

12-Channel DC Load Controller Module



Designed for vessels of all sizes with smaller loads, the MPower® CLMD12 is a compact 12-Channel DC Load Controller Module. Two of the 12 breakers handle a maximum of 12 amps, six handle a maximum of 10 amps and four handle a maximum of 5 amps with a total current capacity of 75 Amps. Additionally, circuits can be paralleled.

If a smaller circuit needs to be protected, each of the 12 breakers can be set to trip at lower current levels using the new Maretron N2KAnalyzer® V3 software. In addition, the CLMD12 has inputs for up to 7 hard-wired switches that can be used to switch breaker states, or as inputs for other data such as bilge alarms or hatch positions, etc.

The CLMD12 handles many DC load types such as lights pumps, motors, and electronics. An added benefit of the CLMD12 is that it reports the current through each of the 12 breakers. This allows you to determine if loads are drawing too much or too little electrical current. This information can be used to report overcurrent faults and under-current conditions such as burnt-out bulbs.

For manual control of the loads, an optional MPower 12-Channel Bypass Module (CBMD12) can be installed in conjunction with the CLMD12.

Monitor and control onboard electrical and electronic systems and reset circuits onboard and remotely with the following devices:

- Maretron MBB300C Black Box
- Maretron TSM810C Dedicated Touchscreen
- Garmin OneHelm™
- Any device running Maretron's award-winning N2KView® V3 Software

MPower devices can also be controlled by the new MPower 6-Rocker VMM Series Contura® Digital Switch Module and the new MPower 12-Button CKM Series Customizable Keypad.



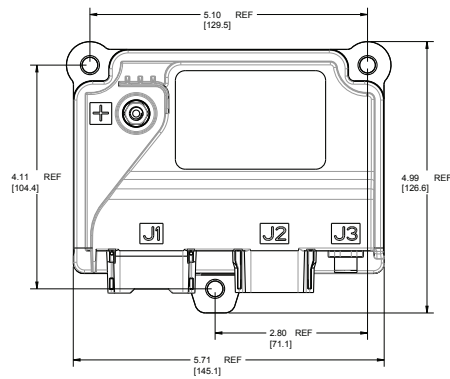
Product Features

- NMEA 2000® Interface
- IP67 Rated
- Ignition Protected
- Opto-isolated from NMEA 2000®, eliminating potential ground loops
- Twelve (12) dimmable Electronic Circuit Breakers (ECBs) for ON/OFF control over NMEA 2000® network
 - 2 breakers capable of carrying up to 12 amps
 - 6 breakers capable of carrying up to 10 amps
 - 4 breakers capable of carrying up to 5 amps
- Individual breaker electrical current monitoring
- Breakers can have power-up states defined (ON, OFF, or PREVIOUS STATE)
- Breakers can be locked against inadvertent actuation
- Seven (7) discrete inputs configurable as Active High, Active Low
- Automatic ECB overcurrent shutdown
- Automatic ECB thermal shutdown (Overtemperature Protection)

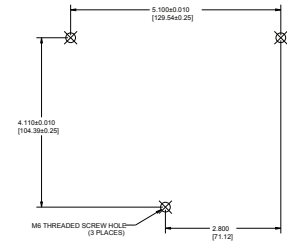
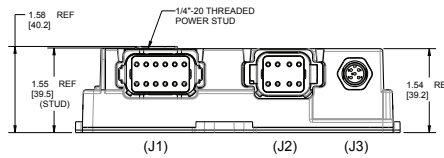
PRODUCTS

| PART NUMBER | DESCRIPTION |
|----------------|--|
| CLMD12-R | 12 Channel DC Load Controller Module w/A3706 and A3707 |
| DT06-12SA | J1 (Output) Mating Connector, Deutsch |
| 0462-209-16141 | J1 (Output) 14AWG Socket, Deutsch |
| W12S | J1 (Output) Wedge, Deutsch |
| 1028-043-1205 | Back Shell, 12 Way Plug, Deutsch |
| DT06-08SA-E003 | J2 (Input) Mating Connector, Deutsch |

| PART NUMBER | DESCRIPTION |
|----------------|---|
| 0462-201-16141 | J2 (Input) 16-20AWG Socket, Deutsch |
| W8S | J2 (Input) Wedge, Deutsch |
| 1011-243-0805 | Back Shell, 8 Way Plug, Deutsch |
| A3706 | Output (J1) Mating Connector with 1m Flying Leads |
| A3707 | Input (J2) Mating Connector with 1m Flying Leads |
| CBMD12 | 12-Channel DC Bypass Module |



