McLaren APPLIED TECHNOLOGIES

DISPLAY UNIT
PCU-8D DISPLAY MODULE

The PCU-8D is a lightweight driver display module designed for general motorsport applications. It is designed to connect to a host ECU via CAN and present the driver with information on a 4.3" display and LED lamps. The display is suitable for use in direct sunlight and at night. The text and graphics layout of the screen is user-configurable via PC software. 100 pages are available, and are selectable by CAN message.

Application

- Data display and warning lamps
- Typically installed within the steering wheel, although can also be remotely mounted

Electrical

- Supply voltage 8V to 16V DC
- Supply current: <0.6A @ 13.8V (screen and all LEDs on)

Electro Magnetic Compatibility

- Complies with the essential protection requirements of 2004/108/EEC

Communications

- 1 CAN interface (1Mbps). No internal termination
- 1 USB interface for configuration only

Unit Inputs

- 1 reset input (active low with internal pull-up; can be left unconnected if not required)
- 1 CAN address selection analogue input (connect an external resistor to unit supply ground)

Other Features

- Configuration software tool supplied with the unit

Environmental

- Size: 130mm x 81mm x 22mm
- Weight: <230g
- Splash resistant to standard motorsport fluids
- Lid has a rubber seal, case fixings are sealed with silicone sealant
- Maximum humidity: 95% non-condensing
- Operating temperature: 0°C to +50°C
- Storage temperature: -25°C to +85°C
- Vibration: 100Hz to 1000Hz, all axes, 24 hours
- Vibration isolation is recommended

Display

- 4.3" backlit LCD display
- Viewable area 95mm x 54mm, 480 x 272 pixel resolution
- Viewable in direct sunlight. Brightness adjustable via CAN message for low-light conditions
- 16 Gauge types for displaying data, including bar tacho, rev lights and variable text
- 100 user-configurable page, selectable by CAN message
- The display is fully customisable; page layout can be configured by PC with text and gauges
- Alarm pages or user-configurable text warnings can be triggered by CAN messages

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DISPLAY UNIT
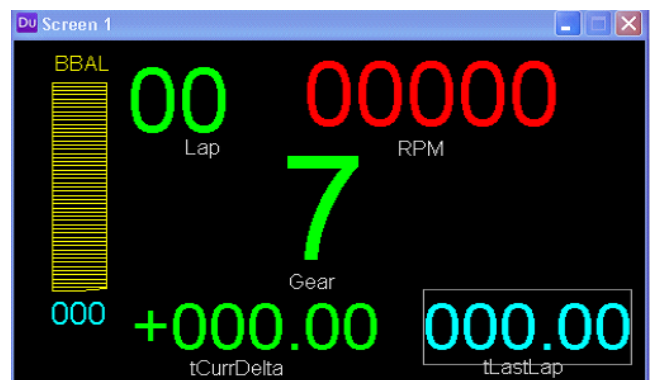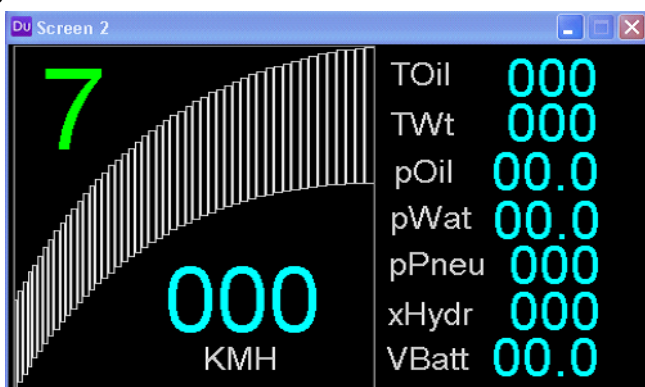## PCU-8D DISPLAY MODULE

Connection Definition

- Un-terminated flying lead only (no connector fitted), length 1m
- 26AWG wire for all wires unless stated
- USB wires are contained within a cable screen, with the other wires coiled round the USB screened cables
- Note the unit supply is required when configuring. The unit cannot be powered by USB
- Wire colours:

