

IMS Mk2 Universe Drive DIN Rail

Quick Start Guide



TMB 24/7 Technical Support

US/Canada: +1 818.794.1286
Toll Free: 1 877.862.3833 (877.TMB.DUDE)
UK: +44 (0)20.8574.9739
Toll Free: 0800.652.5418
e-mail: techsupport@tmb.com

Innovative, Performance-Driven Show Technology Since 1983

tmb.com

Los Angeles

London

New York

Beijing

Toronto

+1 818-899-8818

+44 (0)20-8574-9700

+1 201-896-8600

+86 10-8492-1587

+1 519-538-0888

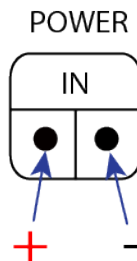


Setup

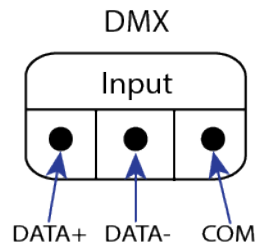
IMS DIN Rail devices use a standard Phoenix MSTB screw terminal connector in various pin configurations. Please refer to the wiring diagrams below for correct hook up of the IMS DIN Rail product.



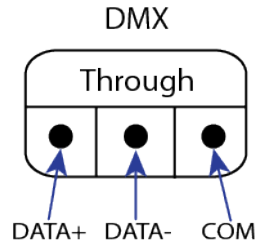
1. Connect the 24 VDC power to the power input located in left top corner. The connector should be wired as depicted in the image below.



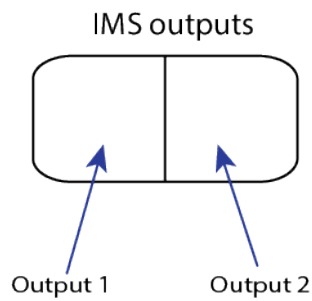
2. Connect the DMX signal input to the DMX input located in the right top corner of the unit. The connector should be wired as depicted in the image below.



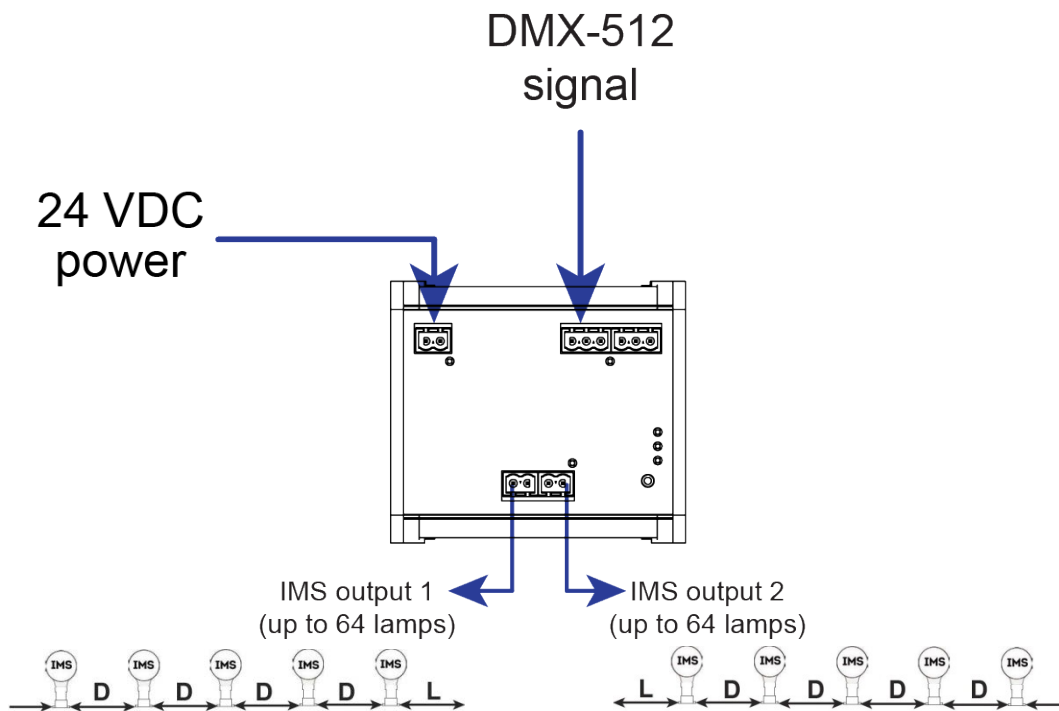
2.1. To pass DMX to another device, connect the DMX cable to the DMX Thru port located in the right top corner of the unit. The connector should be wired as depicted in the image below.



