



PDM15 - POWER DISTRIBUTION MODULE



MoTeC's 15 output Power Distribution Module is designed to provide electronically switched power to the various electrical systems in the vehicle such as motors, lights, solenoids, and electronic devices such as ECUs and data acquisition systems.

The module replaces conventional relays, fuses and circuit breakers to simplify wiring and switch requirements, while increasing reliability.

► FEATURES

- Each output is over-current, short circuit and thermal overload protected
- Outputs programmable in 1 A steps and controllable via a combination of switch inputs, CAN messages and logic functions
- Performs up to 200 logic operations and functions that can be used to selectively turn off systems
- Provides full diagnostic information via CAN

► SOFTWARE

PDM Manager software is used for:

- Configuring all inputs, outputs, CAN messages and conditions
- Monitoring all channel values
- Output testing
- Firmware updating

► SPECIFICATIONS

Inputs

- 16 x switch inputs: range 0 to 51 V, resolution 0.2 V

Outputs

- 8 x 20 A outputs: 20 A continuous, 115 A transient (typical)
- 7 x 8 A outputs: 8 A continuous, 60 A transient (typical)

Communications

- 1 x CAN

Operating Voltage

- 30 V max

Ingress Protection (IP) Rating

- Conformal coating on PCB

Physical

- 1 x 34 and 1 x 26 pin waterproof connectors, 1 x M6 stud
- Case size 107.5 x 127.5 x 38.7 mm
- Weight 260 grams

▶ **COMPATIBILITY**

MoTeC ECU Models

- M1 Series
- Discontinued: M84, M400, M600, M800, M880

MoTeC Dash/Logger Models

- C125, C127, C1212, C185, C187, C1812, CDL3, L120, L180
- Discontinued: SDL, SDL3, ADL, ADL2, ADL3, ACL

▶ **ACCESSORIES**

MoTeC UTC #61059

⚠ (UTC is required, not compatible with MoTeC CAN cable)

▶ **WIRING**

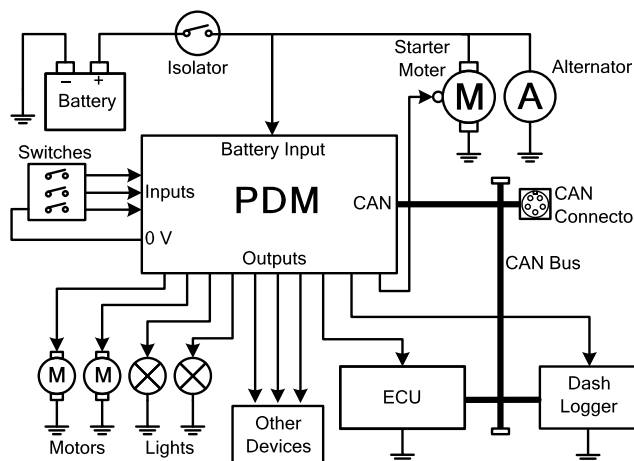
CAN Wiring

⚠ The PDM is wired onto the CAN bus. Please ensure wiring is according to CAN requirements and the CAN bus has at least one 100R terminating resistor.

To communicate to the PC, a CAN connector must be wired into the CAN bus. To connect the PDM directly to the CAN connector, wire according to the following table.

PDM Pin	PDM Name	CAN Connector Pin	CAN Connector Wire
B25	CAN Lo	4	Green
B26	CAN Hi	5	White
A28	0 V	1	Black

