

MoTeC

C127 - COLOUR DISPLAY LOGGER



The C127 comes standard as a combined 7" full colour display and powerful control device with outstanding readability in direct sunlight. With the addition of the Data Logging upgrade it becomes a fully programmable data logger with 120 MB memory. Optional USB Logging provides additional data capacity and flexibility.

Numerous supplied display layouts offer fixed graphics with configurable channels and labels, while the optional Display Creator software provides the tools for full screen customisation.

The C127 acquires data from other devices, such as an ECU, and can display data channels, warning alarms, lap times, fuel calculations, minimum corner speeds, maximum straight speeds and more.

⚠ This product has recently changed part number due to a component modification. All functionality remains the same however the case dimensions and weight have changed slightly from P/N 18048. For CDS18048 (DataSheet) please contact support@motec.com.au.

► FEATURES

- Impressive High Resolution 178 mm (approx. 7") colour LCD display
- High brightness for sunlight readability
- Optional internal logging and USB logging
- 16 full colour (RGB) LEDs; colour, function and intensity are fully programmable
- Suitable for cars, marine and industrial applications
- Supports Wideband Lambda from MoTeC PLMs or LTCs
- Easily integrates with MoTeC CAN based devices such as ECUs and expanders. Full I/O expansion with E888 and E816
- GPS Lap Timing
- Supports T2 Telemetry (with upgrade)
- IP67 rated housing
- A composite video input allows for a live on-screen footage, for example from a rear view camera (requires Display Creator)

▶ ACCESSORIES

- 62204 – C127 RACE TERMINATED LOOM
- 61259 – C127 INPUT LOOM
- 61279 – CABLE USB LOGGING 1.5M (PANEL MOUNT)
- 61403 – CABLE, AUTOSPORT USB LOGGING 1.5M (PANEL MOUNT)
- 61280 – 32 GB USB DATA PLUG
- 61292 – 32 GB USB3 FLASH DRIVE

▶ OPTIONAL UPGRADES

- 29800 – C127 I/O
- 29818 – C127 120MB LOGGING
- 29814 – C127 USB LOGGING
- 29816 – C127 DISPLAY CREATOR
- 29820 – C127 PRO ANALYSIS
- 29823 – C127 T2 TELEMETRY

▶ SPECIFICATIONS

Display

- Screen: Colour TFT LCD, anti-reflective
- Resolution: 800 x 480 resolution, anti-aliased graphics
- Layouts: selectable fixed layouts (user programmable layouts via optional *Display Creator* software)
- 48 user-defined, scrollable message lines with programmable overrides
- 3 programmable modes with customisable labels

Logging - optional (requires upgrades)

- 120 MB internal logging memory
- USB logging to a removable storage device
- Logging rates up to 500 samples per second
- Fast Ethernet download
- i2 Standard data analysis software included (Pro Analysis upgrade available)

Removable USB Storage Device Options

- Kingston 32 GB USB3 Flash Drive - fast, low weight and low cost, not mechanically latched or waterproof.
- MoTeC 32 GB USB3 Data Plug - mechanically latched, waterproof with anodised housing, ideal for exposure to the elements and vibration.

Alternative USB storage devices may be used but are not recommended.

Inputs

- 2 x Digital inputs
- 3 x Speed inputs
- 1 x Composite video input

Inputs - optional (requires I/O upgrade)

- 6 x Analogue voltage inputs
 - 4 x 0 to 5.46 V, 1.33 mV resolution
 - 2 x 0 to 15.0 V, 3.66 mV resolution
- 2 Analogue temperature inputs
 - 2 x 0 to 15.0 V, 3.66 mV resolution

Outputs - optional (requires I/O upgrade)

- 4 x low side outputs PWM or switched operation
- 0.5 Amp max, current limited and thermal overload protected

Expanders

- Compatible with E816 and E888 expanders (providing full functional use)

Internal Sensors

- 3-axis accelerometer, detection range: +/- 5G
- Dash temperature sensor
- Sensor supply voltage
- Battery voltage

Communications

- 2 x configurable CAN buses, with individually programmable CAN bus speeds.
- 2 x RS232 ports, one with transmit and receive, one with receive only.

Power supply

- Operating voltage: 6 to 32 V DC
- Operating current: 0.5 A typical at 14 V (excl. sensor currents)
- Reverse battery protection
- Battery transient protection

Sensor supply currents

- 5 V sensor supply: 0.25 A maximum
- 8 V sensor supply: 0.25 A maximum

Operating temperature

- Internal: -20 °C to 70 °C (above 60 °C maximum backlight brightness progressively reduced)
- Typical ambient temperature range in free air: -20 °C to 55 °C

Ingress Protection (IP) Rating

- The device is rated to IP67

IP rating is dependant upon the user ensuring that the connector entries are waterproof, which, as a minimum, requires all unused wire cavities on the connector to be plugged.

