



EPM-DM3D

Universal Dimmer Module

Quick Reference Guide (revision 1.50 for H/W Rev.C)



OVERVIEW

The universal dimmer module EPM-DM3D is designed to control lighting loads. The module can operate in three-channel, two-channel and one-channel modes. The device supports dimming of both forward (leading edge) and reverse phase (trailing edge) type loads.

The control, data exchange and configuration are all handled via TCP/IP protocol.

Every channel has a pair of digital inputs for manual control and supports one-button and two-button control modes.

The device supports 220-240 Volt electronic and magnetic low-voltage, incandescent, neon/cold cathode, 2-wire dimmable fluorescent, 2-wire dimmable LED lighting loads.

SPECIFICATIONS

Number of channels	1 - 3
Number of digital inputs	3 pairs
Maximum load per output	650 W
Dimming type	Trailing edge cut, Leading edge cut, Non-dim
Overload and short circuit protection	40 A, 100 μ s
Overheat protection	Yes
Maximum voltage	250 V
Supply voltage range	12-24 VDC via power terminals 48 VDC via PoE port
Consumption current	260 mA @ 12 VDC

Network interface	Ethernet (10/100)
Operating temperature	-20° C to 45° C -5° F to 115° F
Operating humidity	5 to 80% RH non-condensing
Dimensions (HWD)	90 mm x 160 mm x 58 mm 3.54" x 6.30" x 2.28"
Weight	300 g 0.66 lbs
Supported data exchange protocols	NetString ModBus TCP ModBus RTU over TCP

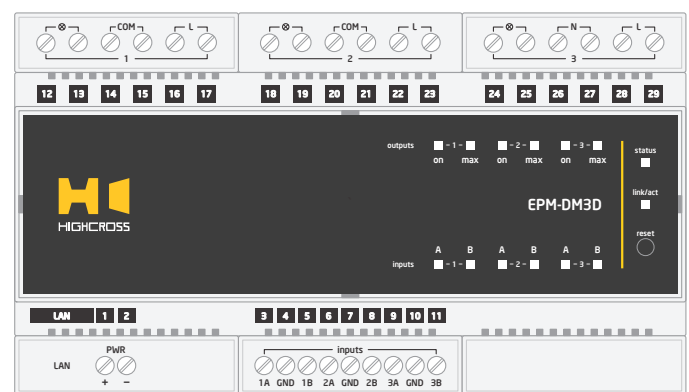
DEVICE CONTROL COMPONENTS

FACE PANEL COMPONENTS

outputs 1-3	Indicators of outputs status
inputs 1-3	Indicators of inputs status
status	Indicates power status and connection to controllers
link/act	Ethernet link and activity indicator
reset	Multifunctional button (reboot, reset, boot-loader)

LOW VOLTAGE TERMINAL BLOCK

LAN	Ethernet network and PoE power connector
PWR	Power supply terminals (+12...48 VDC)
1A - 3B	Digital inputs terminals
GND	Ground contact for inputs, electrically connected to PWR "-" contact



HIGH VOLTAGE TERMINAL BLOCK

LOAD 1-3 ⊗ 1-3	Terminals for Load
COM 1-2	Terminals not used by the device
N 3	Terminals for Neutral
L 1-3	Terminals for Line

LED "status" indicates the power connection and connection status with controllers	
Off	No power connected
Blink (1 Hz)	No connection with external controllers
Fast blink (4 Hz)	The device is in bootloader mode
On	Connected to external controllers

LED "link" indicates Ethernet network link and activity	
Off	No connection to Ethernet network
Blink	Connected to Ethernet network Receiving Ethernet data packets
On	Connected to Ethernet network No network activity

LEDs "1-3 on" display status of output	
Off	The output is off
On	The output is on
Blink	No Line or Load

LEDs "1-3 max" display that output power is 100%	
Off	The output power is less 100%
On	The output power is 100%

Multifunctional button "reset"

To reboot the device push the button for 1 second

To reset the device to factory defaults push and hold the button for 5 seconds.

IP-address will be set to 10.0.1.101, subnet mask - to 255.255.255.0. All other settings will be set to default values

For firmware update, power off the device, push and hold the button and power the device on. Release the button after the LED "status" will start to blink fast.

The network settings of the device started in bootloader mode are: IP-address - **10.0.1.101**, subnet mask - **255.255.255.0**

The **PWR "+"** and **"-"** terminals are designed to power the device 12-24 VDC if connected Ethernet switch has no PoE support.

Terminals **COM** of outputs 1-2 are designed to connect Neutral and are not used by device. Their purpose is suitable of installation only.

Terminals **N** of output 3 are designed to connect Neutral and can be used by device for phase synchronization.

For Load connection diagrams refer to the Instruction manual.

SETUP AND CONFIGURATION

The configuration of the module is handled via web-interface.

To start working with the device:

- Connect the device to the Ethernet switch. If the switch has no PoE support, connect the power 12-24 VDC to the **PWR** terminal
- Ensure that your computer can connect to the network address 10.0.1.101 or set the TCP/IP settings of active network adaptor to: IP address - **10.0.1.100**, subnet mask - **255.255.255.0**
- Enter **10.0.1.101** in address bar of your web-browser
- Enter: login - **root**, password - **root**
- Configure the device settings

The web-interface contains the next web-pages:

Home	Displays the hardware revision and the firmware version
Settings	Network settings, type of data exchange protocol, channels combining mode, dimming type, outputs and digital inputs settings
Control	Control of channels
Status	Displays current TCP/IP connections and device uptime info

For further information refer to www.highcross.pro