeständig"
- utan plint
- Mått H x B x T: 93 x 93 x 62 mm
- med metriska utbrytningsöppningar

ELEKTRISKA EGENSKAPER

Nominell isolationsspänning: $U_i = 1000 \text{ V}$

ANSLUTNINGSDATA

KABELINGÅNGAR

Kabelgenomföring:

Antal kabelgenomföring	Typ av kabelgenomföring	Storlek metrisk utbrytningsöppning	Kabelgenomföringsplats
7	metriska utbrytningsöppningar	M20	Vägg

MEKANISKA EGENSKAPER

Typ av lockfäste: Snabbförslutning för kapslingslock: Öppnas och stängs med ett kvarts varv, låsläget känns igen med en blick

Medlevererade tillbehör: Yttre fästen, Fästband, Tätningsplugg

IP-kapslingsklass: IP66, IP67, IP69
 IP67: Kortvarig nedsänkning upp till 1 m/30 min
 IP69: Vattentryck max. 100 bar, vattentemperatur max 80 °C, avstånd $\geq 0,15 \text{ m}$

Slaghållfasthet: IK09

Plomberingsbar utan tillbehör: Ja

MILJÖFÖRHÅLLANDEN

För att minska kondens och ackumulering, se teknisk information "Kondensvattenbildning och motåtgärder"

Användningsområde: Oskyddad installation

Max omgivningstemperatur 24 h: 55 °C

Omgivningstemperatur: -25 °C upp till +70 °C

Relativ luftfuktighet: $\leq 50 \%$ vid 40°C, $\leq 100 \%$ vid 25°C

MATERIALEGENSKAPER

material:	Polykarbonat
Glödtrådsprov enligt IEC 60695-2-11:	960 °C
UL 94:	V-0
Temperaturbeständighet:	-25 °C upp till +100 °C
Halogenfri:	Ja
Silikonfri:	Ja
Väderbeständig:	Ja (resistent mot UV-exponering från solstrålning, is och havsvatten, korrosion, temperaturbeständig, slagtålig)

DIMENSIONER

Höjd:	93 mm
Bredd:	93 mm
Djup:	62 mm
Nettovikt:	0.108 kg
Inbyggnadshöjd:	74 mm
Inbyggnadsbredd:	74 mm
Inbyggnadsdjup:	47 mm

GODKÄNNANDEN

Överensstämmelse med standarder: DIN EN 60670-1/-22, IEC 60670-1/-22

Certifikat:

Certifikattyp	Certifikatnummer
VDE	40041432
DNV GL	TAE00000EE

DISTRIBUTIONSDATA

Produktnummer:	62000042
EAN:	4012591121701
Förpackningsenhet:	5
Tulltaxenummer:	85369010

ETIM-klass:

DYNAMIC: EC002600 - Box/housing for surface mounting on the wall/ceiling

ETIM-8.0: EC002600 - Box/housing for surface mounting on the wall/ceiling

ETIM-7.0: EC002600 - Box/housing for surface mounting on the wall/ceiling

ETIM-6.0: EC002600 - Box/housing for surface mounting on the wall/ceiling

ETIM-5.0: EC002600 - Box/housing for surface mounting on the wall/ceiling

ETIM-4.0: EC002600 - Box/housing for surface mounting on the wall/ceiling

ANMÄRKNING

Den angivna skyddsgraden ändras inte vid användning av de medföljande tätningspluggarna.

product_label___input___

RITNINGAR

