

Order code: ID2IPCXXBAA

## Irrigation Pump Controller

# Datasheet

### Product description

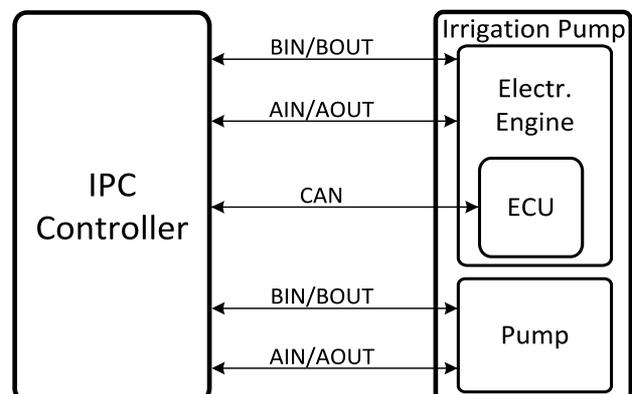
The InteliDrive IPC is a cost effective and sophisticated irrigation pump controller, which features outstanding control, monitoring and protection for both mechanical and electronic diesel/gas engines – all in one unit. The controller is designed for the specific requirements of the irrigation system, which comprises a diesel engine and pump.

### Key features

- ▶ Engine and pump controller for land-based and marine Tier4 applications
- ▶ Control, monitoring and protection for both mechanical and electronic diesel/gas engines in one unit
- ▶ Automatic, manual or remote start/stop of the engine
- ▶ Support of engines with Electronic Control Unit (ECU) - J1939 or Cummins Modbus
- ▶ Analog oil pressure, water temperature, fuel level, battery voltage, engine speed (pick-up)
- ▶ Smooth engine speed control by Up/Down controller buttons, binary inputs for predefined speed options, Speed Up/Down binary inputs or one analog input

- ▶ Pump functionalities: flow meter, flow switch, set of flexible timers
- ▶ Selectable protections alarm/shutdown
- ▶ 3 levels of password protection
- ▶ Ethernet, USB, GSM/GPRS, RS485 or RS232/Modem/Modbus communication
- ▶ Automatic SMS on alarm
- ▶ On-line control and monitoring over web pages (embedded web server)
- ▶ 2 languages (user changeable)
- ▶ Real time clock and event history log
- ▶ Front panel sealed to IP65
- ▶ EN, UL certifications

### Application overview



## Technical data

### Power supply

Power supply range	8 - 36 V DC
Power supply drop-out immunity	100 ms (from min. 10 V)
Power consumption	440 mA @ 8 V; 40 mA @ 36 V
Backup battery type	CR 1225
Estimated backup battery lifetime	10 years

### Operating conditions

Operating temperature	-20 .. +70 °C
Operating humidity	95% non-condensing (IEC/EN 60068-2-30)
Protection degree (front panel)	IP65
Vibration	5-25 Hz, +/- 1,6 mm; 25-100 Hz, a = 4 g
Shocks	a <sub>max</sub> 200 m/s <sup>2</sup>
Storage temperature	-30 .. +80 °C

### Binary inputs

Number	5 non-isolated
Input resistance	4,2 kΩ
Common pole	Positive, V <sub>s</sub> = 8 - 36 V DC
Close/Open indication	0 - 2 V close contact 4 V - V <sub>s</sub> open contact

### Binary outputs

Number	5 non-isolated
Operating voltage	8 - 36 V DC
Switching to	negative supply terminal
Max current	0,5 A (2 A per group)

### Analog inputs - resistive

Number	3 non-isolated
Electrical range	0 - 2500 Ω
Resolution	10 bits, 4 digits
Precision	±2 % ±2 Ω out of measured value
Supported sensor types	Predefined: VDO 10Bar, VDO Temperature, VDO Fuel level User-defined: 30 points non-linear sensors can be defined by the user

### Analog inputs - voltage

Number	3 non-isolated
Electrical range	0 - 10 V
Resolution	10 bits, 4 digits

Input impedance	> 100 kΩ
Precision	±1 % ±1 mV out of measured value
Supported sensor types	User-defined: 30 points non-linear sensors can be defined by the user

### Communication

CAN	External modules 250 kbps, max 200 m Isolated
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### Magnetic pick-up

Voltage input range	2 - 70 V <sub>pp</sub>
Frequency input range	4 Hz - 10 kHz (min 2 V <sub>pp</sub> @ 4Hz - 4 kHz, 6 V <sub>pp</sub> @ 10 kHz)
Frequency measurement tolerance	0.2 %

