




MPower CLMD16 16-Channel DC Load Module User Manual

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MPower CLMD16 16-Channel DC Load Module



Product Information

The product being discussed in the user manual is a set of hardware devices and software called MPOWER. The specific hardware devices demonstrated are CLMD16, CLMD12, CKM12, and VMM6. The software that will be demonstrated is not specified. The CLMD16 and CLMD12 are hardwired input/output devices. They have input connection switches, output indication LEDs, alarm output devices with LED indication, and polarity selectors. The CLMD16 also has resistive input channels signal adjustment and a current loop input connecting point.

The MPOWER configuration allows for inter-system communication. The CLMD16 has 16 channels and the CLMD12 has 12 channels. Each channel can be triggered on or off using breaker switches. Additional trigger inputs on the CLMD16 include voltage sensing inputs, resistance to DC inputs, and current loop pair inputs. The CLMD12 has voltage-sensing inputs only. The CLMD16, CLMD12, VMM6, and CKM12 send and receive NMEA 2000 127501 Binary Status Report PGN. The channel definitions of the sent 127501 Binary Status Report for the CLMD16 and CLMD12 are shown in the tables.

The MPOWER configuration also includes a General tab and a Discrete I/O tab. The General tab allows for configuration settings such as one-button smooth scroll and pre-defined discrete I/O input functions. The Discrete I/O tab allows users to assign breakers to specific input functions. The CLMD16's available signal list provides descriptions of the inputs that can be used to switch loads or be placed into one another before switching loads. Network inputs from MFDs (Multi-Function Displays) have direct control over the CLMD16's breakers unless configured otherwise.

Product Usage Instructions

1. Connect the hardware devices (CLMD16, CLMD12, CKM12, VMM6) to the appropriate interfaces or systems.
2. Configure the MPOWER system using the provided software.
3. Refer to the channel definitions in the tables to understand the trigger and input options for each hardware device.
4. Use the MPOWER configuration settings to customize the system. Adjust settings in the General tab for

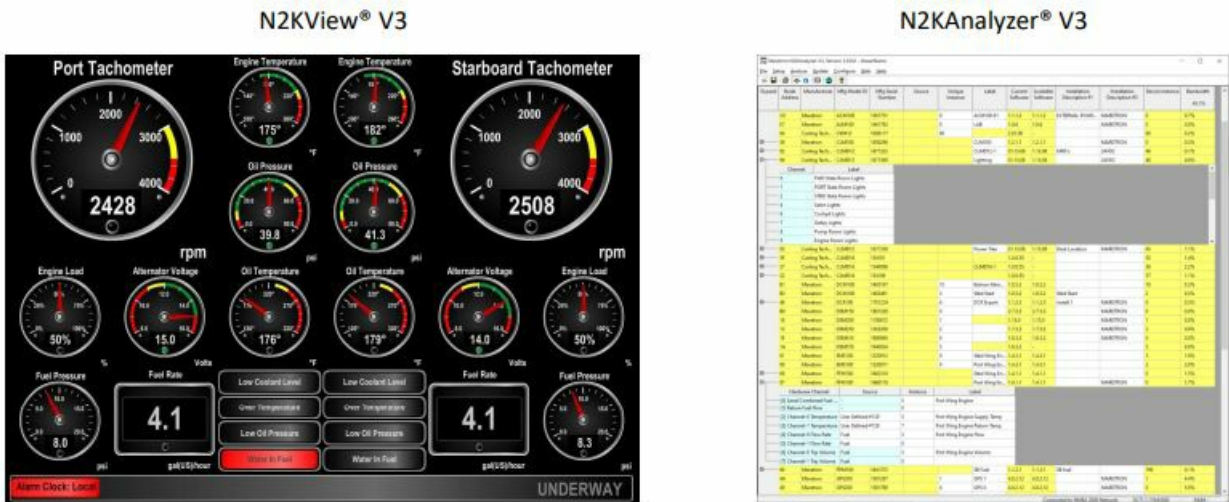
features like a one-button smooth scroll and pre-defined discrete I/O input functions. Assign breakers to specific input functions in the Discrete I/O tab.

