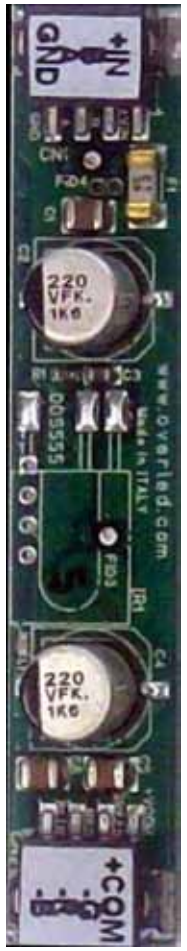
DDS. 555

Descrizione - Description

DDS.555 è un controller per led in tensione costante a 3 canali. Questo modulo è indicato per applicazioni con barre a led, date le sue piccole dimensioni, e funziona in modalità DMX/RDM Infrarosso con telecomando e stand alone con show preprogrammato. DDS.555 in tensione costante funziona a 24vdc o 12vdc e permette di gestire strip led o led in tensione fino ad un massimo di 150w totali per i 3 canali I led si alimentano riferiti ad un unico comune positivo, per le 3 uscite, il segnale PWM esce con polarità verso massa. Il dispositivo è protetto da sovraccarico o guasto con fusibile ripristinabile, l'alimentazione è fornibile su appositi morsetti ad inserzione diretta non serve cacciavite per la connessione, il cavo è ritenuto da apposite molle.

DDS.555 it is constant voltage controller, 3 channel. This module can work in several mode DMX/ RDM/ stand-alone/infrared remote control. This unit can supply up to 150w of strip led or any kind of led with on board costant current. All output are positive common, and ground is the control. The power supply is applied to connector screwdriver isn't necessary for wiring.



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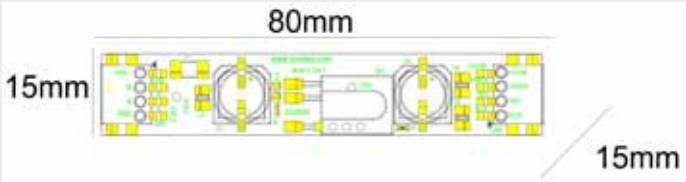
Caratteristiche Tecniche	Techinal Specifications
Alimentazione 24-12Vdc	Power supply: 24-12Vdc
Corrente max per canale 3,5A	Max current per channel 3,5A
DMX standard USITT512	DMX standard USITT512
RDM 2.0	RDM 2.0
Common positive	Common positive
3 canali di uscita	3 channels output
Ricevitore infrarosso	Infrared receiver
Temperatura di lavoro: -10°C to +54° C	Operating temperature: -10°C to +54° C
Temperatura di storage:Tst -20°C to +85° C	Storage temperature: Tst -20°C to +85° C
Relative humidity: RH 80%	Relative humidity: RH 80%

Dimensioni - Dimensions



Codici - Codes

DDS.555
costant voltage

DDS.555-IR
with IR

TE.SAKAY
IR transmitter

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Dmx 512

Developed by the Engineering Commission of United States Institute for Theatre Technology (USITT), the standard was created in 1986, with subsequent revisions in 1990 leading to USITT DMX512/1990.DMX512-A In 1998 the Entertainment Services and Technology Association(ESTA) began a revision process to develop the standard as an ANSI standard. The resulting revised standard, known officially as "Entertainment Technology — USITT DMX512-A— Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories", was approved by the American National Standards Institute (ANSI) in November 2004. This current standard is also known as"E1.11, USITT DMX512-A", or just "DMX512-A", and is maintained by ESTA.

Network topology

ADMX512 network employs a multi-drop bus topology with nodes strung together in what is commonly called a daisy chain. Anetwork consists of asingle DMX512 controller — which is the sole master of the network — and one or more slave devices. For example, a lighting console is frequently employed as the controller for a network of slave devices such as dimmers, fog machines and intelligent moving lights.Each slave device has a DMX512 "IN" connector and, in many case, a DMX512 "OUT" connector (sometimes marked "THRU") as well. The controller, which has only an OUT connector, is connected
via a DMX512 cable to the IN connector of the first slave. Asecond cable then links the OUTor THRU connector of the first slave to the IN connector of the next slave in the chain, and so on. The final, empty, OUTor THRU connector ofthe last slave on the daisy chain should have a terminator plugged into it. Aterminator is a stand-alone male connector with a built-in resistor.Theresistor — typically 120 Oto match the cable characteristic impedance, is connected across the primary data signal pair. If a secondary data pair isused, then another termination resistor is connected across it as well. Although simple systems, i.e., systems having few devices and short cableruns, may work reliably without a terminator, it is considered good practice always to use a terminator at the end of the daisy chain. Some DMXdevices have built-in terminators that can be manually activated with a mechanical switch or by software, or by
automatically sensing the absence of a connected cable.Each DMX network is called a "DMX universe". Large control desks (operator consoles) may have the capacity to control multiple universes, with an OUTconnector provided for each universe.