- NOTES:
1. WEIGHT: 1.25 LBS. (0.567 KG.) MAX.
 2. TEMPERATURE: OPERATING -40° C TO 85° C. STORAGE: -55° C TO 185° C.
 3. MATING CONNECTIONS:
 J1 - DEUTSCH PIN DT06-12SA
 J2 - DEUTSCH PIN DT06-28SA-E003
 J3 - MICRO-C MALE CONNECTOR, M12 X 1



SPECIFICATIONS

| PARAMETER | VALUE |
|---------------------------------|--------------------|
| Number of Channels | 12 |
| Switching Voltage | <32VDC |
| Maximum Unit Current Capacity | 75 Amps |
| Maximum Channel Current Ratings | 4x5A, 6x10A, 2x12A |

CERTIFICATIONS

| PARAMETER | COMMENT |
|------------|---|
| NMEA 2000® | Certified |
| CE Mark | Recreational Craft Directive 2014/35/EU |

NMEA 2000® PARAMETER GROUP NUMBERS (PGNs)

| DESCRIPTION | PGN# | PGN NAME | DEFAULT RATE |
|----------------------------|--------|--|--|
| Periodic Data PGNS | 65300 | Carling Proprietary | 1 time / 4 seconds |
| | 127500 | Load Controller Connection State & Control | 1 time / 4 seconds and on switch change |
| | 127501 | Binary Switch Bank Status | 1 time / 15 seconds and on switch change |
| | 127751 | DC Voltage / Current | 1 time / 15 seconds |
| Response to Requested PGNS | 126464 | PGN List (Transmit and Receive) | N/A |
| | 126996 | Product Information | N/A |
| | 126998 | Configuration Information | N/A |
| | 130818 | Maretron Proprietary | N/A |
| | 130825 | Maretron Proprietary | N/A |
| | 130921 | Carling Proprietary | N/A |
| Protocol PGNS | 059392 | ISO Acknowledge | N/A |
| | 059904 | ISO Request | N/A |
| | 060928 | ISO Address Claim | N/A |
| | 126208 | NMEA Request/Command/Acknowledge | N/A |
| | 126993 | Heartbeat | 1 time / 60 seconds |
| | 130060 | Label | N/A |

ELECTRICAL

| PARAMETER | VALUE | COMMENT |
|--|--|---------------------------------|
| Voltage Input Range | 6.5 to 32 VDC | DC Voltage |
| Power Consumption | 150mA @ 12 VDC / 70 mA @ 24 VDC | NMEA 2000® Interface |
| Load Equivalence Number (LEN) | 3 | NMEA 2000® Spec. (1LEN = 50 mA) |
| Reverse Battery Protection | Yes | Indefinitely |
| Load Dump Protection | Yes | Energy Rated per SAE J1113 |
| Channel Current Measurement Accuracy | +/- 0.5 Amps | Typical |
| Channel Current Measurement Resolution | 0.1 Amps | |
| Minimum Channel Current Measurement | 0.5 Amps | |
| PWM (all breakers) | | |
| Frequency | 200 Hz | |
| Load | Inductive load interface not recommended when PWM used | |
| Duty Cycle Range | 5% - 100% | |
| Duty Cycle Resolution | 1% | |
| Programmable Trip Level Resolution | 1 Amp | |
| Discrete Input Channels | | |
| Input Resistance | 1KΩ | |
| Input Voltage, Open Circuit | 2.75 V | |
| Low Voltage Threshold | 0 to 1.02 V | |
| Open Voltage Threshold | 1.51 – 4.31 V | |
| High Voltage Threshold | 4.82 – 32.0 V | |

MECHANICAL

| PARAMETER | VALUE | COMMENT |
|-------------------------|---|--------------------------------|
| Size | 5.7" x 5.0" x 1.6" (144.8mm x 127mm x 40.6mm) | Including Flanges for Mounting |
| Weight | 1.32 lb. (.599 kg) | |
| Power Stud Torque Value | 20in-lbs. (2.26 N.m) | |