5. Refer to the CLMD16's available signal list to understand the inputs that can be used to switch loads or be placed into one another before switching loads.
6. Ensure that network inputs from MFDs are configured correctly to control the CLMD16's breakers if desired.
7. Follow any additional instructions provided in the full user manual for detailed setup and usage information.

MPOWER HARDWARE DEVICES DEMONSTRATED



SOFTWARE THAT WILL BE DEMONSTRATED

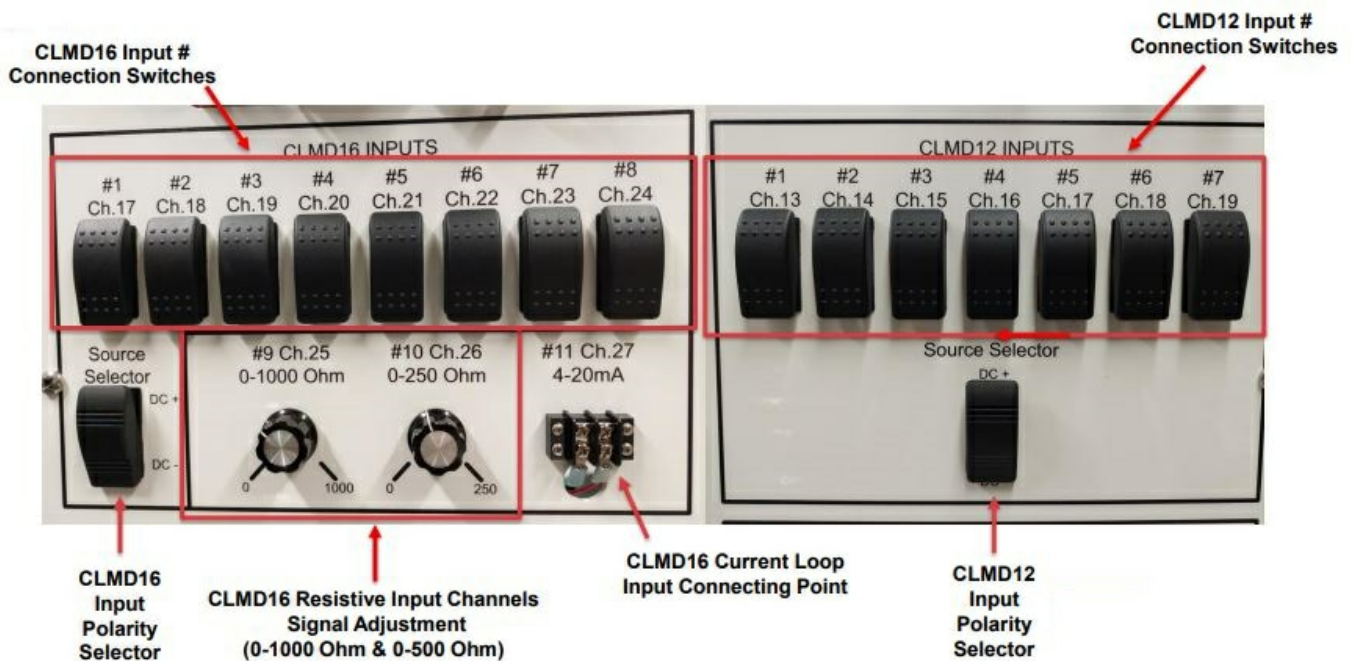


DEMO HARDWARE DESCRIPTION



HARDWIRED INPUT SWITCHES & POTS

CLMD16 & CLMD12 HARDWIRED INPUT SWITCHES & POTS



MPOWER CONFIGURATION

Inter-System Communication Method

CLMD16

CLMD16



		Chan nel	Trigger	
		17	Input 1 (Volta ge Sensing) 'On Level'	
		18	Input 2 (Volta ge Sensing) 'On Level'	
		19	Input 3 (Volta ge Sensing) 'On Level'	
		20	Input 4 (Volta ge Sensing) 'On Level'	
Chann el	Trigger	21	Input 5 (Volta ge Sensing) 'On Level'	
		22	Input 6 (Volta ge Sensing) 'On Level'	
		23	Input 7 (Voltage Sen sing) 'On Level'	
1	Breaker 1 On	22	Input 6 (Volta ge Sensing) 'On Level'	
2	Breaker 2 On			
3	Breaker 3 On			
4	Breaker 4 On	23	Input 7 (Voltage Sen sing) 'On Level'	
5	Breaker 5 On			
6	Breaker 6 On			
7	Breaker 7 On		Input 8 (Volta ge Sensing)	