Electrical

DMX512 data are sent using EIA-485 voltage levels. However, quoting from E1.11, "The electrical specifications of this Standard are those of EIA-485-A, except where specifically stated in this document. Where a conflict between EIA-485-A and this document exists, this document is controlling as far as this Standard is concerned."DMX512 is a bus network no more than 1200 meters long, with not more than 32 devices on a single bus. If more than 32 devices need to communicate, the network can be expanded across parallel buses using DMX splitters. Network wiring consists of a shielded twisted pair, with a characteristic impedance of 120 Ohms, with a termination resistor at the end of the cable furthest from the controller to absorb signal reflections.

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XLR-5 pinout

1. Signal Common
2. Data 1- (Primary Data Link)
3. Data 1+ (Primary Data Link)
4. Data 2- (Optional Secondary Data Link)
5. Data 2+ (Optional Secondary Data Link)

RJ-45 pinout

RJ-45 pinout
1. Data 1+
2. Data 1-
3. Data 2+
4. Not Assigned
5. Not Assigned
6. Data 2-
7. Signal Common (0 V) for Data 1
8. Signal Common (0 V) for Data 2

Connectors

DMX512 1990 specifies that where connectors are used, the data link shall use five-pin XLR style electrical connectors (XLR-5), with female connectors used on transmitting (OUT) ports and male connectors on receiving ports. DMX512-A (E1.11) requires the use of an XLR-5 connector, unless there is insufficient physical space on the device, in which case an XLR-5 adapter shall be supplied. DMX512-A(E1.11-2008) allows the use ofeight-pin modular (RJ-45) connectors for fixed installations where regular plugging and unplugging of equipment is not required.Some DMX512 equipment manufacturers employ non-compliant connectors and pinouts; the most common of these is the three-pin XLR connector, since the electrical specification currently only defines a purpose for a single wire pair.There is risk of equipment damage if a novice unfamiliar with lighting technology accidentally plugs XLR 3-pin DMX into an audio device, since the DMX signal voltages are much higher than what audio equipment normally uses.Also, devices are sometimes fitted with four-pin connectors when both communications and power are sent through a common cable. The RJ-45 connector pinout matches the conductor pairing scheme used by Category 5(Cat5) twisted pair patch cables.The avoidance of pins 4 and 5 helps to prevent equipment damage, if the cabling is accidentally plugged into a single-line public switched telephone network phone jack. Cabling for DMX512 was removed from the standard and a separate cabling standards project was started in 2004. Two cabling standards have been developed, one for portable DMX512 cables (ANSI E1.27-1 - 2006) and one for permanent installations (draft standard BSR E1.27-2). This resolved issues arising from the differences in requirements for cables used in touring shows versus those used for permanent infrastructure.The electrical characteristics of DMX512 cable are specified in terms of impedance and capacitance, although there are often mechanical and other considerations that must be considered as well. Cable types that are appropriate for DMX512 usage will have a nominal characteristic impedance of 120 ohms. Cat5 cable, commonly used for networking and telecommunications, has been tested by ESTA for use with DMX512A.Also, cables designed for EIA485 typically meet the DMX512 electrical specifications. Conversely, microphone and line level audio cables lack the requisite electrical characteristics and thus are not suitable for DMX512 cabling. The significantly lower impedance and higher capacitance of these cables distort the DMX512 digital waveforms, which in turn can cause irregular operation or intermittent errors that are difficult to identify and correct.

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Utilizzo del controller in DMX con uscita in tensione

Si raccomanda prima di collegare le uscite ai moduli led che questi siano in grado di funzionare in tensione costante,si ricorda che la massima potenza utilizzabile per i 4 canali è 150W.

