

SLIM: ENTRY-LEVEL CONTROL SYSTEM

Unique in control systems world, SLIM device includes a main control unit, a graphic LCD and several I/O in one single compact case, car radio size compatible.

Its high number of configurable inputs and outputs, micro processor power and memory size to perform sophisticated controls.

Provided with Can Bus link and RS232 for connection with external networks, PC and Printer.

Just for touch buttons for all programming, menu selections and calibrations.

External PC can be used instead.

It can be used for several applications, like very compact cranes load limiting system, engine or transmissions monitoring system, or alarms detection system.



TECHNICAL DATA

CONTROL SYSTEM:

- Freescale Microprocessor 16bit, 25 MHz
- Flash memory 256 KB
- RAM memory 12 KB
- EEPROM memory 3 KB for parameters storage

CONNECTIVITY:

- 2 CAN BUS, CAN 2.0B (11 or 29 bit), ISO 11898-2 compliance, speed up to 1 Mbit/s.
- 1 RS232 with programmable baud rate (max. 57600 baud.)

ELECTRICAL CHARACTERISTICS:

- Power Supply: 9 ÷ 30 Vdc (Operates on vehicle power supply directly)
- Separated Power supply for the outputs and for the internal logic circuits.
- Current requirements for the internal logic: max. 200 mA
- Maximum current for the outputs: 10 A (external fuse is required)
- Internal watchdog safety relay, used to cut-off the power supply to the outputs in case hardware or software failure.
- Relay status is available as output on connector.

CERTIFICATIONS

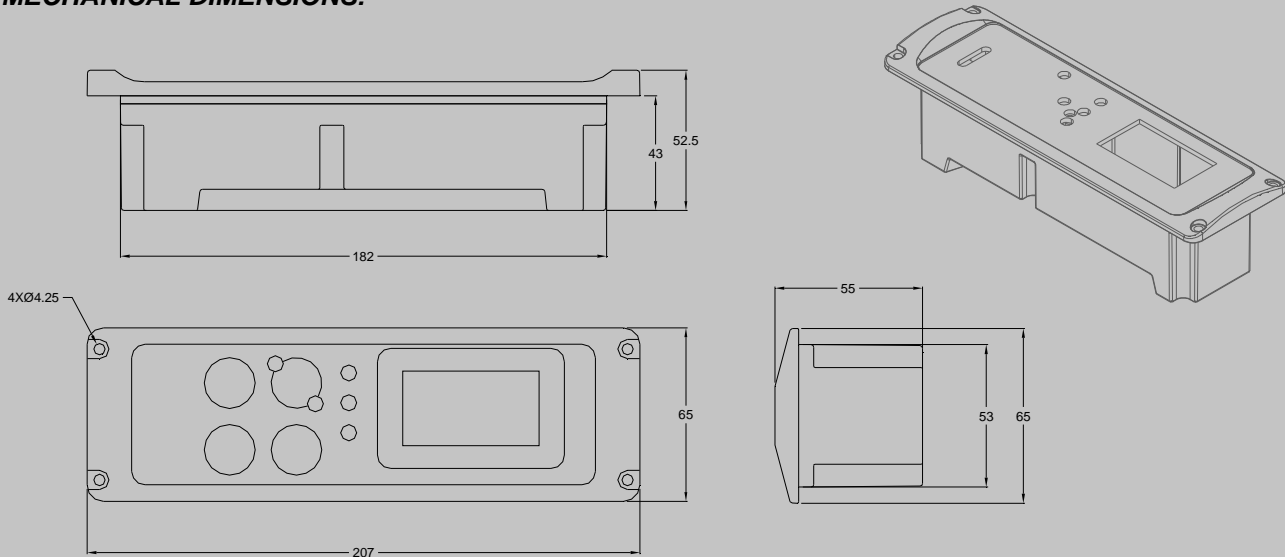
The SLIM unit (all models) is conformed to the following directives and standards required by 89/336 CE, according to automotive standards:

- 1) EMC generic standards for emission, heavy industrial environment :
 - Reference standard: EN 61000-6-4
 - Base standard: EN 55011 (Radiated RF emissions)
- 2) Electromagnetic immunity in heavy industrial environment:
 - Reference standard: EN 61000-6-2
 - Base standard: EN 61000-4-2 (Electrostatic Discharge)
 - EN 61000-4-4 (Fast transient "Burst")
 - EN 61000-4-6 (Conducted RF immunity)
 - EN 61000-4-3 (Radiated RF immunity)

MECHANICAL CHARACTERISTICS AND RATINGS:

- Operating Temperature Range: from -20°C to $+70^{\circ}\text{C}$
- Storage Temperature Range: from -30°C to $+85^{\circ}\text{C}$
- Housing: Plastic and integrated keyboard
- Dimensions : Width 207 mm - Depth 55 mm - Height 65 mm (Radio Standard)
- Connectors: MOLEX minifit type 18 way and 14 way

MECHANICAL DIMENSIONS:



I/O CONFIGURATION

- **6 Input/Output** software configurable as:
 - **On/Off Inputs** (High-side)
 - **On/Off Outputs** (High-side, current 2A, short circuit current 8A), short circuit protected.
 - **PWM Outputs** (High-side, current 2A, short circuit current 8A), short circuit protected.
- **4 Input** software configurable as:
 - **On/Off Inputs (High active)**
 - **Analog Inputs** with range $0 \div +5.5 \text{ V}$, 10-bit resolution
 - **Analog Inputs** with range $0 \div 20 \text{ mA}$, 10-bit resolution
- **8 Input** software configurable as:
 - **On/Off Inputs (High active)**
 - **Analog Inputs** with range $0 \div +5.5 \text{ V}$, 10-bit resolution
- **8 Input** software configurable as:
 - **On/Off Inputs** (High-side)
 - **Analog Inputs** with range $0 \div +5.5 \text{ V}$, 10-bit resolution
 - **RPM Inputs** with range $1\text{Hz} \div 10 \text{ kHz}$ (High or Low side)
- **1 Power supply 5Vdc** for external sensors, max. current = 100 mA, with feedback to microcontroller for check
- **1 Power supply 15Vdc** for external sensors, max. current = 100 mA, with feedback to microcontroller for check