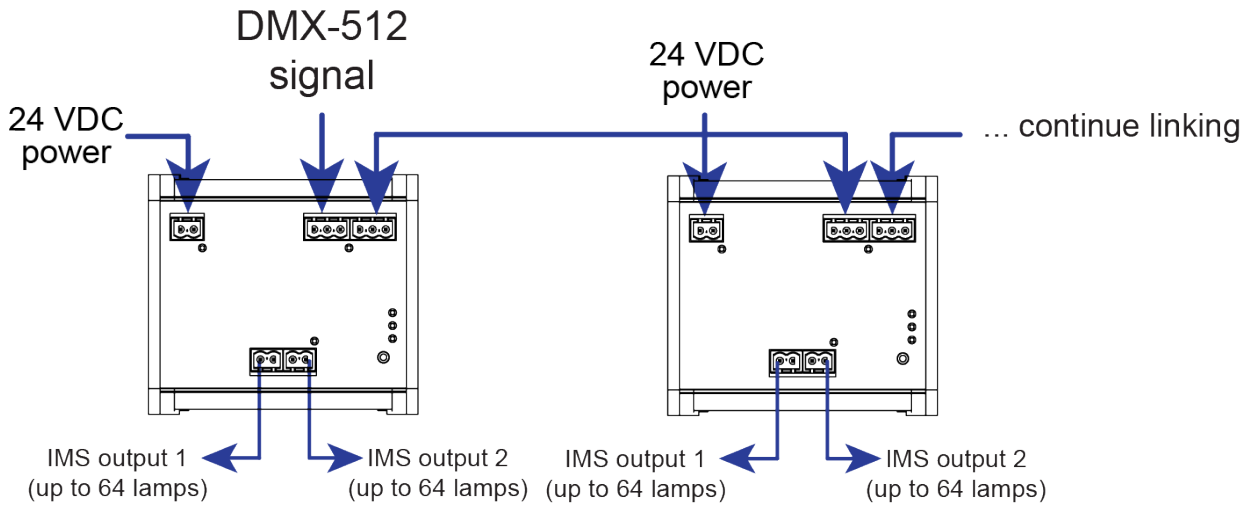
3. Connect the IMS string cable to one of the two Universe Drive outputs. *Note: Up to 64 IMS lamps can be connected to one IMS output.*



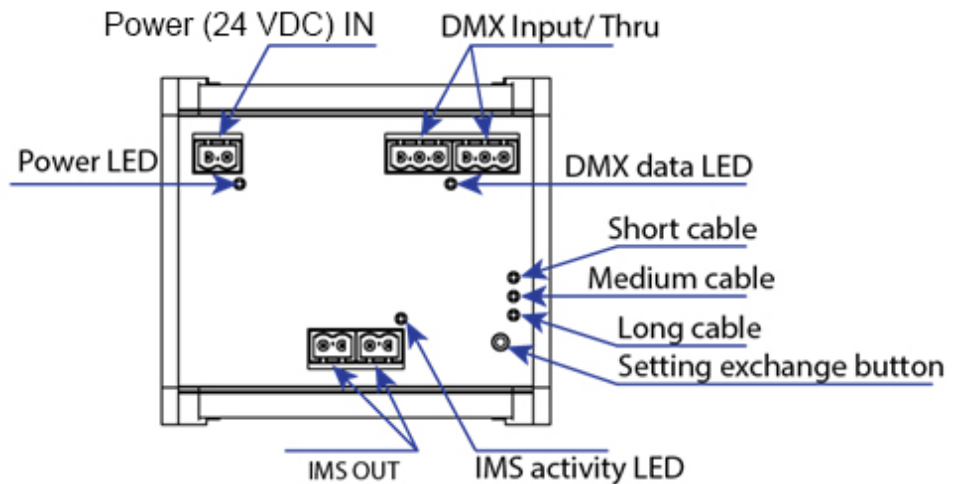
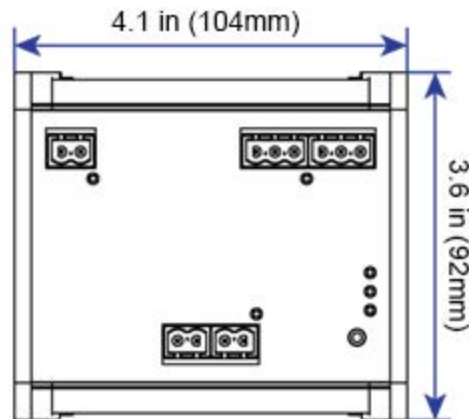
Connection Scheme



