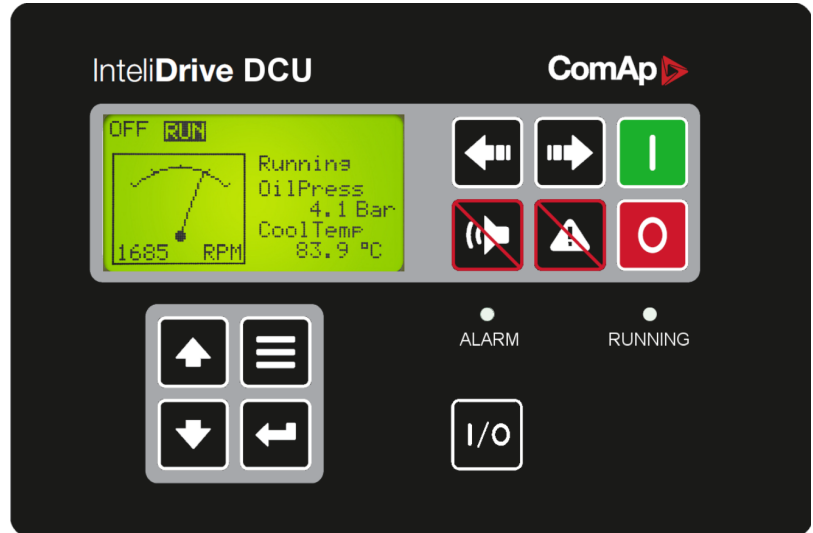


## InteliDrive DCU Industrial



Order code: ID2DCUINBAA

LT version Order code: ID2DCUINBLA

# Datasheet

## Embedded Certified Engine Controller for Industrial Applications

### Product description

- > Specialized engine controller for Industrial applications variable speed (AS) or single speed (SS)
- > Provide control, monitoring and protection diesel/gas engine and application side as well
- > Communication with up to 10 CAN J1939 (or similar like KWP2000) devices at same time

### Key features

- > Support of machinery with multiple CAN devices (ECU, ACM, SCR etc.)
- > Engine controller for land-based applications powered by engine driven compressors and pumps
- > Event driven History up to 4 000 records
- > Speed control for Tier4Final/Stage V engines
- > Plug&Play support of InteliVision display family of ComAp IV5, IV8, IV12T
- > Configurable large PLC interpret with [TechnicalTerms.PLC Editor] and monitor
- > 14 binary inputs, 14 binary outputs, 8 analog inputs
- > Over 100 binary inputs and outputs are available via CAN modules
- > 3 level password protection

- > Configurable Modbus Registers, Modbus RTU and Modbus TCP support for easy integration into the complete control system
- > Load sharing for propulsion engines
- > Integrated load and clutch control
- > Virtual shared inputs and outputs via CAN
- > Running hours meter, number of starts counter
- > Communication capabilities including RS232, RS485, Modem, Modbus, Internet, Ethernet
- > Remote monitoring via Modbus, TCP/IP, AirGate
- > Cloud-based monitoring and control via WebSupervisor
- > Front panel sealed to IP65
- > Available also in low temperature (LT) version

### Application overview

- > Single/Variable speed engine operation
- > Pump/Compressor application

# Technical data

## Power supply

|  |                       |
|--|-----------------------|
| Power supply range                                 | 8-36 V DC             |
| Current consumption<br>(depends on supply voltage) | 0.34 A at 8 V DC      |
|  | 0.12 A / 24 V DC      |
|  | 0.09 A / 36 V DC      |
| Galvanically isolated from controller body         | YES                   |
| Battery voltage measurement tolerance              | 2 % at 24 V           |
| RTC battery lifetime                               | Up to 10 years (20°C) |

*Note: RTC battery flat causes wrong Date&Time information only.*

## Operating conditions

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Operating temperature            | -20 °C to +70 °C                    |
| Storage temperature              | -30 to +80 °C                       |
| Humidity                         | 95 % non-condensing (EN 60068-2-30) |
| Flash memory data retention time | 10 years                            |
| Protection front panel           | IP 65                               |
| Standard conformity              |                                     |
| Electromagnetic Compatibility    | EN 61000-6-2 ed.3:06                |
|                                  | EN 61000-6-4:07+A1:11               |
|                                  | IEC 60533, Ed. 2; 1999-11           |
| Vibration                        | 5-25 Hz, $\pm 1.6$ mm               |
|                                  | 25-100 Hz, a = 4 g                  |
| Shocks                           | a = 200 m/s <sup>2</sup>            |
| Heat radiation                   | 9 W                                 |

