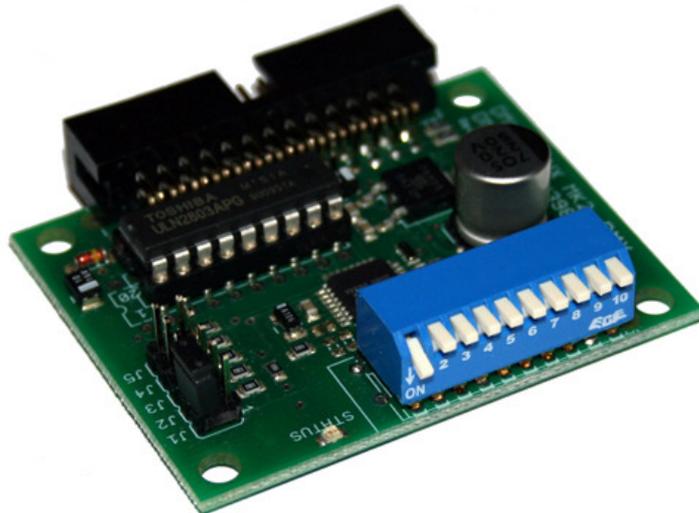


DMX UNIVERSAL DEMUX with 8 outputs

with different modes
Threshold / Binary / PWM / Strobe / Servo

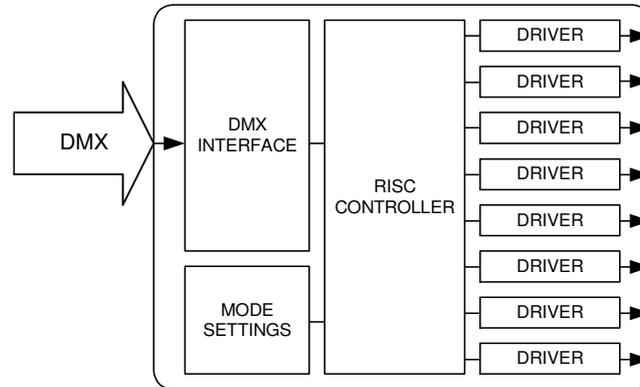
User Manual



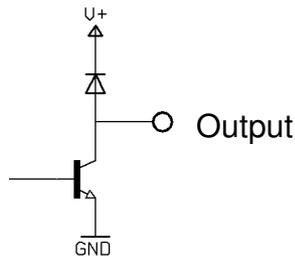
DMX
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Specification

This DMX298 universal demux has different working modes. 8 outputs are switched by the DMX signal.



Each output has a driver and a protection diode as shown in the following drawing:



Data Sheet

Voltage supply:

5-12V DC / 100mA (without connected units)

DMX:

1 or 8 DMX channels (depends on the selected mode)
on pin raw

Output:

8 outputs with driver
max. 500mA / on pin raw

PCB-Dimensions:

46mm x 58mm

Connection of the DMX298 demux



PIN	DESCRIPTION	PIN	DESCRIPTION
1	Output 1 (-)	2	Output 1 (+)
3	Output 2 (-)	4	Output 2 (+)
5	Output 3 (-)	6	Output 3 (+)
7	Output 4 (-)	8	Output 4 (+)
9	Output 5 (-)	10	Output 5 (+)
11	Output 6 (-)	12	Output 6 (+)
13	Output 7 (-)	14	Output 7 (+)
15	Output 8 (-)	16	Output 8 (+)
17	Power supply 5-12V	18	GND
19	Power supply 5-12V	20	GND
21	DMX+	22	DMX+
23	DMX-	24	DMX-
25	GND	26	GND

Modes

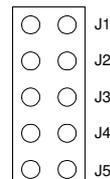
The actual mode is switched by a jumper. Only a correct setting as shown in the following drawings let the DMX298 demux work correct.

A combination of the modes is not possible.

Threshold output (no jumper closed)

The „Threshold“ mode use 8 DMX channels. The 1st output is switched by the first DMX channel and so on.

A DMX value between 0 and 127 switch the output OFF. If the DMX value is between 128 and 255 the output is switchd ON.