8	Breaker 8 On	24	'On Level'	
9	Breaker 9 On	25	Input 9 (Resistance to DC -) 'On Level'	
10	Breaker 10 On			
11	Breaker 11 On			
12	Breaker 12 On	26	Input 10 (Resistance to DC -) 'On Level'	
13	Breaker 13 On			
14	Breaker 14 On	27	Input 11 (Current Loop Pair) 'On Level'	

CLMD12

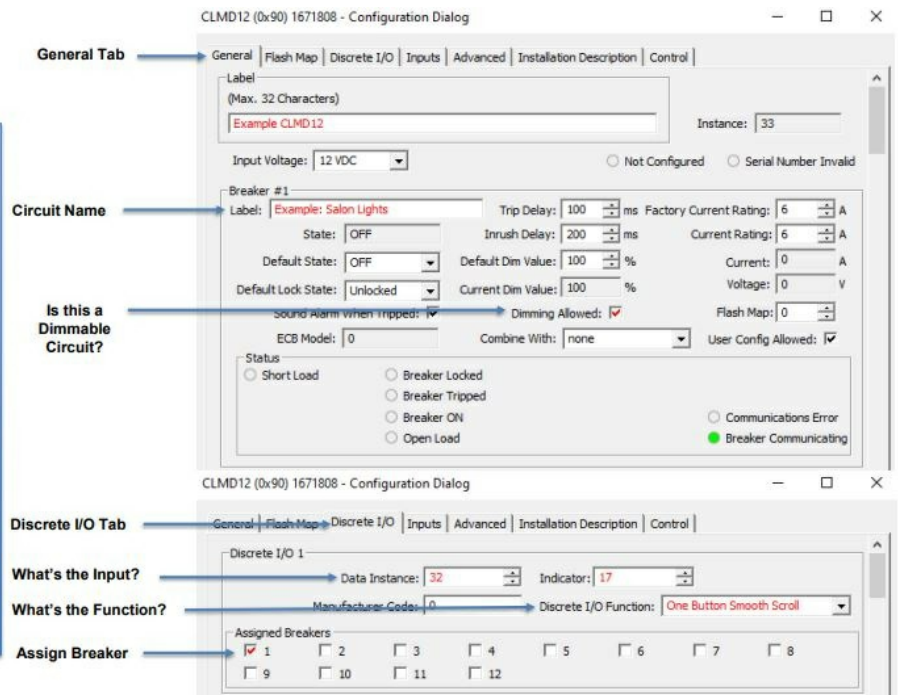
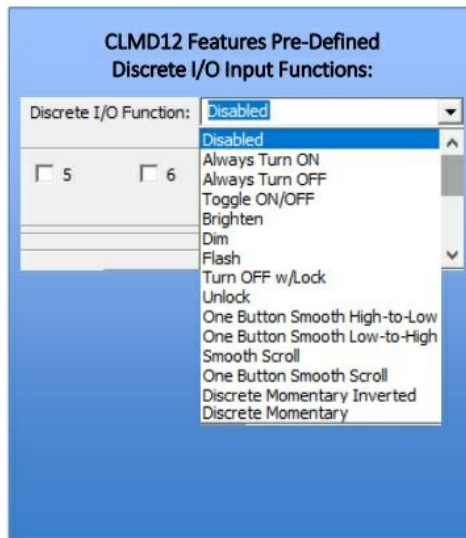
CLMD12