Modalità DMX

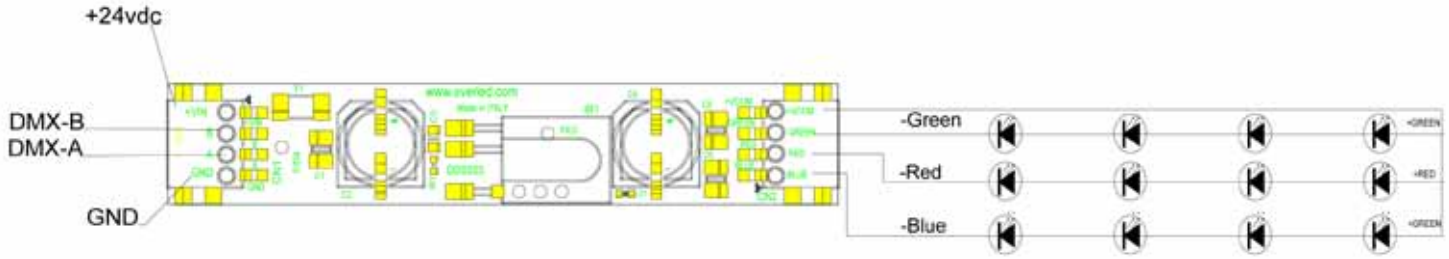
Il modulo DDS.555A entra In questa modalità appena riceve segnale DMX in modo prioritario su tutte le altre funzionalità, ed è quindi necessario l'uso di un generatore DMX compatibile allo standard per generare i 3 canali utilizzati dalla scheda. A seconda della personalità scelta prima tramite RDM si decide il numero di canali utilizzati dal modulo in caso di personalità 4 canali questi saranno 1,2,3. La assegnazione del canale DMX quindi l'indirizzamento nella rete DMX avviene in modalità RDM . Controllare la corretta connessione alla rete DMX dei segnali Ae B in caso sia invertito o non corretta il led di DMX non lampeggia ma rimane acceso fisso,indicando appunto errore di connessione. Nota in caso di assenza DMX il modulo assume modalità manuale.

DMX mode

Verify the connected LED they can work with constant voltage!

DMX operation Mode

DMX generator it is necessary in this operating mode ,DDS. 555 require 3 channels from DMX streaming. To set DMX address connect the RDM interface. If no DMX available the module go in stand alone mode.



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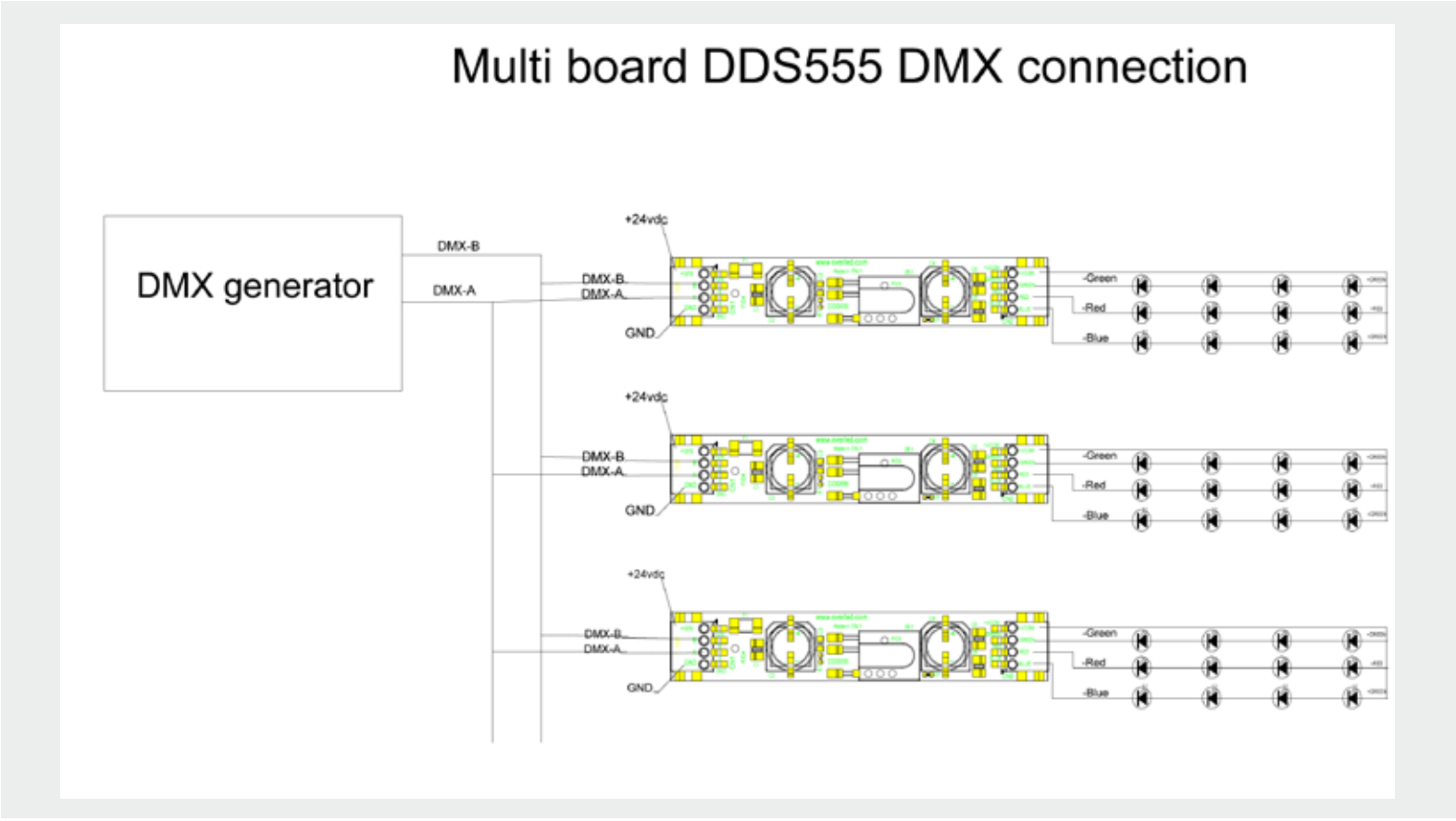
Multi board DDS. 555 DMX connection



