
Figure 1: MXL PRO

Introduction

MXL PRO is a new powerful, professional and high-tech gauge, which allows the user to sample and display a large number of parameters. It represents the new generation of AIM gauges: the high performance one. **MXL PRO** is suggested both for “street” and “track” use.

MXL PRO has a beautiful wide display and a standard backlight.

MXL PRO has 2 Deutsch connectors and 2 Binder and includes a tachometer, 1 RPM input, 8 analog inputs (temperatures, pressures, potentiometers, Lambda sond, “on board” and custom sensors), 4 speed inputs, gear position (that can be sampled from an “on board” gear sensor or calculated from RPM and speed values) and lap time.

Moreover, the logger may be interfaced with the engine’s ECU using a **RS232 serial cable** or a **CAN cable** (connected to the gauge’s ECU-RPM-POWER input), in order to sample the data outcoming from the ECU.

To have a complete list of compatibles ECUs, communication protocol and connection with AIM logger, please refer to “[documents](#)” page of our website www.aim-sportline.com, where You find a dedicated datasheet called ECU-AIM logger.

MAIN FEATURES

MXL PRO is featured as follows:

- wide display with standard backlight;
- RPM numerical and graphical view (configurable RPM scaling);
- 1 RPM input;
- internal lateral G-sensor to map tracks;
- 8 analog inputs;
- 4 speed inputs;
- gear number;
- optional Built-in GPS System (GPS internal board and external GPS antenna) for 3D track mapping;
- 10 shift light leds: green, red and yellow;
- 6 freely configurable alarm leds for maximum/minimum alarm;
- fast USB data download (300 Kbytes/sec) to your PC and Race Studio 2 analysis software;
- 8 Mbytes internal non volatile memory
- lap and split times;
- configurable number of split times;
- built-in clock and calendar for test management;
- internal data acquisition system;
- total and partial (resettable) odometer;
- water resistant
- rugged and lightweight aluminium chassis

Data are stored in a great 8 Mb non volatile memory and may be downloaded to a PC through an USB cable.

For further information about the gauge's display, please refer to the following drawing.

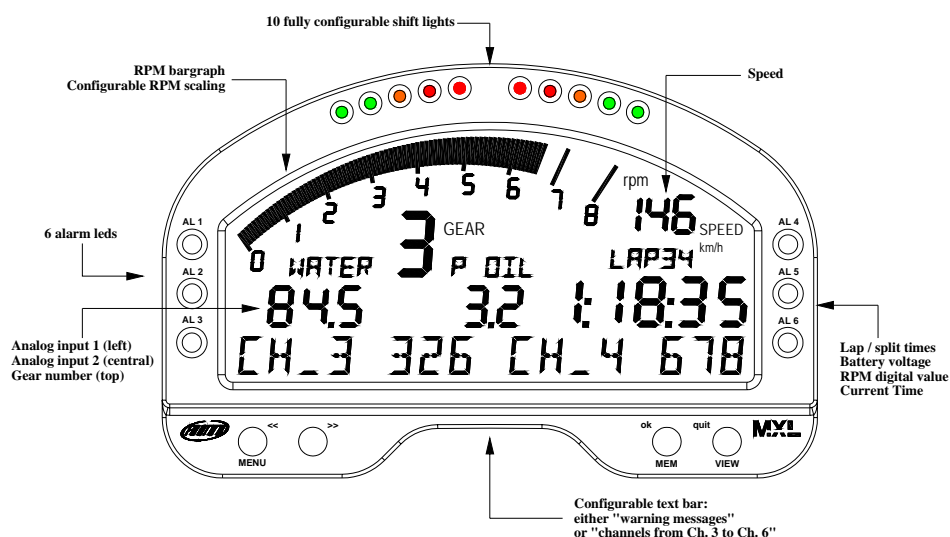


Figure 2: MXL PRO display

How to connect MXL PRO to the PC

To connect your **MXL PRO** to the PC, please use the USB data download cable and plug it both in the gauge's USB port and in the PC's USB port, as explained in Figure 3. ~~Moreover, it is reminded to use a 9-15 Volts external power source in order to be able to switch on the gauge.~~

