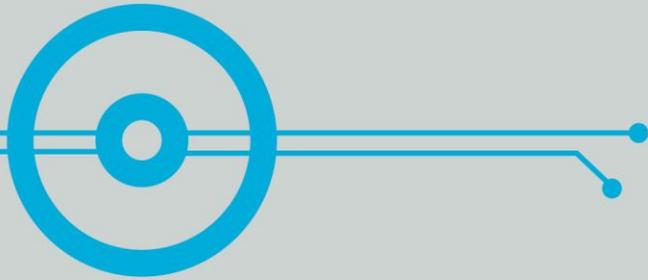
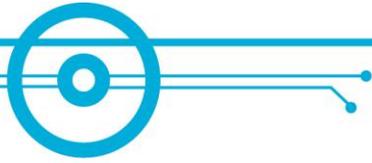


20 Channel Slice User Guide



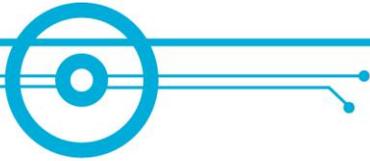
DATE
11/12/2025

PREPARED BY
Oliver Jeffery



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IMPORTANT SAFETY NOTICE

Read this user guide in full before you attempt to use the 20 Channel Slice.

On receipt of the 20 Channel Slice, check no damage has occurred whilst in transit. If you suspect any damage, do not use the controller until you have discussed the issue with EMP Designs Ltd.

If you do not fully understand anything contained in the user guide, contact the manufacturer by email before use (info@empdesigns.co.uk).

Ensure that all electrical connections and interconnections between external LED's are properly made in accordance with the manufacturers' instructions and no short circuits between channels are made.

All external wiring remains the responsibility of the user.

Whilst EMP Designs Ltd. has made every effort to ensure the 20 Channel Slice is safe to use and meets the client's specification, the client, prior to each application, should always complete on-site testing.

All external connections should only be made while the power is turned off.

Do not attempt to disassemble the controller in any way. Please return the controller to EMP Designs Ltd. if any servicing is required.

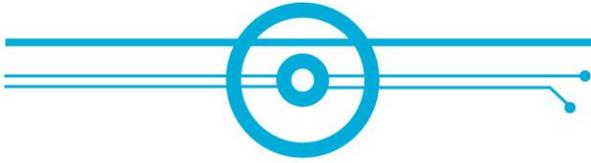
Damage may occur if the controller outputs are continually overloaded or short circuited.

Damage may occur if the power in polarity is incorrect.

Ensure a fuse is fitted to the input supply of the controller.

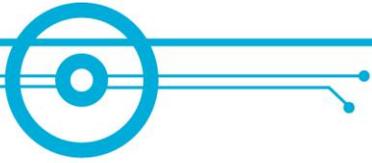
Avoid places subject to extremely high temperatures or humidity.

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20 Channel Slice User Guide 11/12/2025

