



## OVERVIEW

The **DCU-S** unit is a programmable controller designed to be used on industrial vehicles and suitable to operate in harsh conditions (wide temperature range, water, dust, vibrations, etc.).

The unit is able to read a wide range of analog and digital sensors and can drive the actuators directly.

The hardware cost extremely low in relation to the performance, but especially the high reliability and ease of use, make this device a unique product in its price range.

The DCU-S is equipped with an appropriate standard control software in order to be used as slave unit in a CANOpen network; the identification over the CAN-bus can be defined by the wiring through three digital inputs made for this purpose.

## SPECIFICATIONS

- CPU: Microchip PIC18F4580
- Memory: 1.5 kByte RAM, 32 kByte Flash, 256 Byte EEPROM
- CAN-bus: full CAN 2.0B (11 bit or 29 bit identifiers), with programmable baud-rate from 125 kbit/s to 1 Mbit/s, CANOpen protocol
- Serial interfaces: RS485 with programmable baud-rate from 1.2 to 115.2 kbit/s
- Functions: Watchdog, Brownout, Undervoltage

## OUTPUTS

- 2 high-side PWM outputs (600 Hz, 4A max.) with short circuit protection
- 8 high-side digital outputs with self diagnosis and short circuit protection
- 5 Vdc (100 mA max.) regulated power supply output for external sensors

## INPUTS

- 5 analog inputs, 10 bit resolution, programmable range (0..20mA, 0..5V)
- 4 high-speed digital inputs, usable as 2 RPM/frequency inputs + 2 digital on/off inputs, or to handle up to 2 incremental encoders
- 20 digital on/off inputs configurable for high-side or low-side operation

## OPTIONALS

- EEPROM: 32 kByte, serial access, 1.000.000 write cycles
- Real Time Clock with rechargeable lithium battery
- 2 analog outputs, 8 bit resolution, programmable range (0..5V, 0..10V, 2mA max.)

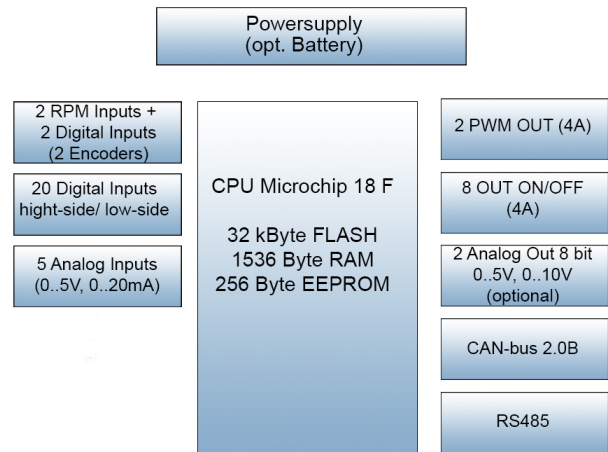
## OPERATING CONDITIONS

- Supply voltage: 8 .. 32 Vdc
- Operating temperature range: -40 .. +70 °C
- Storage temperature range: -40 .. +85 °C
- Max. humidity level: 95% (without condensation)
- Protection grade: IP68 (with connector plugged)
- Weight: 720 g

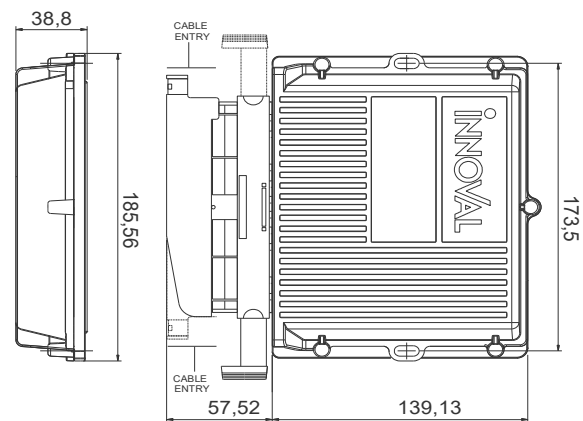
## CERTIFICATIONS

- ECE/ONU 10/03: E3 10R-03 1156
- IP6K8 according to ISO20653:2013

## BLOCK DIAGRAM



## MECHANICAL DRAWING



Remark: cable exit is possible on both sides.