OPERATING CONDITIONS

- Supply voltage: 10 .. 32 Vdc
- Operating temperature range: -40 .. +70 °C
- Storage temperature range: -40 .. +85 °C
- Max. humidity level: 95%
- Protection grade: IP68 (with connector plugged)
- Weight: 720 g

OVERVIEW

The DCU-S V.2 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 software slave for the control by CAN-bus through the CANOpen protocol.

CERTIFICATIONS

- UNECE 10/05 : E3 10R-05 1278
- IP6K8 according to ISO20653:2013

SPECIFICATIONS

- CPU: ARM cortex M3 (LPC1518)
- Internal Memory: 20 kByte RAM, 128 kByte Flash, 4 kByte 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 (optional: J1939, ISOBUS)
- Functions: Watchdog, Brownout, Undervoltage

BLOCK DIAGRAM

OUTPUTS

- 2 high-side PWM outputs (600 Hz, 4A max.) with self diagnosis and short circuit protection
- 8 high-side PWM digital outputs (4A max.) with self diagnosis and short circuit protection
- 2 analog outputs 12 bit 0..5V (minimum load 5 kOhm)
- 1 output 5Vdc/100mA for sensor supply

MECHANICAL DRAWING

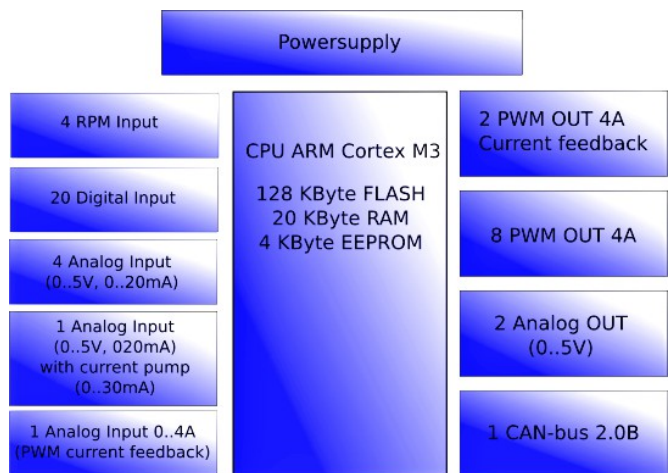*Remark: cable exit is possible on both sides.*

INPUTS

- 4 analog inputs, 12 bit resolution, programmable range (0..20mA, 0..5V)
- 1 analog input, 12 bit resolution with integrated current source (0.3mA..30mA) and programmable range (0..20mA, 0..5V)
- 1 analog input 12 bit resolution 0..4A (can be used to measure the current delivered by the 8 PWM outputs without integrated current feedback)
- 4 RPM inputs for direct reading of signals with frequency up to 5kHz, also used as digital inputs or to manage up to 2 incremental encoders
- 20 digital inputs inputs configurable for high-side or low-side operation by the software, two of which used of the at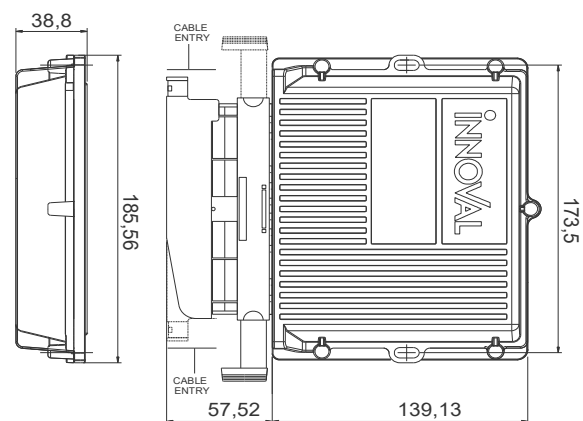tribution of the Node-ID CANOpen