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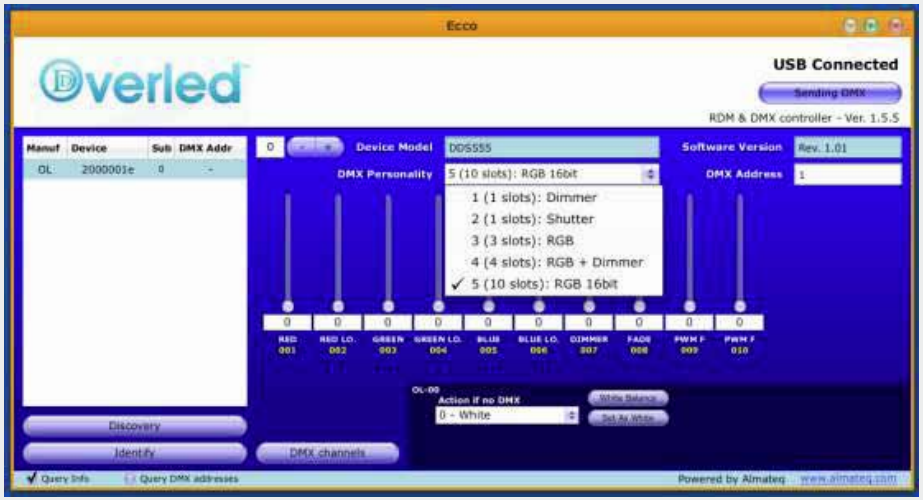
– Alimentazione al dispositivo
– Allacciare segnale DMX ai poli (A+) e (B-)
– Predisporre il collegamento a PC attraverso l'interfaccia ECCO e lanciare l'omonimo programma di gestione
– Alimentare la scheda, quindi lanciare la ricerca rapida dei componenti dall'Ecco col comando Discovery tenendo contemporaneamente premuto il tasto Shift (rilasciarlo appena lanciato il comando)
– Nella finestra a sinistra del pannello di visualizzazione Ecco appare la riga relativa al componente identificato
– Selezionare il componente col mouse e quindi appare la videata relativa al componente selezionato
– Aprire la finestra relativa alle DMX Personality cliccando col mouse sulle freccette a destra
– Selezionare la personalità desiderata cliccando col mouse sulla riga relativa che viene evidenziata (anche con il simbolo di "spunta" a sinistra)
– La scheda memorizza immediatamente la nuova personalità ed è pronta per essere utilizzata
– Spegnere l'alimentatore prima di staccare i cavi dalla scheda.

