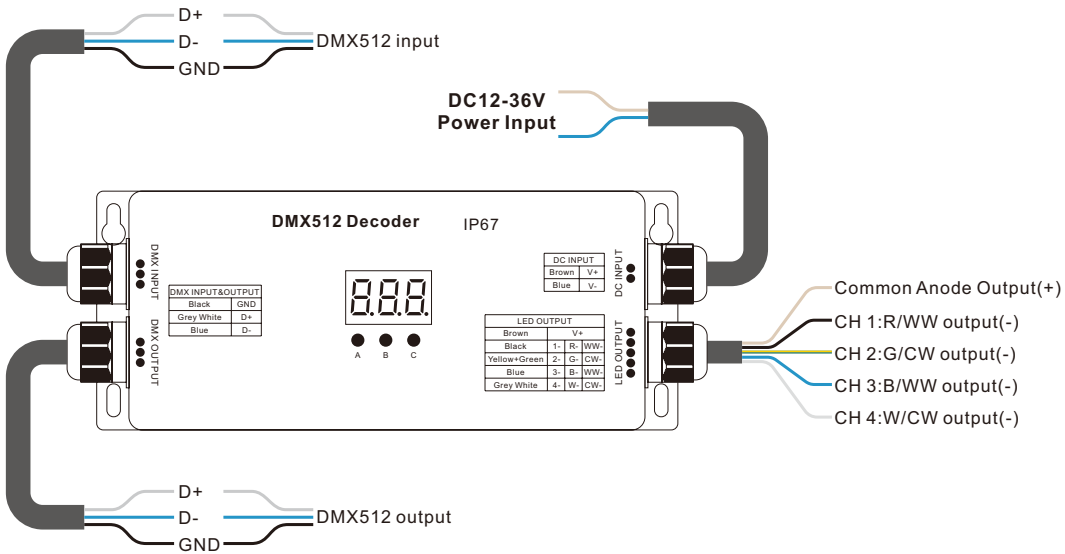
# RDM Enabled Waterproof DMX512 Decoder

70060053

***Important:*** *Read All Instructions Prior to Installation*

## Function introduction




## Product Data

| No. | Input Voltage | Output Current | Output Power | Remarks | Size(LxWxH) | Ambient Temperature |
|---|---|---|---|---|---|---|
| 1 | 12-36VDC | 4x5A | 4x(60-180)W | Constant voltage | 180.5x73.6x38mm | -25℃ ~ +45℃ |
| 2 | 12-36VDC | 4x350mA | 4x(4.2-12.6)W | Constant current | 180.5x73.6x38mm | -25℃ ~ +45℃ |
| 3 | 12-36VDC | 4x700mA | 4x(8.4-25.2)W | Constant current | 180.5x73.6x38mm | -25℃ ~ +45℃ |

- Standard DMX512 compliant control interface
- RDM function enabled to realize intercommunication between DMX master and decoder.
- For example, DMX decoder's address can be assigned by DMX master console
- With digital display to show data directly, easily to set and show DMX address.
- Total 4 PWM output channels, common anode
- DMX address manually settable
- DMX channel quantity from 1CH~4CH settable
- Output PWM frequency from 200HZ ~ 35K HZ settable.
- Output dimming curve gamma value from 0.1 ~ 9.9 settable
- To work with power repeater to expand output power unlimitedly.
- Waterproof grade:IP67

## Safety & Warnings

- DO NOT install with power applied to device.
- This device is IP67 rating and protected against damp environment.

## Operation

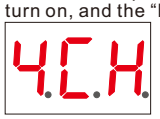
To set desired DMX512 address through buttons,
**button A** is to set "hundreds" position,
**button B** is to set "tens" position,
**button C** is to set "unit" position.




**Set DMX address (Factory default DMX address is 001)**
Press and hold down any of the 3 buttons for over 3 seconds, digital display flashes to enter into address setting, then keep short pressing button A to set "hundreds" position, button B to set "tens" position, button C to set "units" position, then press and hold down any button for >3 seconds to confirm the setting.



**DMX signal indicator** ● : When DMX signal input is detected, the indicator on the display following after the digit of "hundreds" position of DMX address turns on red  . If there is no signal input, the dot indicator will not turn on, and the "hundreds" position of DMX address will flash.



**Choose DMX Channel (Factory default DMX channel is 4CH)**
Press and hold down both buttons B+C simultaneously for over 3 seconds, CH digital display flashes, then keep short pressing button A to choose 1/2/3/4, which means total 1/2/3/4 channels. Press and hold down button A for >3 seconds to confirm the setting. Factory default is 4 DMX channels.

