HRDL-14

Miniaturized high-performance racing data logger
Up to 1 Gbyte internal memory

Description

HRDL-14 is an evolution of Magneti Marelli successful DAS4 EVO to increase logging performances (higher data throughput and logged channels number), the number of Inputs (to allow a flexible set up) and to reduce the dimensions and weight.
HRDL-14 is intended to enhance the new Magneti Marelli data logger product range, started with RDL.
HRDL-14 is a versatile data acquisition unit developed for racing applications which require high resolution data from a large number of channels.
Interconnection with the box can be obtained using two CAN lines, a ARCNet line and a RS 232 line while a Ethernet line is dedicated to data download.
On the box is present a high performance RISC microcontroller.
HRDL-14 is provided with analogue inputs including: Single-ended, differential, temperatures and K-type thermocouple.
Furthermore the device provides lap trigger and wheel speed inputs.

Main Features

- *12 Single ended @ 12 bit resolution*
- *4 Single ended @ 10 bit resolution*
- *4 Differential @ 12 bit resolution (selectable gain: 1 or 100)*
- *1 Pick-ups or Hall effect*
- *4 Hall effect*
- *Up to 1 Gbyte internal data logger*
- *Up to 300 logged channels*
- *Up to 128 kbyte/s logging rate*
- *Sampling rates up to 1000 Hz*
- *2 CAN communication buses*
- *1 ARCNet line*
- *1 Ethernet line*

Benefits

- *Data download via Ethernet link*
- *SW selectable NTC/PT1000 temperature sensor*
- *Floating point data management*
- *Direct management of Marelli dashboard display*
- *Pick-ups inputs for wheel speed and distance measurement*
- *Requires WinTAX4 analysis Requires SYSMA logging setup tool*
- *Very compact design*
- *Robust design, easy to install*

Typical Applications

Rally cars
One make race series
Industrial application
Formula cars

HRDL-14-083816413600

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Technical Characteristics

Inputs

Analogue Single-ended (@ 12 bit resolution)	12
Analogue Single-ended (@ 10 bit resolution)	4
Differential (*) (@ 12 bit resolution)	4
K-type thermocouple	2
NTC/PT1000 temperature sensor (selectable)	4
NTC internal temperature sensor	1
VR Pick-ups or Hall effect	1
Hall effect	4
Lap trigger (**)	1
“Code Load” enable pin	1
Syncro (Iso9141)	1

(*) Selectable gain: 1 or 100
(**) Configurable on request

Outputs

Voltage references	4

Communications

CAN line (1 Mbit/s (***))	2
ARCNet line (10 Mbit/s)	1
RS 232	1

(***) Configurable on request

Logic Core

Microcontroller (80 MIPS RISC)	1
Flash E2PROM (microcontroller)	1 Mb
RAM memory (microcontroller)	48 Kb
RAM memory	512 Kb
E2PROM	4 Kb
Time keeper	1

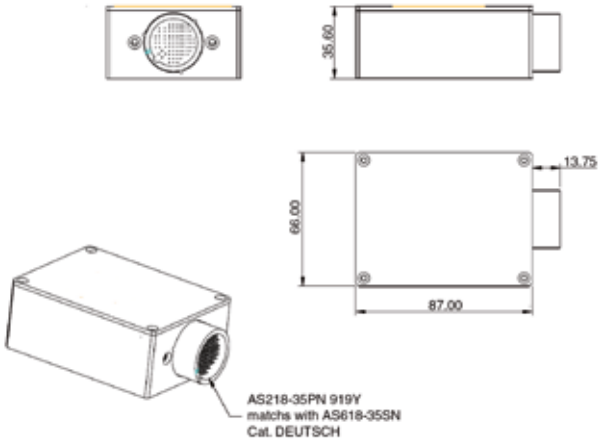
Logging

Flash disk memory	up to 1 Gb
Logged channels	up to 300
Logging rate	up to 128 Kb/s
Sampling rate	up to 1000 Hz

Other Characteristics

Power supply	8 to 18 V
Operating temperature range (internal)	- 40 to 85 °C
Temperature range during data download	0 to 70 °C
Protection class	IP 54
Dimensions	
without connector	66 x 87 x 35.6 mm
Weight (approx.)	230 g

Dimensions



Dimensions in millimetres

Application Schematics