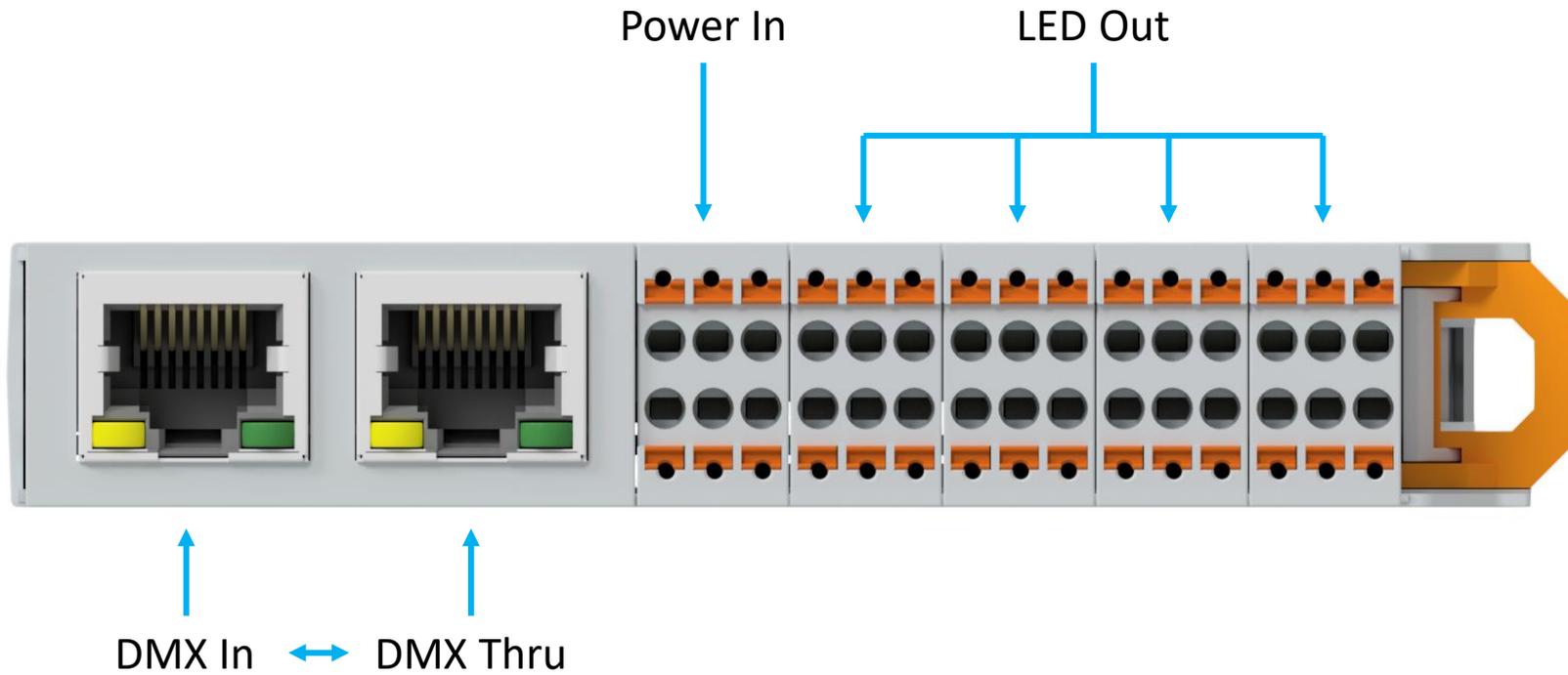


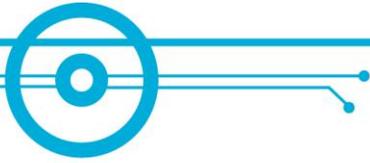
Specification

Specification	
Output Channels	20
Operating Voltage	12-24Vdc
Communication	Wired DMX & RDM (RJ45)