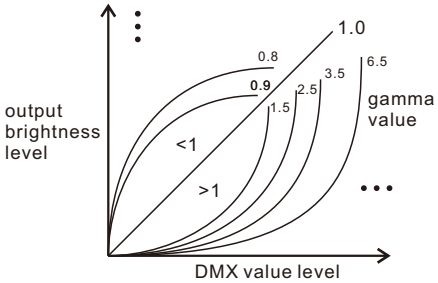
For example the DMX address is already set as 001.
1CH=1 DMX address for all the output channels, which all will be address 001.
2CH=2 DMX addresses , output 1&3 will be address 001, output 2&4 will be address 002
3CH=3 DMX addresses, output 1, 2 will be address 001, 002 respectively, output 3&4 will be address 003
4CH=4 DMX addresses, output 1, 2, 3, 4 will be address 001, 002, 003, 004 respectively



**Choose PWM frequency (Factory default PWM frequency is PF1 1KHz)**
Press and hold down both buttons A+B simultaneously for over 3 seconds, digital display will show PF1, PF means output PWM frequency, the digit 1 will flash, which means frequency, then keep short pressing button C to select a frequency from 0-9 and A-L, which stand for following frequencies:
0=500Hz, 1=1KHz, 2=2KHz, …, 9=9KHz, A=10KHz, B=12KHz, C=14KHz, D=16KHz, E=18KHz, F=20KHz, H=25KHz, J=35KHz, L=200Hz.
Then press and hold down button C for >3 seconds to confirm the setting.



**Choose Dimming Curve Gamma Value (Factory default dimming curve value is g1.0)**
Press and hold down all buttons A+B+C simultaneously for over 3 seconds, digital display flashes g1.0, 1.0 means the dimming curve gamma value, the value is selectable from 0.1-9.9, then keep short pressing button B and button C to select corresponding digits, then press and hold down both buttons B+C for >3 seconds to confirm the setting.






### Firmware OTA update

You will get this after power on the decoder, it means this decoder supports firmware OTA update function. This function can be used when there is a firmware update from the manufacturer, the update can be executed through a Windows computer and an USB to serial port converter, the converter will connect the computer and the decoder's hard wire DMX port. A software RS485-OTW on the computer will be used to push the firmware to the decoder.

Connect the computer and the decoder through the USB to serial port converter, if you need to update multiple decoders' firmware, connect the converter to first decoder's DMX port, then connect other decoders to the first decoder in daisy chain through the DMX port. Please do not power on the decoders.

Run the OTA tool RS485-OTW on the computer, select the correct communication port "USB-SERIAL" , baudrate "250000", and data bit "9", use default settings for other configurations. Then click "file" button to select the new firmware from the computer, then click "Open Port", the firmware will be loaded. Then click "Download Firmware", the right side state column of the OTA tool will show "send link". Then power on the decoders before "wait erase" displaying on the state column, the digital display of the decoders will show A.P. 1 . Then "wait erase" will show on the state column, which means the updating starts. Then the OTA tool starts writing data to the decoders, the state column will show the progress, once writing data finishes, the digital display of the decoders will flash A.P. 1 , which means firmware updated successfully.

### Restore to Factory Default Setting

Press and hold down both buttons A+C for over 3 seconds until the digital display turns off and then turns on again, all settings will be restored to factory default.
Default settings are as follows:
DMX Address: 001
DMX Address Quantity: 4CH
PWM Frequency: PF1
Gamma: g1.0

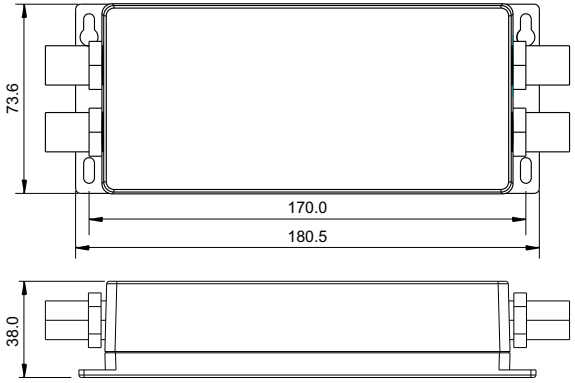
### RDM Discovery Indication:

When using RDM to discover the device, the digital display will flash and the connected lights will also flash at the same frequency to indicate. Once the display stops flashing, the connected light also stops flashing.

### The supported RDM PIDs are as follows:

DISC_UNIQUE_BRANCH
DISC_MUTE
DISC_UN_MUTE
DEVICE_INFO
DMX_START_ADDRESS
IDENTIFY_DEVICE
SOFTWARE_VERSION_LABEL
DMX_PERSONALITY
DMX_PERSONALITY_DESCRIPTION
SLOT_INFO
SLOT_DESCRIPTION
MANUFACTURER_LABEL
SUPPORTED_PARAMETERS

### Product Dimension




### Wiring Diagram

