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| TECHNICAL DOCUMENTATION | 7/02/2005 | GAUGE | MXL Strada |
| Notes: MXL Strada technical documentation, dimensions and pinout – Version 1.06 | | | |

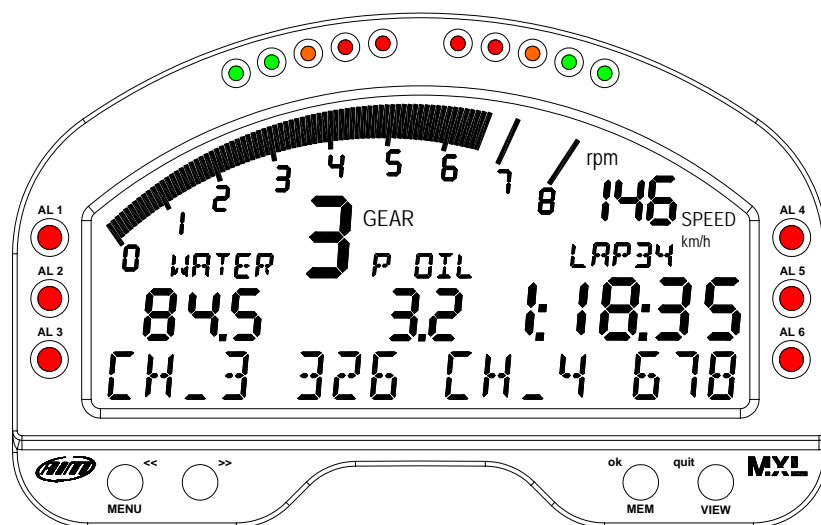


Figure 1: MXL Strada

Introduction

MXL Strada is a new powerful, professional and high-tech gauge, which allows the user to sample and display different parameters. **MXL Strada** is the first step of AIM new generation gauges: the high performance one. Also if **MXL Strada** is mainly suggested for “street” use, you can also use it on track. **MXL Strada** has a beautiful wide display and a standard backlight.

MXL Strada has 1 AMP connector and 2 Binder connectors; it includes a tachometer, 1 RPM input, 8 analog inputs (temperatures, pressures, potentiometers, Lambda sond, “on board” and custom sensors), 1 speed input, 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**, 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 Strada is featured as follows:

- wide display with standard backlight;
- RPM numerical and graphical view (configurable RPM scaling);
- 1 RPM input;
- 8 analog inputs
- 1 speed input;
- gear number;
- 10 shift light leds: green, red and yellow;
- 6 freely configurable alarm leds for maximum/minimum alarm;
- PC interface via USB and free Race Studio software;
- 128 Kbytes internal non volatile memory
- lap and split times;
- configurable number of split times;
- built-in clock and calendar;
- internal data acquisition system;
- total and partial (resettable) odometer;
- water resistant
- rugged and lightweight aluminium chassis

Its 128 Kbytes non volatile memory record up to 250 laps with Lap Times, up to 5 split times, and Maximum/Minimum values of RPM, Speed, Channel 1 and Channel 2.