## Dimensions and weight

|            |                   |
|------------|-------------------|
| Dimensions | 183 × 123 × 47 mm |
| Weight     | 800 g             |

## Binary inputs

|                         |                        |
|-------------------------|------------------------|
| Number of inputs        | 14                     |
| Input impedance         | 4.7 k $\Omega$         |
| Input range             | 0-36 V DC              |
| Switching voltage level | 0-2 V DC close contact |
| Voltage level           | 8-36 V DC              |
| Minimal input duration  | 110 ms                 |

## Binary open collector outputs

|                                      |                       |
|--------------------------------------|-----------------------|
| Number of outputs                    | 14                    |
| Maximum current - outputs BO1, BO2   | 1 A                   |
| Maximum current - outputs BO3 - BO14 | 0.5 A (2 A per group) |
| Maximum switching voltage            | 36 VDC                |

## RS232 interface

|                  |                 |
|------------------|-----------------|
| Maximal distance | 10 m            |
| Speed            | up to 115.2 kBd |

## D+ function

|   |                       |
|---|-----------------------|
| Max. D+ output current                  | 300 mA                |
| Guaranteed level for signal Charging OK | 90% of supply voltage |

## Speed pick-up input

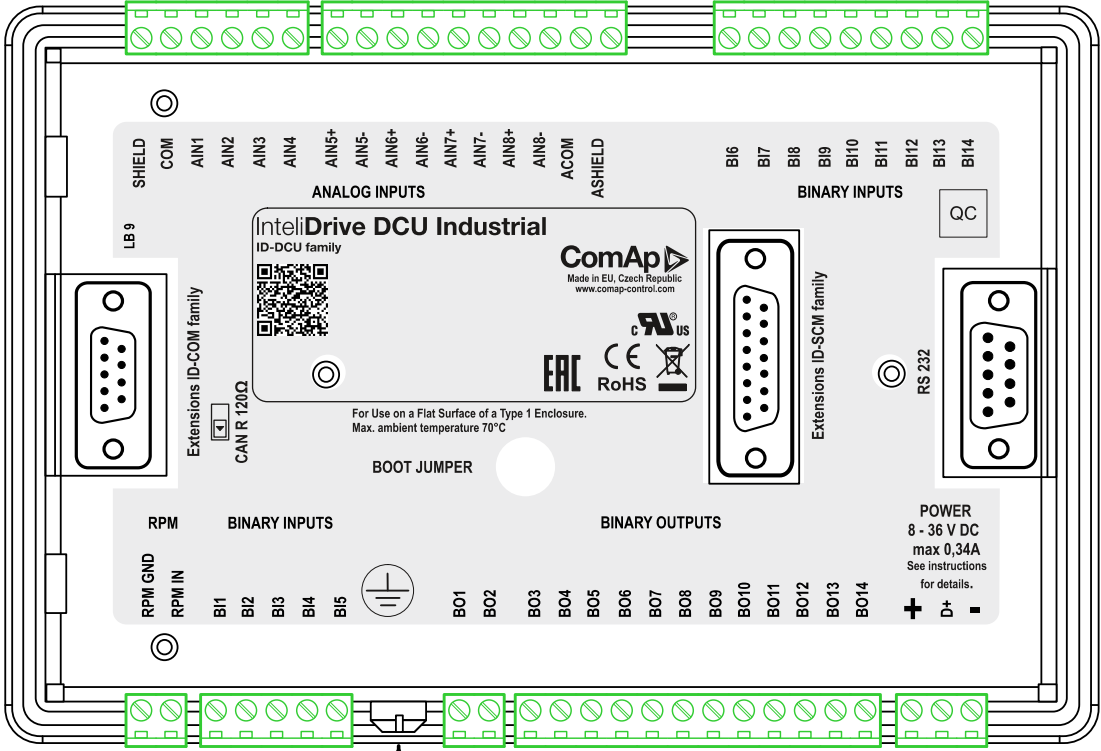
|                                 |  |
|---------------------------------|--|
| Type of sensor                  | magnetic pick-up (connection by shielded cable is recommended) |
| Input impedance                 | 10 k $\Omega$  |
| Input voltage range             | 2 Vpk-pk to 50 Veff  |
| Minimum measured frequency      | 4 HZ   |
| Maximum measured frequency      | 10 kHz (min. input voltage 6Vpk-pk)                            |
| Frequency measurement tolerance | 1.5 %  |