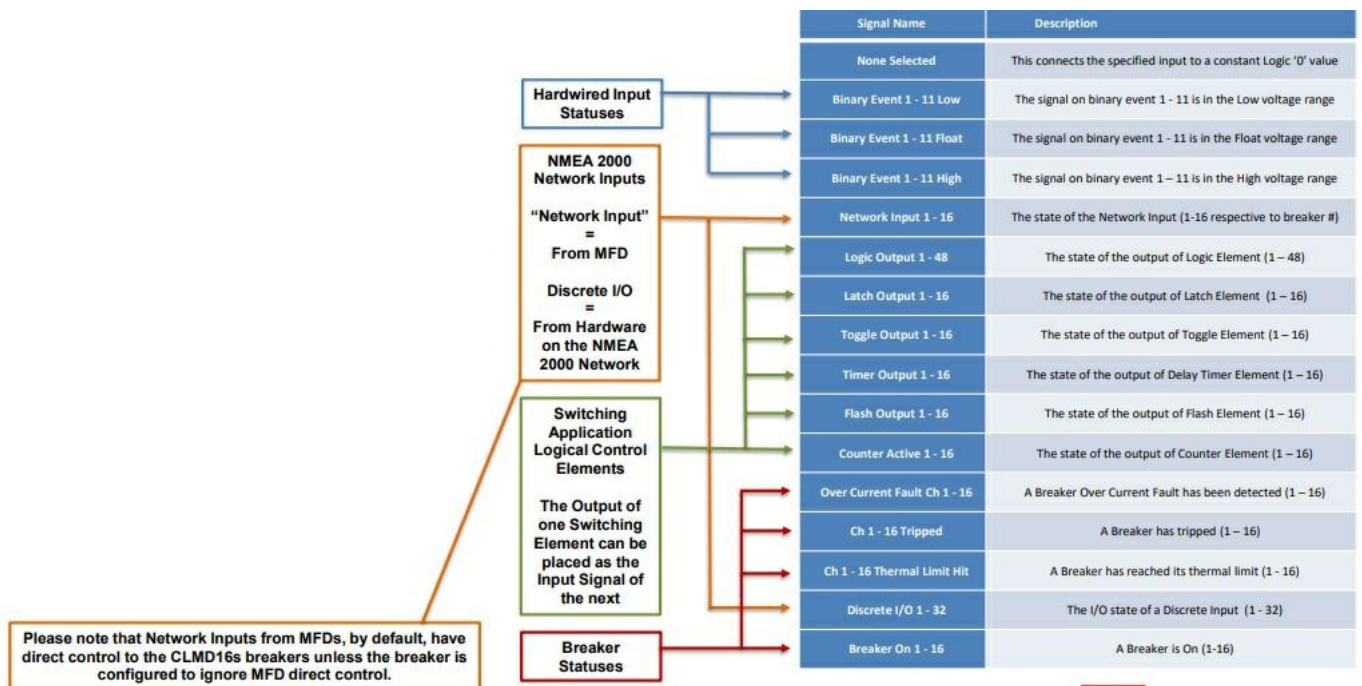
		Chan nel	Trigger	
		13	Input 1 (Volta ge Sensing) 'On Level'	
		14	Input 2 (Volta ge Sensing) 'On Level'	
		15	Input 3 (Volta ge Sensing) 'On Level'	
Chan nel	Trigger			
1	Breaker 1 On			
2	Breaker 2 On	16	Input 4 (Voltage Sen sing) 'On Lev el'	
3	Breaker 3 On			
4	Breaker 4 On			
5	Breaker 5 On	17	Input 5 (Volta ge Sensing) 'On Level'	
6	Breaker 6 On			
7	Breaker 7 On			
8	Breaker 8 On	18	Input 6 (Volta ge Sensing) 'On Level'	
9	Breaker 9 On			
10	Breaker 10 O n	19	Input 7 (Volta ge Sensing) 'On Level'	
11	Breaker 11 O n			
12	Breaker 12 O n			

The CLMD16, CLMD12, VMM6 and CKM12 send and receive NMEA 2000 127501 Binary Status Report PGN. The tables to the left shows the channel definition of the sent 127501 Binary Status Report for the CLMD16 and CLMD12.

Configuration Example CLMD12 (1)