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

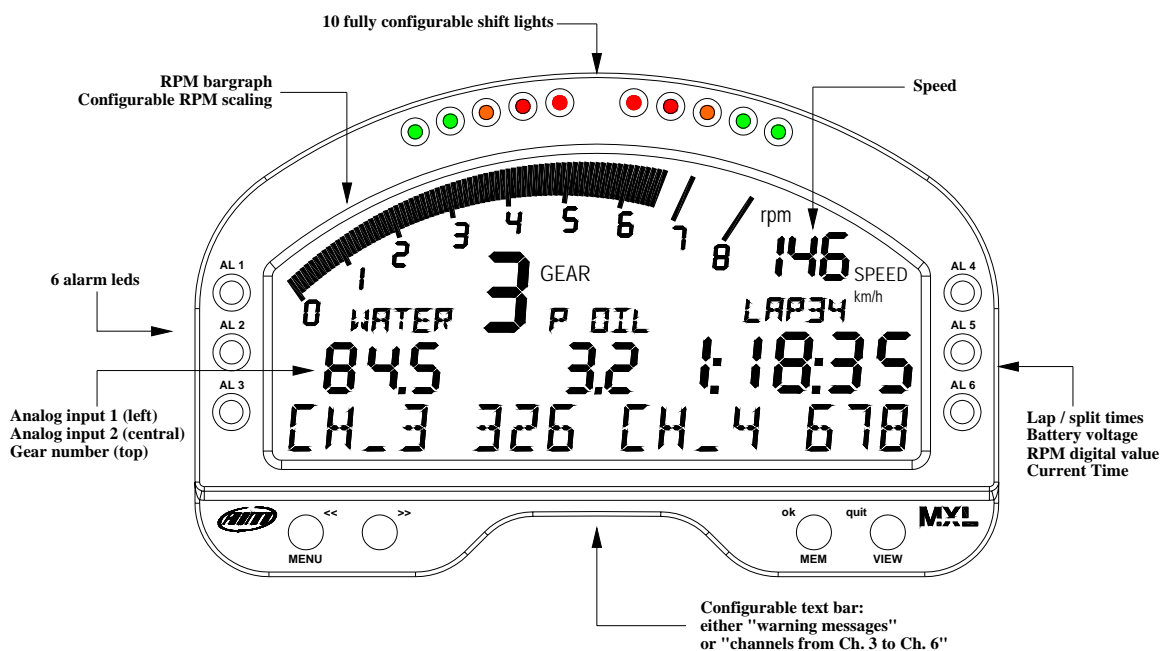


Figure 2: MXL Strada display

How to connect Your MXL Strada to the PC

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

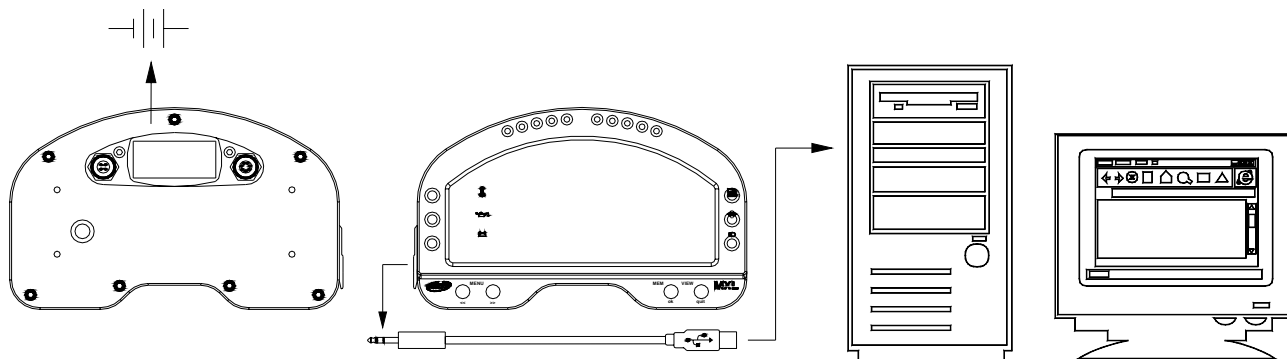
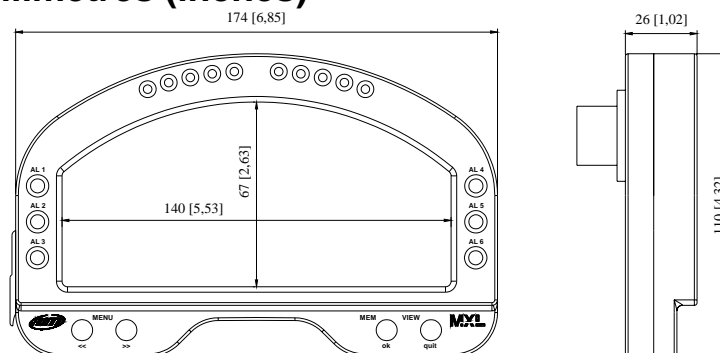


Figure 3: How to connect Your MXL Strada to the PC

Dimensions in millimetres (inches)



Connector details (Beacon channel)

| Pin | Function | Pin | Function |
|-----|--------------|-----|-----------|
| 1 | Magnetic Lap | 3 | + VB |
| 2 | GND | 4 | Optic lap |

Connector details (CAN for external "Expansion modules")

| Pin | Function | Pin | Function |
|-----|----------|-----|----------------------|
| 1 | Can 0 + | 4 | Can 0 - |
| 2 | GND | 5 | 9-15 V Battery input |
| 3 | +VB | | |

Connectors Details (AMP – 12 Pin)

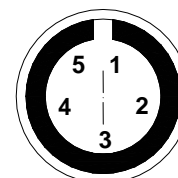
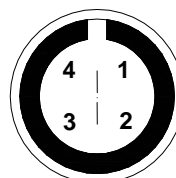
| Pin | Function | Pin | Function |
|-----|---------------------|-----|---|
| 1A | GND | 7A | USB D- |
| 2A | 9-15V Battery input | 8A | RPM 150-400 V (coil input) and RPM sq. wave (> 8 V) |
| 3A | Can 1 - (*) | 9A | + VB |
| 4A | Can 1 + (*) | 10A | GND |
| 5A | RS 232 TX (*) | 11A | + VB |
| 6A | RS232 RX (*) | 12A | Speed |

Connectors Details (AMP – 16 Pin)

| Pin | Function | Pin | Function |
|-----|----------------|-----|----------------|
| 1B | Analog Input 4 | 9B | Analog Input 8 |
| 2B | V Reference | 10B | USB D+ |
| 3B | Analog GND | 11B | Analog GND |
| 4B | Analog Input 3 | 12B | Analog Input 7 |
| 5B | Analog Input 2 | 13B | Analog Input 6 |
| 6B | V Reference | 14B | V Reference |
| 7B | Analog GND | 15B | Analog GND |
| 8B | Analog Input 1 | 16B | Analog Input 5 |

| | | | | | | | | | | | | | |
|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|
| 6A | 5A | 4A | 3A | 2A | 1A | 8B | 7B | 6B | 5B | 4B | 3B | 2B | 1B |
| 12A | 11A | 10A | 9A | 8A | 7A | 16B | 15B | 14B | 13B | 12B | 11B | 10B | 9B |

28 pins AMP Connector pinout (external view):
12 pins connector is labelled "A" connector and
16 pins connector is labelled "B" Connector



Female binder connectors pinout (external view): 4 pins (left) and 5 pins (right)

Technical characteristics

| General characteristics | Value |
|-------------------------|--|
| Analog Input | 8 |
| Speed channels | 1 |
| Input channels from ECU | Max. 64 |
| Memory Management | Records Lap Times and Max. / Min. Values |
| External power | From 9 to 15 VDC |
| Voltage output (V ref.) | 4.5 V (for potentiometers) |
| Internal memory | 128 Kbytes |
| ECU interface | Serial / CAN protocol |
| PC interface | 300 kbyte/sec USB port |

| Other characteristics | Value |
|------------------------------|---------------|
| MXL Strada dimensions | 174x110x26 mm |
| Display dimensions | 140x67 mm |
| Chassis | Aluminium |

(*) "for ECU interface