## Analog inputs (Not electrically separated)

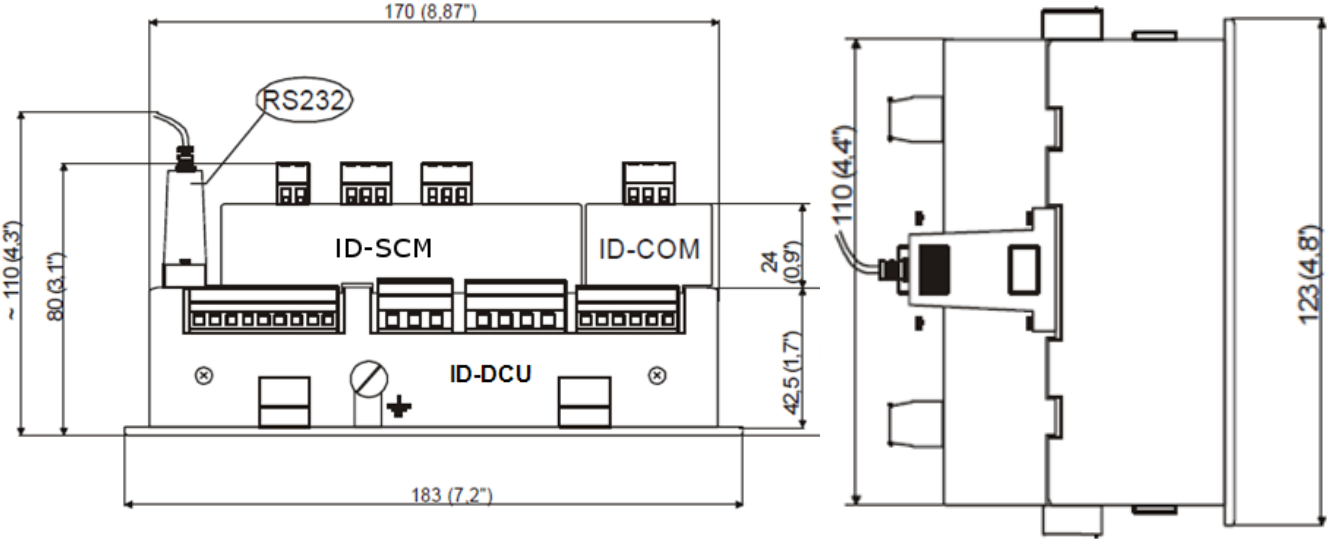
|  |  |
|--|--|
| <b>Group 1 AI1 – AI4</b>   |  |
| Number of inputs   | 4 unipolar                                       |
| Resolution   | 10 bits, max 4 decimals                          |
| Jumper selectable range  | V, $\Omega$ , mA                                 |
| Maximal resistance range   | 2500 $\Omega$                                    |
| Maximal voltage range  | 4.0 V  |
| Maximal current range  | 0-20 mA  |
| Input impedance  | 180 $\Omega$ for mA measuring                    |
| Input impedance  | > 100 k $\Omega$ for V measuring                 |
| Resistance measurement tolerance   | $\pm 2$ % $\pm 2$ $\Omega$ out of measured value |
| Voltage measurement tolerance  | $\pm 1$ % $\pm 1$ mV out of measured value       |
| Current measurement tolerance  | $\pm 1$ % $\pm 0,5$ mA out of measured value     |
| <b>Group 2 AI5 – AI8</b>   |  |
| Number of inputs   | 4 bipolar  |
| Resolution   | Up to 16 bits                                    |
| Jumper selectable range  | V, $\Omega$ , mA, thermo coupler                 |
| Maximal resistance range   | 2500 $\Omega$                                    |
| Maximal voltage range  | $\pm 1000$ mV / 100 mV / 5 V                     |
| <i>Note: The maximal input voltage offset is in the range from -2 to +5 V DC against controller minus power supply when AI5 to AI8 is used for differential voltage measuring.</i> |  |

|                                  |  |
|----------------------------------|--|
| Maximal current range            | $\pm 0-20$ mA active                               |
|                                  | 0-20 mA passive                                    |
| Input impedance                  | 50 $\Omega$ for mA measuring                       |
| Input impedance                  | >100 k $\Omega$ for V measuring                    |
| Resistance measurement tolerance | $\pm 0.5$ % $\pm 2$ $\Omega$ out of measured value |
| Voltage measurement tolerance    | $\pm 0.5$ % $\pm 1$ mV out of measured value       |
| Current measurement tolerance    | $\pm 0.5$ % $\pm 0.5$ mA out of measured value     |