Example: DMX value 1: $77_D = 0...127$

Output 1: OFF

DMX value 2: $219_D = 128...255$

Output 2: ON

...

DMX value 1: $219_D = 128...255$

Output 1: ON

DMX value 2: $77_D = 0...127$

Output 2: OFF

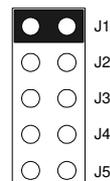
...



Switch 10 invert the output signal in this mode.

Binary output (only J1 closed)

The „Binary“ mode use only one DMX channel to switch all 8 outputs. The received DMX value is given in a binary signal to the outputs. Each bit of the DMX value is equal to one output.



Example: DMX value: $77_D = 01001101_B$

Output 1: ON 01001101_B

Output 2: OFF 01001101_B

Output 3: ON 01001101_B

Output 4: ON 01001101_B

Output 5: OFF 01001101_B

Output 6: OFF 01001101_B

Output 7: ON 01001101_B

Output 8: OFF 01001101_B

DMX value: $219_D = 11011011_B$

Output 1: ON 11011011_B

Output 2: ON 11011011_B

Output 3: OFF 11011011_B

Output 4: ON 11011011_B

Output 5: ON 11011011_B

Output 6: OFF 11011011_B

Output 7: ON 11011011_B

Output 8: ON 11011011_B

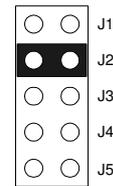


Switch 10 invert the output signal in this mode.

Strobe control (only J2 closed)

The „strobe“ mode generate 8 strobe trigger signals. Depends on the DMX value the signal is faster or slower or a single trigger signal is generated.

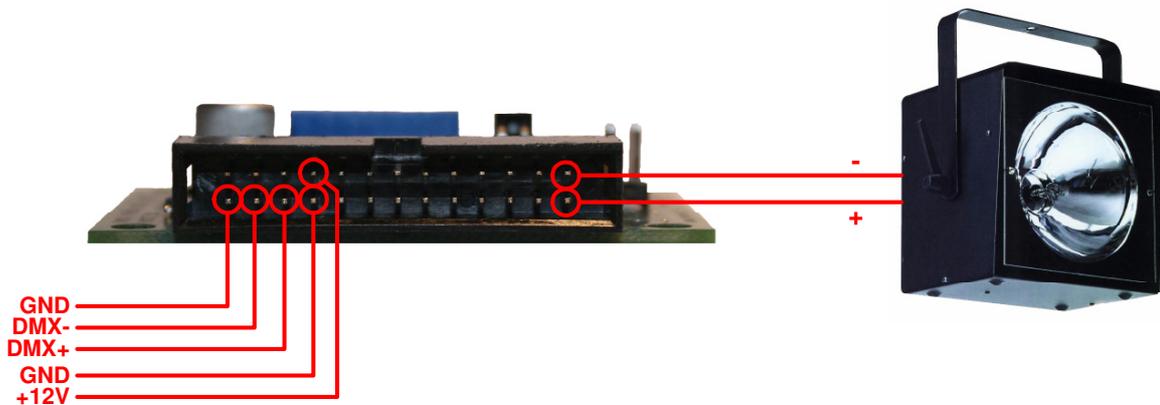
DMX value function:



DMX Channel	DMX Value	Function
1...8	0-10	Strobe off
	11-249	Strobe speed slow→fast
	250-255	Sync strobe Each time the DMX value is in teh range of 250-255 a single trigger signal is generated.

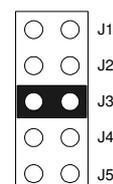
Connection of the strobe

Der Anschluß erfolgt entsprechend der folgenden Skizze, die den Kanal 1 darstellt:



PWM output (only J3 closed)

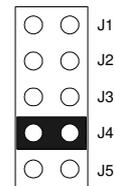
The PWM mode use 8 DMX channels. Each DMX value is used to control one output. The PWM signal depends on the DMX value in a range between 0% and 100%.



Switch 10 invert the output signal in this mode.

Servo control (only J4 closed)

The „servvo“ mode of the DMX298 demux use 8 DMX channels to control the 8 outputs. Each output provide a servo control signal for a standard servo.