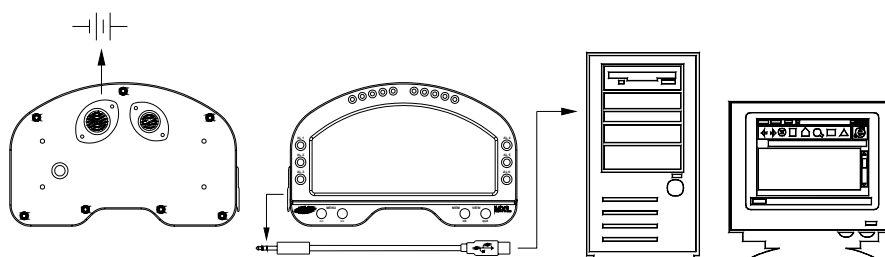
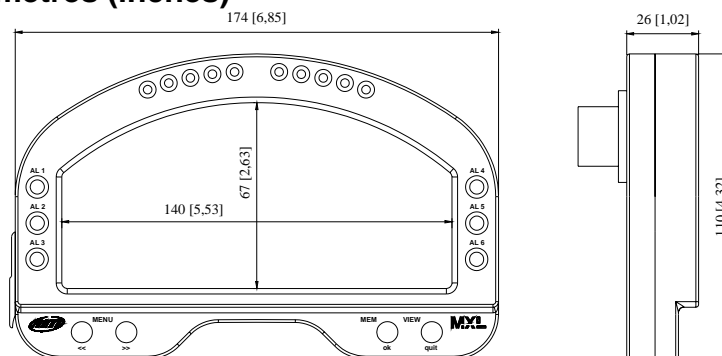


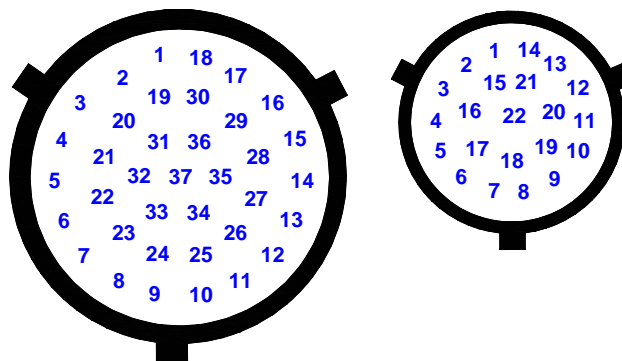
Figure 3: How to connect your MXL PRO to the PC

Dimensions in millimetres (inches)



37 pins Deutsch connector

Pin	Function	Pin	Function
1	9-15 V Battery input	20	Analog GND
2	Analog input 1	21	V reference
3	Analog input 2	22	V reference
4	Analog GND	23	Analog GND
5	Analog GND	24	V reference
6	V reference	25	Analog GND
7	V reference	26	Analog input 8
8	Analog input 3	27	GND
9	Analog input 4	28	Optic Lap
10	Analog input 6	29	Magnetic Lap
11	Analog GND	30	Speed 2
12	RPM Sq. Wave 4-8 V	31	Analog GND
13	RPM Coil 150-400 V and RPM Square Wave (>8V)	32	Analog input 5
14	+ VB	33	Analog input 7
15	GND	34	V reference
16	+ VB	35	GND
17	+ VB	36	Speed 1
18	GND	37	GND
19	Analog GND		



37 pins Deutsch Connector (external view) on the left and 22 pins Deutsch connector (external view) on the right

Technical characteristics

General characteristics	Value
Analog Input channels	8
Speed channels	4
Input channels from ECU	Max. 64
Max sampling frequency per channel	Up to 500 Hz
Total sampling frequency	2000 Hz
Internal g-sensor	Monoaxial, $\pm 10g$
External power	From 9 to 15 VDC
Voltage output (V reference)	4.5 V (for potentiometers)
Internal memory	8 Mbytes
ECU interface	Serial / CAN protocol
PC interface	300 kbytes/sec USB port

22 pins Deutsch connector

Pin	Function	Pin	Function
1	+ VB	12	GND
2	GND	13	+ VB
3	Can 0 + ⁽¹⁾	14	MEM
4	Can 0 - ⁽¹⁾	15	VIEW
5	Speed 3	16	GND
6	Speed 4	17	RS 232 RX (for ECU Interface)
7	USB D-	18	RS 232 TX (for ECU interface)
8	USB D+	19	GND
9	GND	20	CAN 1+ (ECU interface)
10	+ VB	21	CAN 1- (ECU interface)
11	GND	22	n.c.

Other characteristics	Value
MXL PRO dimensions	174x110x26 mm
Display dimensions	140x67 mm
Chassis	Aluminium

(1) External Expansion Modules