Physical

 For size and weight of P/N 18048 please refer to CDS18048

- Size: 196.2 x 122.5 x 26.3 mm excluding connector
- Weight 715 g
- 1 x 34 pin waterproof connector
- 1 x mini USB port (located on the back of the device)

SCREEN CLEANING


Wipe using a clean water dampened microfibre cloth, followed by a clean dry microfibre cloth.

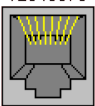
COMPATIBILITY

- MoTeC ECUs: All models (some earlier models may require an additional adaptor in conjunction with the RS232 adaptor)
- MoTeC Displays/Loggers: All

ETHERNET PINOUTS

This pinout is suitable for cables identified as **Revision: A** and **Revision: B** on the affixed label.

 **Note:** Check the revision of the cable (identified on the label) before using the relevant pinout information from the table.

RJ45					M122/M130/M142/M150			CDL3/C125/C127/ C1212/L120	
Pin	Function	Revision	MoTeC Colour	Pin Numbering	M122/ M130 Pin	M142/M150 Pin	Function	Pin	Function
1	Ethernet TX+	Rev A & Rev B	Orange-White	 Socket	B25	D25	Ethernet RX+	11	Ethernet RX+
2	Ethernet TX-	Rev A & Rev B	Orange		B26	D26	Ethernet RX-	10	Ethernet RX-
3	Ethernet RX+	Rev A	Green-White		B23	D23	Ethernet TX+	2	Ethernet TX+
		Rev B	Green						
6	Ethernet RX-	Rev A	Green		B24	D24	Ethernet TX-	1	Ethernet TX-
		Rev B	Green-White						

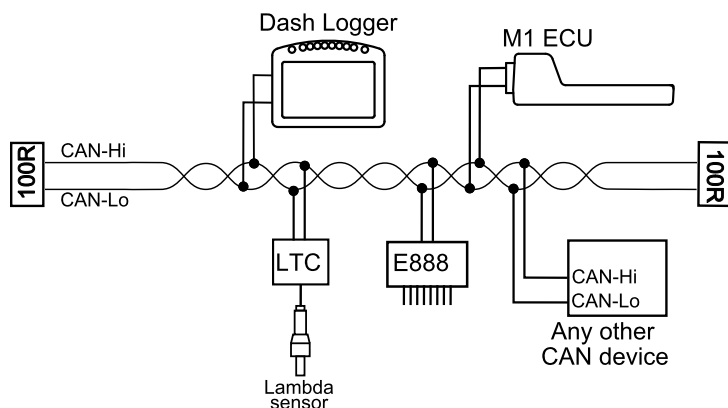
- MoTeC Expanders: E816 and E888 expanders.
- MoTeC Accessories: SLM, PLM, LTC, BR2, PDM, GPS, ADR2, V2 etc.
- Many non-MoTeC devices

SOFTWARE

- Microsoft Windows based software
 - **Dash Manager** used for setup and management of the display and data logging system, providing:
 - Configuration of the inputs, outputs, LEDs, display, data logging and calculations.
 - Offline generation of a configuration file that can then be sent to the device.
 - Channel monitoring
 - Firmware updating and extensive help screens
 - **Display Creator*** allows for full customisation of the screen layout, including live video.
 - **i2 Data Analysis** software provides the tools for comprehensive data analysis. Standard or Pro* version available
 - **T2 Telemetry*** software
- (* available via upgrades)

► WIRING

The Display Logger should be connected via the CAN bus to any current MoTeC ECU and any number of other CAN devices. See the following example.



