MoTeC

ADR - ACCIDENT DATA RECORDER

The ADR records lateral, longitudinal and vertical chassis G-force data during an accident. Readings are made continuously (cyclic logging) to allow data capture immediately previous to the event which triggered the logging.

It is a standalone device that can be used in isolation or in conjunction with other devices such as a GPS, Data Logger or ECU. The ADR firmware can be customized to suit each application.

MoTeC ADR included in FIA Institute ADR Programme.

For configuration and function information, refer to the ADR User Manual on the MoTeC website, or on the media (provided with the unit) containing the Resource Files.

▶ FEATURES

- Password protection
- Supports an external LED indicator
- Continuous (cyclic) logging
- Internal backup power
- Configurable incident trigger impact level
- Configurable high severity impact level
- Configurable CAN and GPS

▶ SPECIFICATIONS

Communications

- CAN
- RS232 (for GPS receive)
- USB (for future use)

Connectors

- 1 x 11 pin double density size 8 Autosport connector
- Matching connector: MoTeC #68109 - Autosport double density female (red)

Physical construction and dimensions

- Case size (mm): 73.5 x 45 x 27
- Case material: anodized aluminum
- Internal components encapsulated
- Weight (gram): 110

Power

- Power supply (vehicle battery): 6 – 30V
- Current: 1A peak, 200mA steady state
- USB power when connected to PC (if no other power source)
- Backup power (internal super capacitor): 30 seconds of logging and 10 minutes of LED operation when power supply lost (no battery required)
- Backup power recharge: under one minute after connection to a power source

Operational

- G force recording of lateral, longitudinal and vertical channels at 1000Hz

- Recording of up to 20 CAN channels at 100Hz

- G force range: -150G to +150G

- G force channel resolution: 0.1G

- GPS data recorded:

  – Date and time

  – Latitude and Longitude

- Pre-event (accident) recording duration: 2 seconds

- Event duration: 30 seconds

- Event capacity storage: 10 events

- Data output format: CSV

▶ SOFTWARE

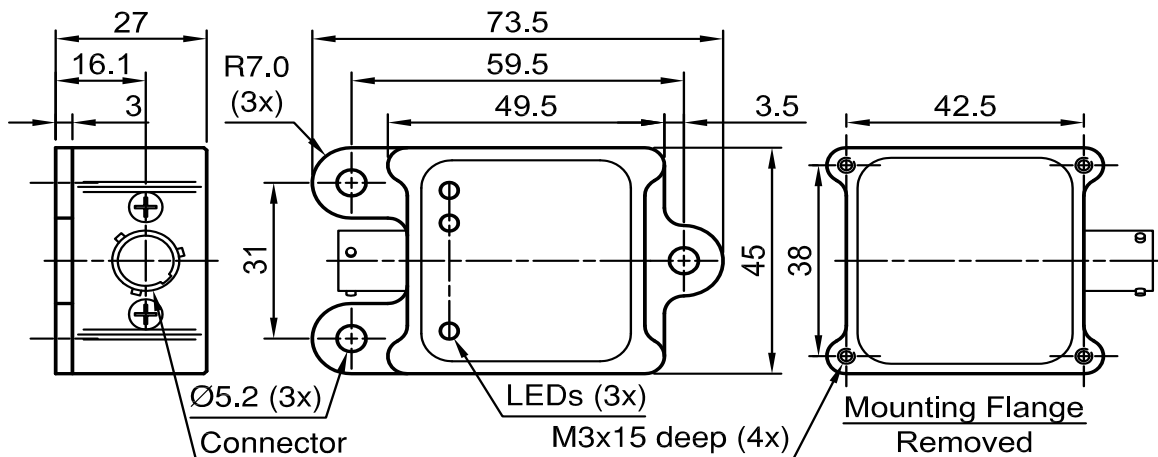The ADR Manager application is installed on a PC. The software is used for:

- Configuration

- Data download

- Re-setting or clearing the ADR

▶ LED OPERATION

Three LED Indicators are visible on the enclosure. Support is provided for an external LED.

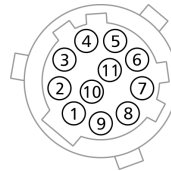| LED	Operation	Indicates
Power	Green	External power present
Data	Blue	Data available for download
Status	Red - single long pulse	On power up indicates correct operation

LED	Operation	Indicates
	Red - rapid flash	Fault
	Red - slow flash	An event has exceeded the high severity impact level
External	As for status	As for status

▶ CONNECTOR AND PINOUT

Connector: 11 pin double density Autosport size 8

Pin	Function	Notes
1	Battery Negative	
2	Battery Positive	6 – 30V DC
3	CAN-Lo	
4	CAN-Hi	
5	RS232-Rx	
6	USB 5V	
7	USB D-	For future use
8	USB D+	For future use
9	USB 0V	
10	LED Output	Status output
11	5 Volt Supply Output	GPS power supply 90mA

Connector pinout, loom-side view

▶ DIMENSIONS AND MOUNTING