CLMD16 Configuration Concept

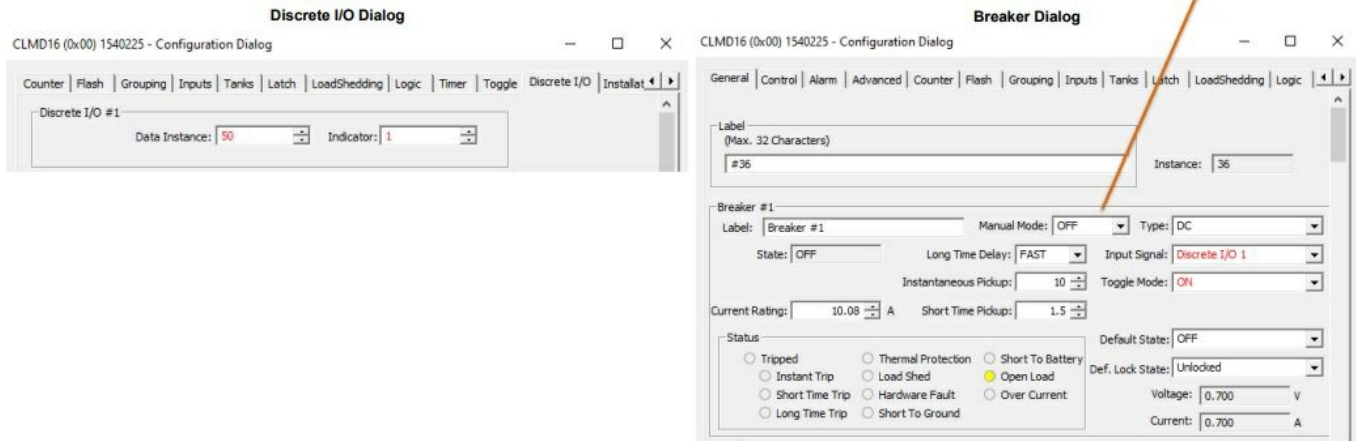


Everything Starts With an 'Input'

Logical Switching Elements receive an Input and then their Output can be used as the Input of the next desired action See the CLMD16's 'Available Signal list' to the right for a description of the Inputs that can be used to switch a load(s) or placed into one another before switching a load(s).

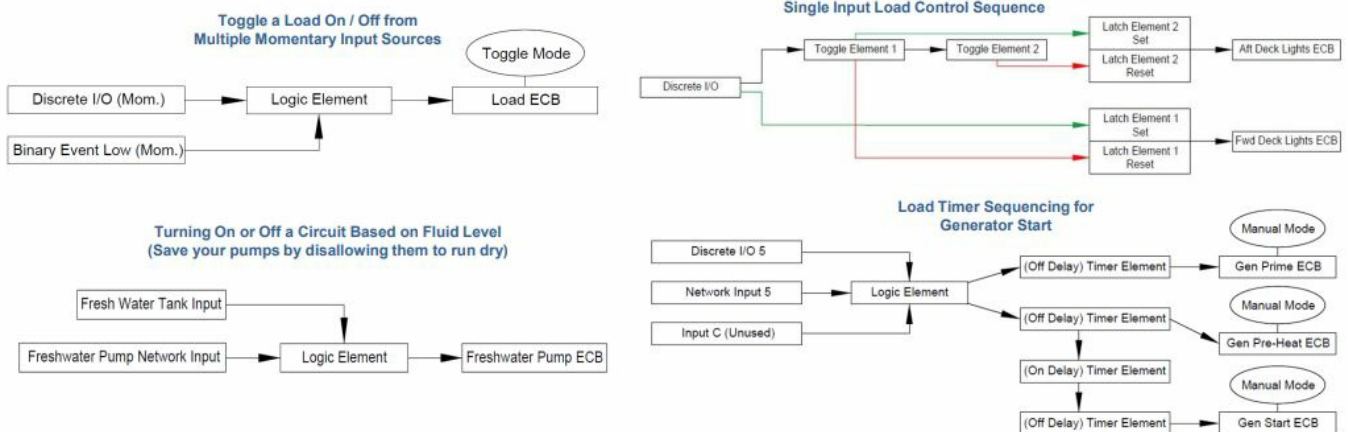
CLMD16 Configuration Example (1)

'Manual Mode' is the means in which to sever the direct communication / control of the Breaker from MFD(s).
By default, compatible MFD(s) present on the network containing a Maretron CLMD product will have direct control access unless "Manual Mode" is enabled.



CLMD16 Configuration Example (2)

- Any Logic Element, Breaker Status, or Input can be placed in between the user control and breaker(s) to Impose or Influence the control of a Breaker(s).



- For more examples, please see our 'CLMD16 Configuration Guide' available on the web "CLMD16's Configuration Capacity Is Only Limited By your Imagination"

LET'S GET STARTED