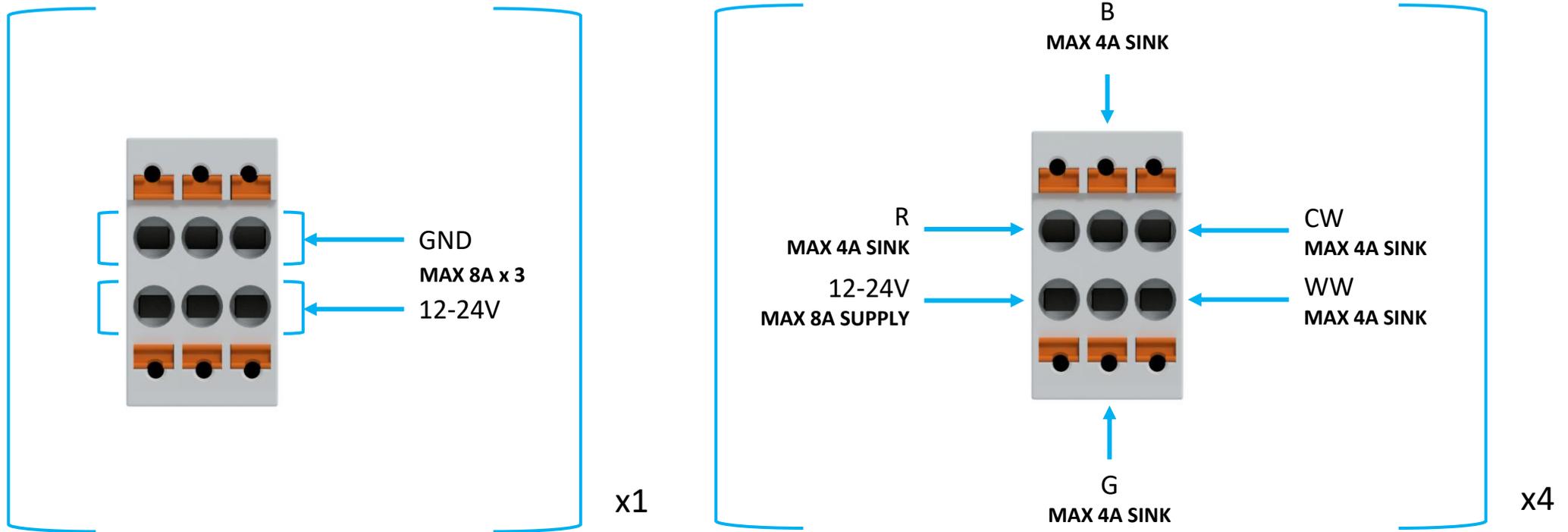


Connection Guide





Connection Guide & Maximum Current Ratings



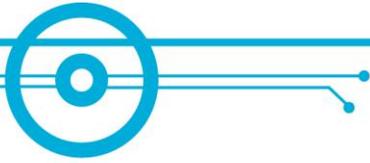
Power In

Max Input Current 24A

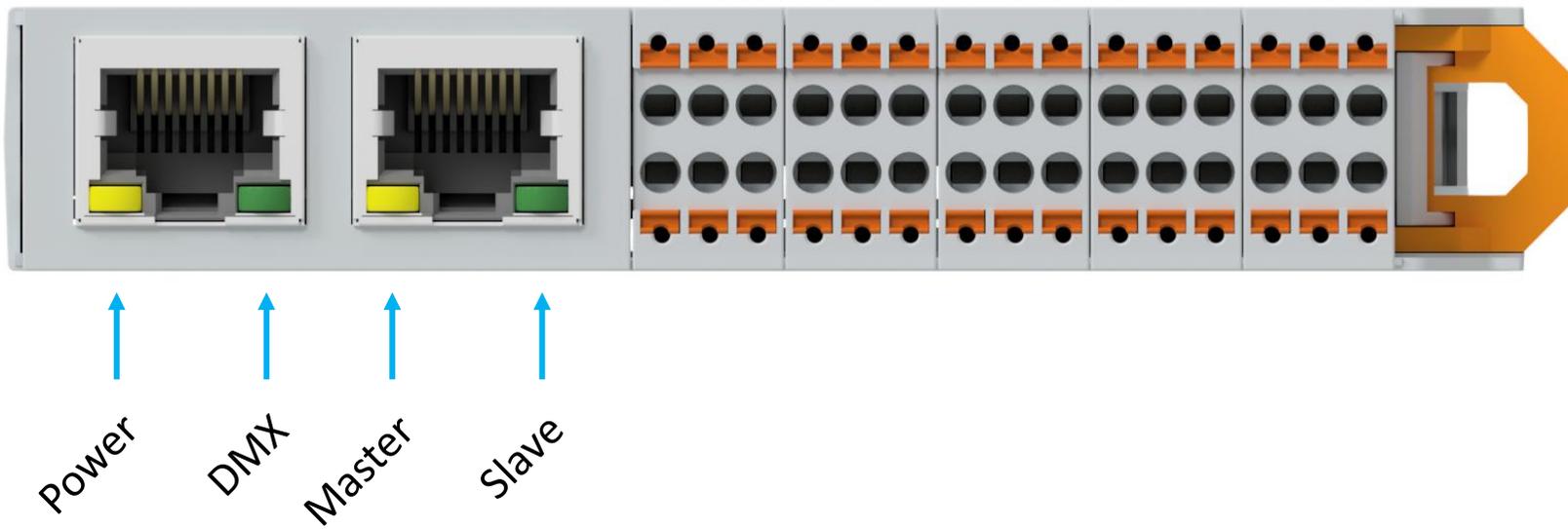
LED Out

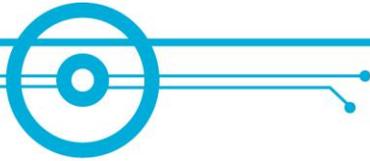
Please note:

When connecting more than 2 channels off a single 12-24V supply, the maximum current per channel must be reduced to avoid overloading the MAX 8A SUPPLY.



LED Indicators

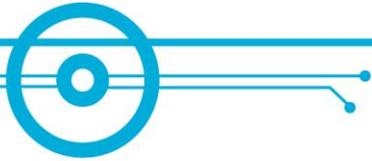




RDM Configuration

Mode	Description
1 - Master (20ch)	Wired DMX control of 20 channels (+ synchronisation output to Slaves)
2 - Slave (20ch)	Wired DMX control of 20 channels (+ PWM synchronised to Master clock)
3 - Test (20ch)	Cycles through channel 1-20 at 50% brightness

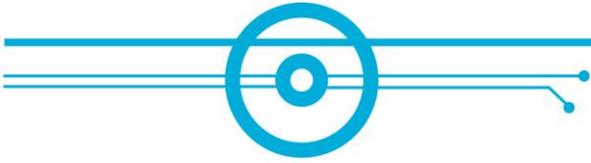
DMX Address	
1-493	Sets channel 1's address; channels 2-20 follow consecutively



PWM Synchronisation (Master/Slave Modes)

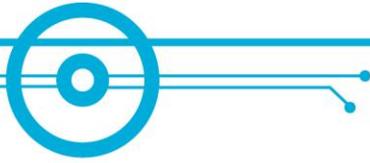
The Master and Slave modes allow multiple 20 Channel Slice's to operate with their PWM carrier frequencies synchronised. This is used to prevent beat frequencies which cause rolling visual artifacts that can be detected by the human eye, cameras and video recording equipment. This works for up to 1 universe (512 channels) of unique DMX addresses or an unlimited number of duplicate DMX addresses. For more than 512 unique DMX addresses a second master device will be required.

1. Choose one 20 Channel Slice and configure it to be the Master from the RDM configuration.
2. Configure all other units to be in Slave mode.
3. Daisy chain all units together using the DMX In and DMX Thru ports.



Fault Indication

Although care must be taken to prevent short circuits between channel outputs and supply, if the current limit is exceeded on an output the 20 Channel Slice will turn off all outputs, and the Power and DMX LEDs will flash to signify a fault.



Get In Touch

If you require further support, don't hesitate to get touch.

Address

EMP Designs Ltd
Unit 15 Camberley Business Centre
Bracebridge
Camberley
Surrey
GU15 3DP

Phone

01252 514477

E-mail

info@empdesigns.co.uk
sales@empdesigns.co.uk

Website

<https://www.empdesigns.co.uk/>

Social Media



<https://www.instagram.com/empdesignsltd/>



<https://www.facebook.com/ukempdesigns>



<https://www.linkedin.com/company/10971529/admin/dashboard/>



<https://www.youtube.com/channel/UCWgFEywgZkPVL0zmKIg6NtA>