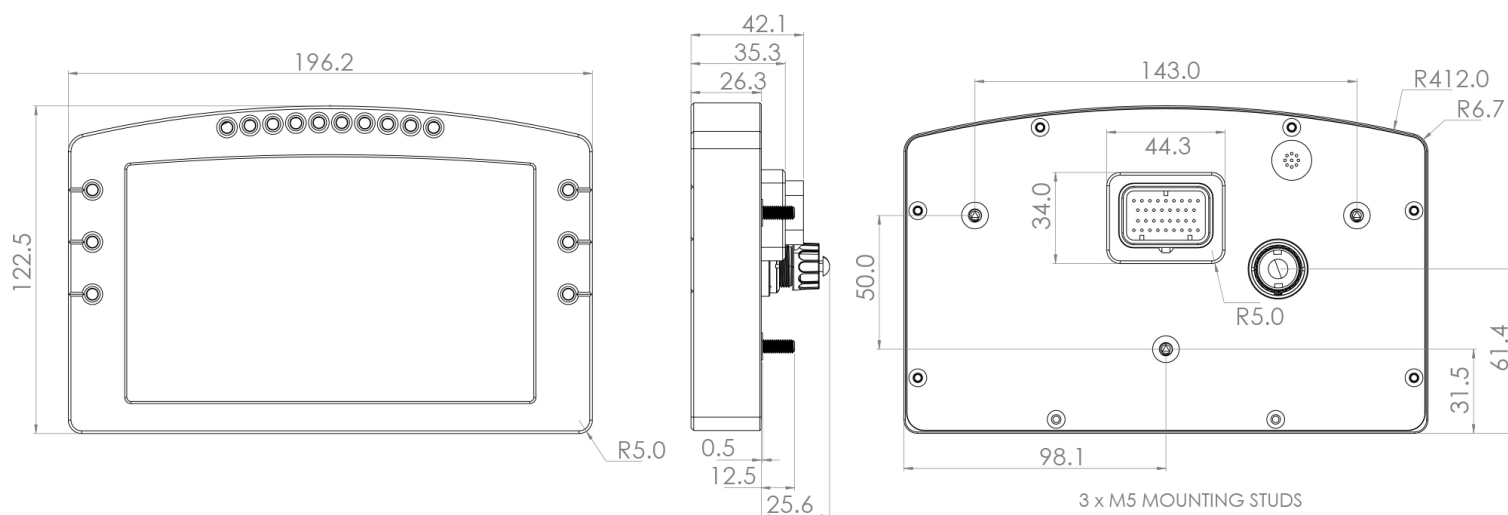
Detailed wiring information is available in the User Manual at <https://www.motec.com.au/downloads>

⚠ When using older MoTeC ECUs like M4/M48/M8, the Display Logger should be connected via RS232. For some ECUs, a PCI cable may also be required.

► DIMENSIONS AND MOUNTING

Measurements in mm.

⚠ For P/N 18048 dimensions please refer to CDS18048.



⚠ **Note:** Do not remove any part of the casing. The case provides electromagnetic screening to avoid interference with other equipment, and is also essential for thermal management. Thermal management may be compromised if mounted in a confined space, refer to the operating temperature specifications. Ensure product is not stressed when mounted.

PINOUT

Mating Connector: Part number 65044

Pin	Name	Standard Function
1	E-TX–	Ethernet Transmit –
2	E-TX+	Ethernet Transmit +
3	AV1	Analogue Voltage Input 1 (with I/O upgrade)
4	AV2	Analogue Voltage Input 2 (with I/O upgrade)
5	AV3	Analogue Voltage Input 3 (with I/O upgrade)
6	AV4	Analogue Voltage Input 4 (with I/O upgrade)
7	8V	Sensor 8 V
8	5V	Sensor 5 V
9	0V	Sensor 0 V
10	E-RX–	Ethernet Receive –
11	E-RX+	Ethernet Receive +
12	AV5	Analogue Voltage Input 5 (with I/O upgrade)
13	AV6	Analogue Voltage Input 6 (with I/O upgrade)
14	DIG1	Digital Input 1
15	DIG2	Digital Input 2
16	AT1	Analogue Temp Input 1 (with I/O upgrade)
17	AT2	Analogue Temp Input 2 (with I/O upgrade)
18	CAN1L	CAN1 Lo
19	CAN1H	CAN1 Hi
20	RS232-1 TX	RS232-1 Transmit
21	SPD1	Speed Input 1
22	SPD2	Speed Input 2
23	SPD3	Speed Input 3
24	VID1	Video Input 1 *
25	RS232-2 RX	RS232-2 Receive
26	CAN2L	CAN2 Lo/RS232 Ground Input
27	CAN2H	CAN2 Hi/RS232 Receive
28	RS232-1 RX	RS232-1 Receive Input
29	AUX1	Auxiliary Output 1 (with I/O upgrade)
30	AUX2	Auxiliary Output 2 (with I/O upgrade)
31	AUX3	Auxiliary Output 3 (with I/O upgrade)
32	AUX4	Auxiliary Output 4

Pin	Name	Standard Function
33	BAT+	Battery Positive
34	BAT-	Battery Negative