Example Wiring



Wire Gauges

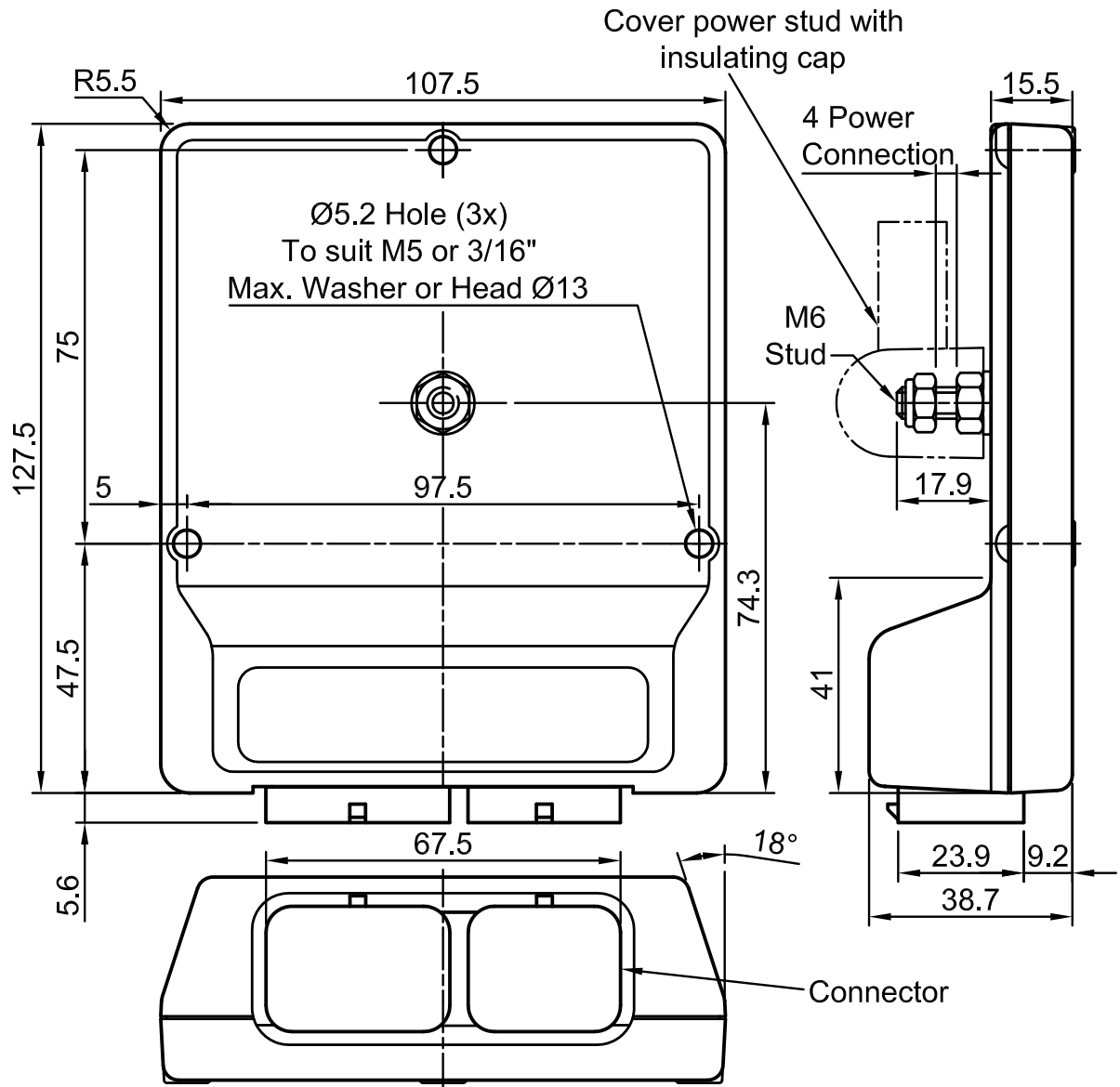
Suitable wire gauges are 24# to 20# for the 8 A outputs and 20# to 16# for the 20 A outputs. The wire gauge must be chosen to suit the current consumed by the connected device and to ensure that the voltage drop is acceptable. In a long run it may be necessary to use a heavier gauge wire to minimise voltage drop. The wire gauge must also be compatible with the connector pin; using a smaller than recommended wire gauge may result in a poor crimp.

► DIMENSIONS AND MOUNTING

Measurements in mm.

The product provides through holes for mounting. See drawing for details.

Recommended mounting torque value is 5 Nm. The torque value must not exceed 5.5 Nm.