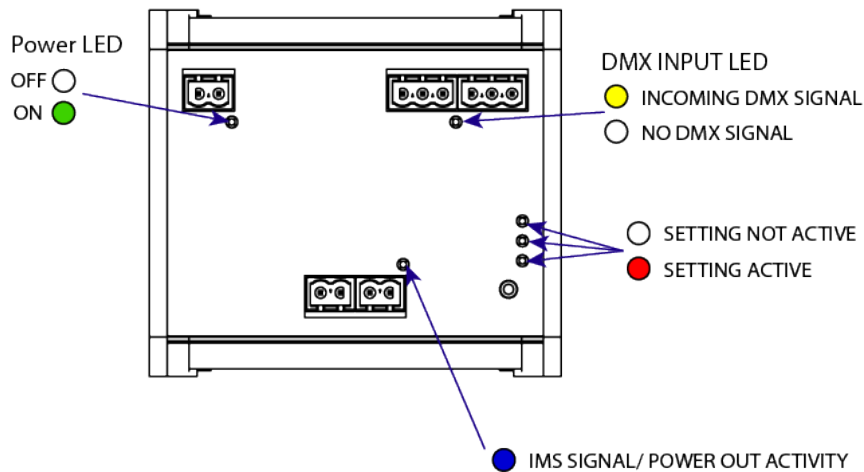
The image below shows DMX signal “daisy-chaining.”



Dimensions and Connections



LED Status Information



LED Status LED description

The Power LED has two states: ON and OFF

- ON: Unit is receiving power
- OFF: Unit is not receiving power

The DMX INPUT / THRU activity LED has two states: OFF and BLINKING YELLOW.

- OFF: There is no incoming DMX signal
- BLINKING YELLOW: There is an incoming DMX signal

The IMS OUTPUT activity LED has two states: OFF and BLINKING BLUE.

- OFF: There is no output power/data signal
- BLINKING BLUE: There is an active output power/data signal.

IMS Output String length LED indicators:

The three IMS String length LEDs have three states: ON, OFF, and BLINKING

- OFF: This setting is not activated
- BLINKING: The string length setting is not set and needs confirmation
- ON: The string length setting is activated

Setting the correct IMS string length setting

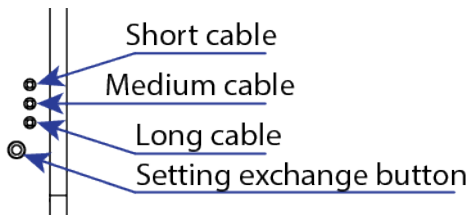
The IMS string length setting exists to ensure correct and safe data transfer to the IMS strings. To compensate for speed loss over longer cable runs, changing the string length setting changes the speed of data packet transfer.

NOTE: Due to the vast amount of customization options available to the IMS Mk2 product range, the terms "short," "medium," and "long" may not reflect the actual length of the cable, as number of lamps and other conditions may change the interpretation of which length setting should be used. When setting up the IMS Mk2 system for the first time, be sure to send the IMS DIN Rail IMS Drive a dynamic DMX scene, to ensure the length setting is appropriate to the application. Be sure to test each length setting to ensure the best IMS Mk2 lamp operation.

There are the three IMS string length settings:

- 1) Short length cables
- 2) Medium length cables
- 3) Long length cables

To change the setting to suit the application, press and hold the "Setting Exchange Button" at the right bottom corner. Once the currently ON LED begins to blink, blinking the length setting can be changed.



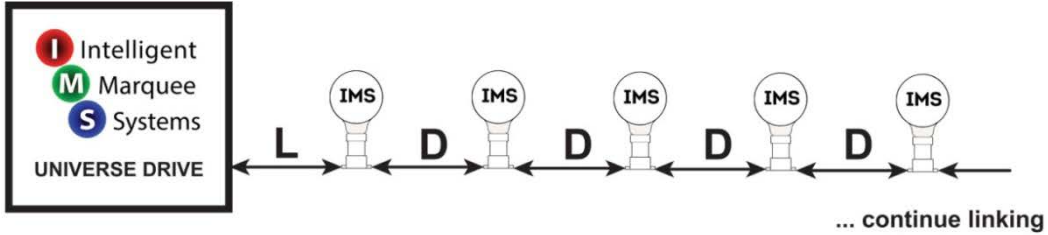
By pressing the "Setting Exchange Button", the current setting will advance to the next setting. For example, the current setting is "short cable" and the user wants to change to the "medium cable" setting. In this case the user has to press the "setting exchange button" once. The result is shown in the picture below.



When the correct setting has been selected by lighting up the corresponding LED, within five seconds the LED of the selected setting will change its state from blinking to solid on indicating the chosen setting is activated.