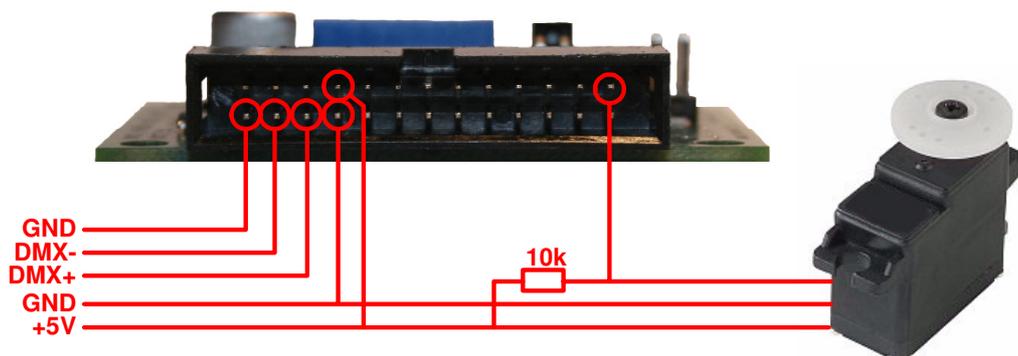


ATTENTION:

For this mode you need a power supply ouf 5V DC. This is also used for the DMX298 power supply.

Connection of the servos

The connection of the interface with the servo is shown in the following drwing. Please use a resistor between the 5V and the signal line for the most standard servos.



LED-Display-Codes

The integrated DMX-LED is used as a multifunctional display.

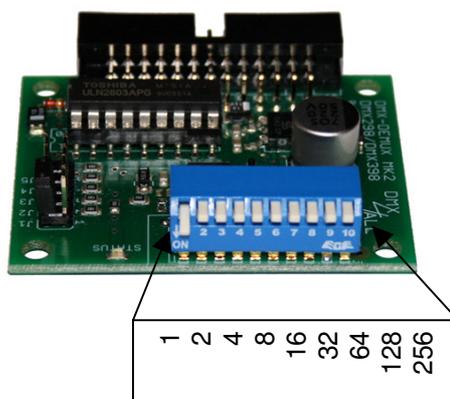
This LED lights nonstop in normal operation. If the LED does not light, there is no DMX512-input-signal.

Also the LED signalled the operation status. In this case the LED lights up in short pitches and then turns into off modus. The Number of flashing signals is equal to the Number of the error status.

Error Status	Error	Description
2	Address error	Check if a valid DMX- starting address is adjusted at the DIP-switch.
3	DMX-signal error	An invalid DMX input signal is established, invert the signal line by changing switch 2 and 3. Or use a twisted pair wire.

DMX starting address calibration

The starting address can be set by a DIP-Switch. Switch 1 has the valency 2^0 (=1), Switch 2 has the valency 2^1 (=2) and so on... finally Switch 9 has the valency 2^8 (=256). Each Switch, which is moved to ON position, represents the starting address.



Address	Switch
1	
2	
3	
4	
5	

Address	Switch
...	...
508	
509	
510	
511	

Accessoires

Housing

Dimensions: 72x50x28 mm



CE-conformity



This assembly (board) is controlled by a microprocessor and uses high frequency (8MHz). To get the characteristics of the assembly in relation to the CE-conformity, an installation in a compact metal casing is necessary.

Risk-Notes

You purchased a technical product. Conformable to the best available technology the following risks should not be excluded:

Failure risk: The device can drop out partially or completely at any time without warning. To reduce the probability of a failure a redundant system structure is necessary.

Initiation risk: For the installation of the board, the board must be connected and adjusted to foreign components according to the device paperwork. This work can only be done by qualified personnel, which read the full device paperwork and understand it.

Operating risk: The Change or the operation under special conditions of the installed systems/components could as well as hidden defects cause to breakdown within the running time.

Misusage risk: Any nonstandard use could cause incalculable risks and is not allowed.

Warning: It is not allowed to use the device in an operation, where the safety of persons depend on this device.



DMX4ALL GmbH
Reiterweg 2A
D-44869 Bochum
Germany

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