▶ **PINOUT****Connector A**

34 pin waterproof connector, mating connector #65044

Pin	Name	Function
A1	OUT1	20 A Output 1 (with A10)
A2	OUT9	8 A Output 9
A3	OUT2	20 A Output 2 (with A12)
A4	OUT10	8 A Output 10
A5	OUT3	20 A Output 3 (with A14)
A6	OUT11	8 A Output 11
A7	OUT4	20 A Output 4 (with A16)
A8	OUT12	8 A Output 12
A9	OUT5	20 A Output 5 (with A17)
A10	OUT1	20 A Output 1 (with A1)
A11	OUT13	8 A Output 13
A12	OUT2	20 A Output 2 (with A3)
A13	OUT14	8 A Output 14
A14	OUT3	20 A Output 3 (with A5)
A15	OUT15	8 A Output 15
A16	OUT4	20 A Output 4 (with A7)
A17	OUT5	20 A Output 5 (with A9)
A18		Not used
A19	DIG2	Digital/Switch Input 2
A20		Not used
A21	DIG4	Digital/Switch Input 4
A22		Not used
A23	DIG7	Digital/Switch Input 7
A24		Not used
A25		Not used
A26	VBATT-	Battery Negative
A27	DIG1	Digital/Switch Input 1
A28	GND	0 V
A29	DIG3	Digital/Switch Input 3
A30	DIG5	Digital/Switch Input 5
A31	DIG6	Digital/Switch Input 6
A32	DIG8	Digital/Switch Input 8
A33	DIG9	Digital/Switch Input 9
A34	DIG10	Digital/Switch Input 10

Connector B

26 pin waterproof connector, mating connector #65045

Pin	Name	Function
B1		Not used
B2		Not used
B3	OUT6	20 A Output 6 (with B9)
B4		Not used
B5	OUT7	20 A Output 7 (with B11)
B6		Not used
B7	OUT8	20 A Output 8 (with B13)
B8		Not used
B9	OUT6	20 A Output 6 (with B3)
B10		Not used
B11	OUT7	20 A Output 7 (with B5)
B12		Not used
B13	OUT8	20 A Output 8 (with B7)
B14		Not used
B15	DIG13	Digital/Switch Input 13
B16		Not used
B17	DIG15	Digital/Switch Input 15
B18	VBATT-	Battery Negative
B19		Not used
B20	DIG11	Digital/Switch Input 11
B21	DIG12	Digital/Switch Input 12
B22	GND	0 V
B23	DIG14	Digital/Switch Input 14
B24	DIG16	Digital/Switch Input 16
B25	CAN Lo	CAN Low
B26	CAN Hi	CAN High

Connector C

M6 stud, mating: eyelet and M6 nut

Pin	Name	Function
C1	VBATT+	Battery Positive

▶ PRODUCT INFORMATION

Compliances

This product is designed for use in a vehicle. As such, this product complies with the following standard:

- Directive 2014/30/EU: Electromagnetic Compatibility; by application of UNECE Regulation No.10 (R10) Rev 5.

Installation

IP Rating (dust or water ingress)

This product should be installed in a protected location where only occasional water splashing occurs and where the exposure to dust does not exceed conditions typical for vehicle installations.

Operating Temperature Range

This product is designed for an internal operating temperature range of -40 °C to 85 °C.

It should be installed in a location with sufficient air circulation and be shielded against thermal emissions from surrounding components.

Vibration Statement

This product is designed to withstand vibrations typical for normal vehicle installations.

It should not be exposed to severe and lasting vibrations. For example, the product should not be installed in solid connection to vibrating components like engines or undamped vehicle structures.

Safety

- For safe operation, use only undamaged.
- Minimal force should be exerted to plug in connectors.
- These devices may output voltages which may constitute a risk to human safety. Appropriate precautions must be taken:
 - At no time operate the device with faulty, bare or exposed wiring.
 - Adhere to the normal supply voltage limits as listed in the **Basic Specifications** section
 - Adhere to wire gauges as listed in **Wiring and Connecting**.

Repair

Do not attempt to open and/or repair the device.

For repairs, contact your local MoTeC representative and return the product via an Authorised MoTeC Dealer.

Disposal



This product should be disposed of in accordance with relevant national regulations for disposal of electronic waste.

It does not contain hazardous materials which might be subject to specific materials regulations.

Manufacturer Information

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