# Dimensions, terminals and mounting



Grounding Terminal



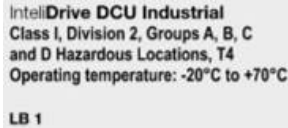


## Available extension modules

| Product         | Description  | Order code  |
|-----------------|--|---|
| ID-SCM, ID-SCM1 | Speed Control Module   | <a href="#">ID-SCM</a> , <a href="#">ID-SCM1</a>      |
| ID-COM          | Communication Module with CAN and RS485/J1587 interface<br>Communication Module with CAN1/CAN2/J1587 interface | <a href="#">ID-COM</a><br><a href="#">CM2J1708BZB</a> |
| IGS-PTM         | Analog/Binary Input/Output Module  | <a href="#">IGS-PTM</a>                               |
| IS-AIN8         | Analogue Input Module  | <a href="#">IS-AIN8</a>                               |
| IS-AIN8TC       | Module for Thermocouple Measurement  | <a href="#">IS-AIN8TC</a>                             |
| IS-BIN16/8      | Binary Input/Output Module   | <a href="#">IS-BIN16/8</a>                            |
| I-AOUT8         | Analog Output Module   | <a href="#">I-AOUT8</a>                               |
| IGL-RA15        | Remote Annunciator   | <a href="#">EM2IGLRABAA</a>                           |
| Inteli AIN8     | 8 Analog Input Channels and 1 RPM/Impulse Input Module   | <a href="#">I-AIN8</a>                                |
| Inteli AIN8TC   | 8 Analog Channels Module   | <a href="#">I-AIN8TC</a>                              |
| Inteli IO8/8    | Binary Inputs/Outputs and Analog Outputs Module  | <a href="#">I-IO8/8</a>                               |
| Inteli AIO9/1   | Analog Input Output Module   | <a href="#">I-AIO9/1</a>                              |

## Related products

| Product                  | Description  | Order code   |
|--------------------------|--|--|
| InternetBridge-NT        | 3G Communication Module with Cellular/Ethernet Connection<br>4G EU market<br>4G USA+Canada market<br>4G Japan market | <a href="#">IB-NT</a><br><a href="#">CM2IB4GEBFB</a><br><a href="#">CM2IB4GABFB</a><br><a href="#">CM2IB4GJBFB</a>   |
| InteliVision 5           | 5.7" colour display unit with buttons (can be equipped by backlit buttons and Marine certification)                  | <a href="#">INTELVISION 5</a><br><a href="#">INTELVISION 5 CAN</a><br><a href="#">INTELVISION 5 CAN Backlit</a>  |
| InteliVision 8           | 8" colour display unit (can be equipped by Marine certification)   | <a href="#">INTELVISION 8</a><br><a href="#">InteliVision 8 Marine</a>   |
| InteliVision 12Touch OEM | 12" touch colour display (OEM is equipped by Marine certifications)  | <a href="#">RD1IV12TBZH</a><br><a href="#">(RD112OEMBZH)</a>   |
| I-CB                     | ECU Communication Bridge   | <a href="#">I-CB/CAT DIESEL</a><br><a href="#">I-CB/CAT GAS</a><br><a href="#">I-CB/DEUTZTEM</a><br><a href="#">I-CB/MODBUS</a><br><a href="#">I-CB/MTU</a><br><a href="#">I-CB/MTU ECS</a><br><a href="#">I-CB/MTU SIAM4000</a> |

## Certificates and standards

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>&gt; EN61000-6-2 ed.3/2006</li> <li>&gt; EN61000-6-4:2007/A1:2011</li> <li>&gt; UL 6200</li> <li>&gt; C1D2</li> </ul> |    |
|--|--|

