



MAGNETI
MARELLI

MDU X20

Data display unit
Alphanumeric LCD

Description

The MDU X20 is a combined dashboard and input module for use either as a stand-alone display unit, or as an integral part of a complete data acquisition and monitoring system for use in the demanding environment found in motorsports vehicles.

The compact dimensions of the MDU X20 make it particularly suitable for motorbike applications. The advanced features of the LCD also make this product suitable for car applications.

The MDU X20 is equipped with a comprehensive range of analogue and digital inputs. The graphical bar indicator is typically used for representing engine revs. An additional two fields are available to display gear number and lap number. Four further fields have configurable labels, one of which permits the user to scroll a list of channels with a button. A final field allows the display the lap time, or an alarm (with associated text label) or for displaying user configured text messages.

As part of the Magneti Marelli data acquisition and telemetry system, the MDU X20 can communicate over a CAN network with a range of data loggers receiving and displaying data from the logger as well functioning as an additional input module.

MDU X20 is available with different case:

- MDU 020 Aluminium
- MDU 220 Plastic

Possibility of GPS integrated.

Main Features

- Visible area LCD 164 x 67.5 mm
- On display is shown: bar graph, gear number, speed, lap time, best lap, lap number
- 2 push-button on the front panel for page and bar graph selection, temporary alarm disable, brightness regulation
- 6 high-brightness warning lights green/yellow/red for gear change (with programmable threshold for each gear)
- 2 high-brightness warning blue leds and 4 RGB programmable leds for general alarm
- 6 Single-ended
- 3 Pick-ups or Hall effect
- 2 Temperature
- 2 Lap Triggers
- 1 Internal 3 Axial accelerometer



Benefits

- Bar graph with 2 configurable non-linear scale, manually selectable or automatically swapped by condition
- Available 8 brightness steps for backlight regulation
- Alarm channels with programmable thresholds and linkable to leds
- Inputs configurable to suit all sensors in the product range
- 1 outputs for external warning lamps
- Transmit internal inputs and channels over CAN bus
- Easy to use and configure
- Designed for rugged applications

Typical Applications

- All race applications

DATA DISPLAY

MDU X20

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Technical Characteristics

Inputs

Single-ended (2 @ 12 bit).....	6
NTC/PT1000 temperature sensor.....	2
NTC internal temperature sensor.....	1
Internal 3 axial accelerometer (up to 6 g).....	1
VR Pick-ups or Hall effect.....	3
Remote push button.....	2
Lap Trigger.....	2
"Code Load" enable pin.....	1

Outputs

Voltage references (@ 5 V, 70 mA).....	1
External lamps driver.....	1

Leds

Green gear shift leds.....	2
Yellow gear shift leds.....	2
Red gear shift leds.....	2
Blue alarm leds.....	2
RGB functions leds.....	4

8 brightness steps for each leds

Communications

CAN line (1 Mbit/s (*)).....	2
Ethernet line (10/100base T).....	1

(*) 1 Configurable on request as Flex-Ray (10 Mbit/s)

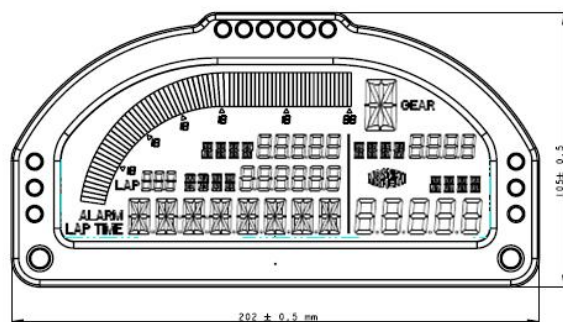
Logic Core

Microcontroller (64 MIPS RISC).....	1
Flash EPROM (microcontroller).....	1 Mbyte
RAM memory (microcontroller).....	48 Kbyte
Flash EPROM.....	32 Mbyte
RAM memory.....	32 Mbyte
E2PROM.....	32 Kbyte
Time keeper.....	1

Other Characteristics

Power supply.....	8 to 18 V
Operating internal temperature (Excl. Ethernet).....	85 °C
Protection class.....	IP 64
Visible area LCD.....	164 x 67.5 mm
Dimensions	
without connector.....	202 x 105 x 19 mm
with connector.....	202 x 105 x 23 mm

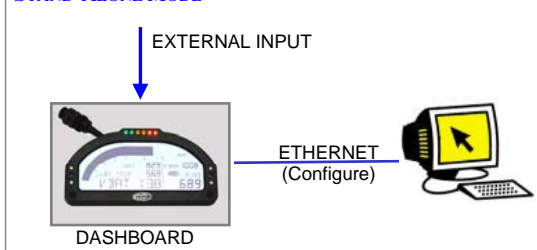
Dimensions



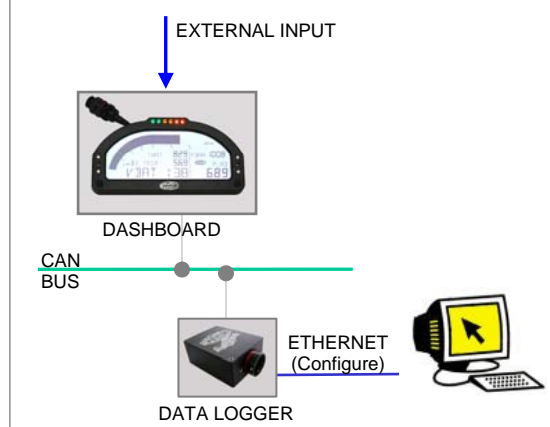
Dimensions in millimetres

Application Schematics

STAND-ALONE MODE



CAN COMMUNICATION MODE



For further information, please contact:



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