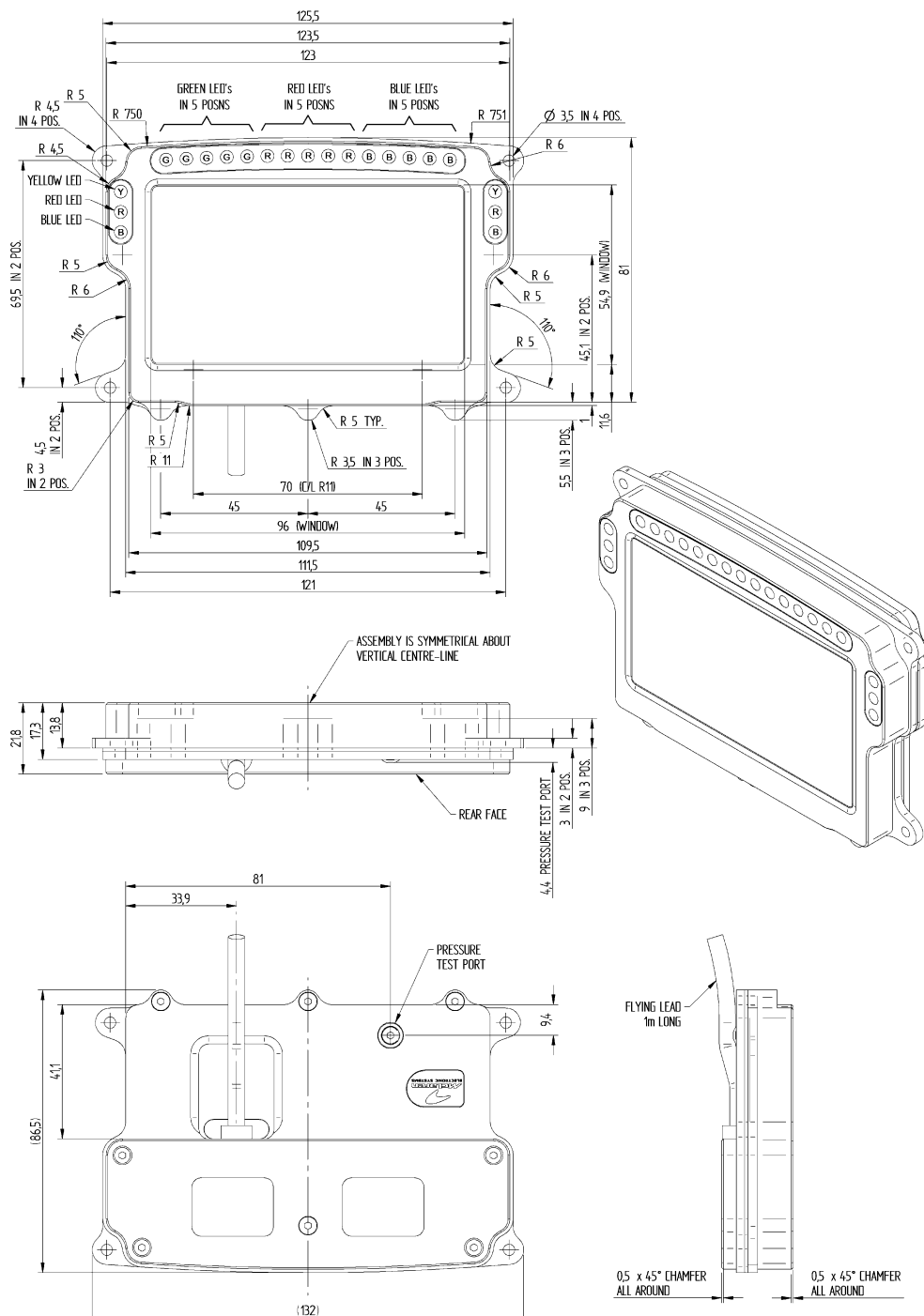|		
Orange		Unit Supply Positive
Brown		Unit Supply Ground
White		CAN +
Blue		CAN -
Green	(28AWG)	USB +
White	(28AWG)	USB -
Red	(24AWG)	USB 5V
Black	(24AWG)	USB Ground
(Drain)	(28AWG)	USB Screen (internally connected to supply ground)
Grey		CAN address selection input
Yellow		Reset input

Example Screen Layouts
- The configuration software allows each page layout to be fully customised
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Screen 2

Screen 5

IP 000:000:000:000

Screen 6

tLastLap 00.00 s
tLapDelta 00.00 s
tDashSector 00.00 s
tCurrentDelta 00.00

Screen 1

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Description	Order Code
Panel Display Unit PCU-8D	O 030 020 011 002

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