N.B. Utilzzando Ecco è poi possibile andare a programmare anche il suo indirizzo DMX (DMXAddress) o la sua azione in assenza di DMX (Action if no DMX) ecc.requisite electrical characteristics and thus are not suitable for DMX512 cabling. The significantly lower impedance and higher capacitance of these cables distort the DMX512 digital waveforms, which in turn can cause irregular operation or intermittent errors that are difficult to identify and correct.

– Connect Ecco RDM signal to the device DMX input , A and B or + and - (A+) (B-)
– Run Ecco or Esuite in PC /MAC
– Power device On (DDS555)
– USE Discovery button on the screen of your pc, to get all devices connected on the DMX line
– In to the left window a complete list of device appear
– Select with the mouse one of device on the list
– Click on right button on you mouse to get info from device
– Choice the personality you wanted
– Now the device have stored in memory the personality
_ Same for addressing , select device you want to change Address and edit the new one in the ADDRESS window.
– Select also what the device must do if no DMX available, just click in the window "ACTION IF NO DMX"and select all available for this device.



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DDS.555-IR receiver operation

Modalità IR receiver

Questa modalità il modulo diventa un controller regolato da telecomando, collegando ordinando il modulo con ricevitore IR, una volta che riceve comandi dal telecomando il modulo DDS555 a cui è collegato diventa una unità master DMX che trasmette sui 3 canali i colori ricevuti dal telecomando IR utilizzando gli indirizzi 1,2,e3, questa modalità permette di collegare piu unità slave controllabili sulla linea DMX, con canale DMX 1,2,3 a seconda del dispositivo.
Tasto "Flash": attiva lo Show
Tasto "Strobe": disattiva lo Show
Tasto "Fade": decremento master dimmer del colore selezionato
Tasto "Smooth": incremento master dimmer del colore selezionato

Per Uscire dalla modalità Telecomando occorre inserire un generatore DMX con la DDS555 spenta, collegare i cavi A e B sul generatore DMX poi accendere la DDS555 in questo modo esce dalla modalità Telecomando, per rientrarvi basta attivare il telecomando con il tasto ON. Premere il tasto ON (sul trasmettitore) solo cosi' la scheda entra in modo Telecomando con Master DMX OUTPUT Il colore di defaul tacceso di fabbrica e' ROSSO (canale DMX = 1),a questo punto, premendo uno dei tasti colorati si ottiene la tonalita' corrispondente regolata sui canali R,G,B, (indirizzi DMX 1,2,3). Premendo il tasto 'Flash' piu' volte e' possibile selezionare uno fra 3 show disponibili.Il primo mostra una serie di colori assortiti; il secondo ha colori freddi, il terzo ha colori caldi. Tasto "Setup": memorizzazione di un colore personalizzato: Premere Setup: verra' mostrato il precedente colore personalizzato Usando i tasti R, G, B creare il colore desiderato: Tenendo premuto un pulsante si ottiene una rampa (salita o discesa) del colore corrispondente; ad ogni pressione si inverte la direzione della rampa. Quando il colore e' quello desiderato, premere il tasto "Cancel" per memorizzarlo. Durante la regolazione, e' possibile caricare un colore di partenza premendo uno dei tasti di tonalita'. Tasto "Cancel": richiama il colore personalizzato (oltre a terminare
eventuale regolazione in corso).

Mode IR receiver

DDS555 can be used with IR receiver, this allow to receive from remote IR control command,the DDS555 must be IR type.The DDS555 in with IR receiver become a DMX master and it may be possible to conect several slave Module DDS555 or other device assuming DMX channel 1,2,3, (R,G,B) The unit connected to the receiver can be used as master DMX until is power off, DMX generator Connected then power on DDS555 and exit from IR mode,the unit go in slave DMX mode, and can be configured by RDM, do not use the remote control during RDM operation to avoid conflict between DMX out from generator and DMX out from DDS555 with IR receiver.
To start IR operation, please push ON button, a red color or channel DMX 1 is activated (factory default), push colour button for selection 1. Show selecting it may be possibile by pressing same button "Flash" maximum 3 different show can be selected, to switch SHOW off press button "Strobe" Custom color setting pressing "Setup" and pressing colour button R,G,B, it can be possible,"Fade" button decrease the light value "Smooth" increase the light value. To store the custom colour press "Setup" button. To recall a colour press "Cancel" and exit from color customizing.

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IR receiver Master Slave connections