Cable Length / Lamp Spacing

The following settings are recommended using IMS122CL3 cable. *Settings may vary depending on cable type, IMS control data transfer rate, and other conditions. The settings below are examples of different scenarios and their tested results.*



if D = 15cm

Cable setting	L	Max.
Short	1m	64
Medium	5m	64
Long cable	20m	64
Short with transcoding	5m	64
Medium with transcoding	25m	64
Long with transcoding	55m	64

if D = 30cm

Cable setting	L	Max.
Short	1m	51
Medium	5m	64
Long cable	10m	64
Short with transcoding	5m	64
Medium with transcoding	20m	64
Long with transcoding	50m	64

if D = 50cm

Cable setting	L	Max.
Short	1m	41
Medium	1m	64
Long cable	10m	64
Short with transcoding	1m	62
Medium with transcoding	15m	64
Long with transcoding	45m	64

if D = 100cm

Cable setting	L	Max.
Short	1m	30
Medium	1m	46
Long cable	1m	64
Short with transcoding	1m	45
Medium with transcoding	1m	64
Long with transcoding	40m	64

- IMS lamp
Max. - Max. number of working lamps
L - Length of cable between Universe Drive and first lamp
D - Distance between lamps

Lamp Control

The IMS Mk2 system consists of three lamp types: RGBW, Dynamic White, and Clear Golden Warm White filament type. The Universe Drive receives the DMX signal and re-multiplexes this together with the power going to the lamps.

Each of the IMS lamps can be controlled individually via DMX. IMS lamps are addressed via the IMS Mk2 Hand Held Programmer (HHP), sold separately. The Warm White Filament lamp uses 1 DMX channel of control (0-255, 0-100%). The Dynamic White lamp uses 2 DMX channels of control, one for Warm White and the second for Cool White (0-255, 0-100%). The RGBW lamps use 4 DMX channels of control (see example below).

Channel	Value	Function	Lamp Number	Start DMX Address
1	000 ↔ 255	RED intensity 0% - 100%	1	1
2	000 ↔ 255	GREEN intensity 0% - 100%	1	↓
3	000 ↔ 255	BLUE intensity 0% - 100%	1	
4	000 ↔ 255	WHITE intensity 0% - 100%	1	
5	000 ↔ 255	RED intensity 0% - 100%	2	
6	000 ↔ 255	GREEN intensity 0% - 100%	2	↓
7	000 ↔ 255	BLUE intensity 0% - 100%	2	
8	000 ↔ 255	WHITE intensity 0% - 100%	2	
9	000 ↔ 255	RED intensity 0% - 100%	3	9

Frequently Asked Questions

How many lamps can be used per output?

It is possible to use 64 lamps per output x two outputs = 128 lamps per Universe Drive. However, the maximum lamps possible may vary depending length and type of cable. Please refer to the "Cable Length" diagram in this guide.

What is the transcoding setting and what does it do?

Signal Transcoding is an option to allow for longer cable runs either by longer lead-ins, longer socketed lengths, or a greater number of lamps. Transcoding changes the dimming resolution from 8-bit (256 steps of dimming) to 6-bit (64 steps of dimming). The Transcoding Setting is best when IMS lamps are being used for quick color changes that do not require a long, smooth crossfade. Always try and use the

standard option as it performs best in most situations. Choose the transcoding option as a means to troubleshoot why a string isn't working correctly.

When not to use transcoding:

The standard, non-transcoding setting has a higher bit-rate and makes for smoother dimming in situations where cable length and/or lamp quantity per string are secondary concerns. Always try to use the standard option if possible. If IMS is being used for applications such as low resolution video type effects, choosing the standard setting will produce better results.

Standard color fade. Transcoding will have more steps during this crossfade:



Scenario where transcoding will work as desired:



How can I patch the DMX addresses into the IMS Mk2 lamps?

In order to set the DMX addresses for lamps, a ProPlex IMS Mk2 HHP (Hand held Programmer) is required. The HHP makes it possible to set the required DMX address for each IMS lamp, test individual lamps, and test lamps strings attached to the IMS Universe Drive without the need for a DMX console.

Note: The IMS Mk2 Universe Drive DIN Rail has two outputs. Each output can have a maximum of 64 lamps. A maximum of 128 lamps can be connected in total per Universe Drive.

TMB 24/7 Technical Support

US/Canada: +1 818.794.1286
Toll Free: 1 877.862.3833 (877.TMB.DUDE)
UK: +44 (0)20.8574.9739
Toll Free: 0800.652.5418
e-mail: techsupport@tmb.com