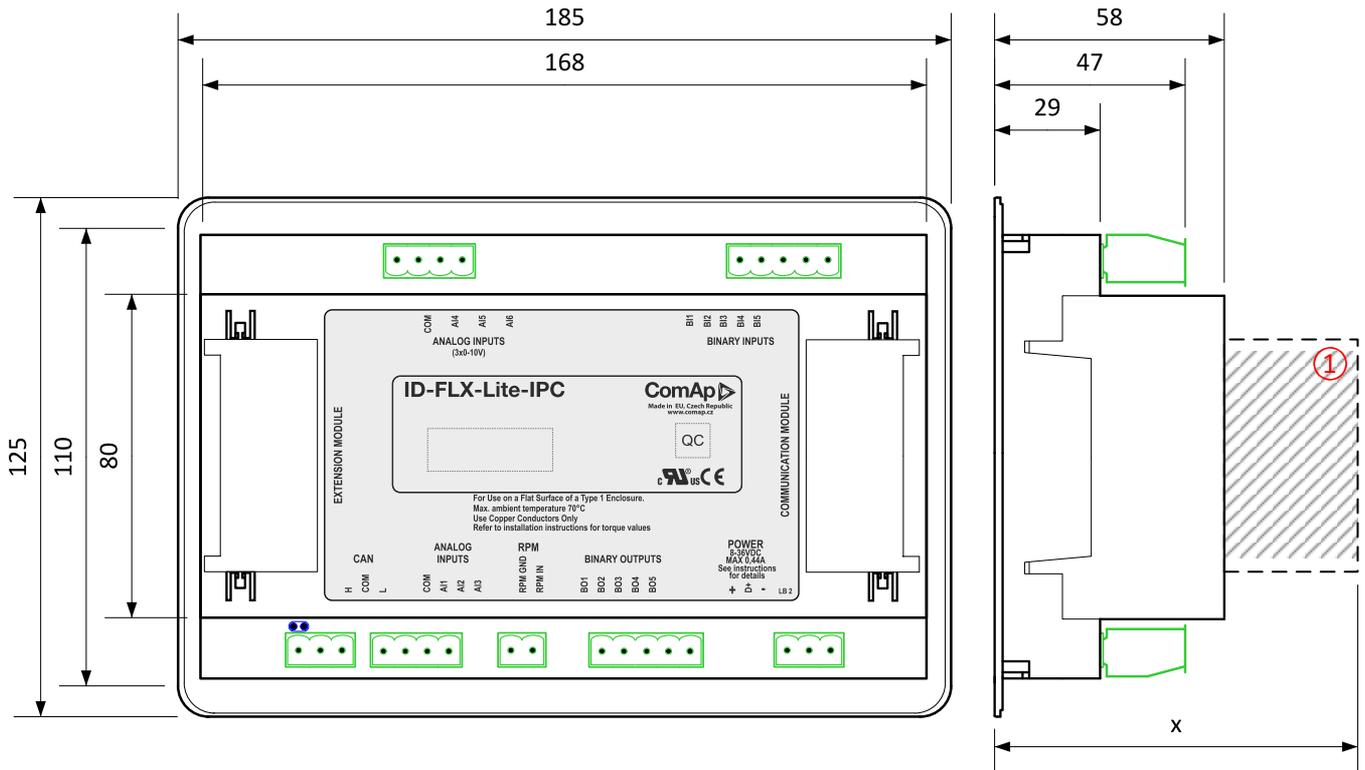
### D+

Excitation current	300 mA, during the engine start only
Charging fail threshold	80 % of U <sub>supply</sub>
Voltage range	0 - 60 V (max. 70 V)
Voltage accuracy	±0.1 V

### Display

Type	Built-in monochromatic
Resolution	128x64

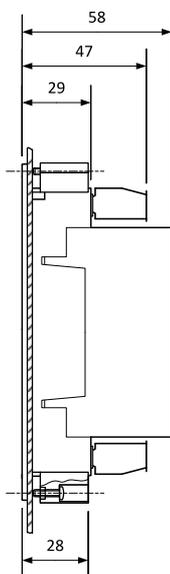
## Dimensions, terminals and mounting



① Plug in module

**Note:** Dimension *x* depends on plug-in module

### Panel door mounting



### Overview of parameter *x*

Plug-in module	Parameter <i>x</i> [mm]
IL-NT-AOUT8	75
IL-NT-BIO8	74
IL-NT-IO1	75
IL-NT-AIO	75
IL-NT-RS232	113
IL-NT-RS232-485	115 @ RS232 / 74 @ RS485
IL-NT-S-USB	128
IB-Lite	108
IL-NT-GPRS	122

**Note:** Parameter *x* includes reserve for connectors of plug-in modules.

**Note:** The controller is to be mounted onto the switchboard door. The requested cut-out size is 175x115 mm. Use the screw holders delivered with the controller to fix the controller into the door.

## Available extension modules

Product	Description	Order code
IL-NT-AOUT8	8 analog outputs packed in a unit	<a href="#">IL-NT-AOUT8</a>
IL-NT-BIO8	8 binary inputs in a unit (HW switchable to 8 binary outputs)	<a href="#">IL-NT-BIO8</a>
IL-NT-IO1	4 binary inputs and 4 analog inputs in a unit	<a href="#">IL-NT-IO1</a>
IL-NT-AIO	4 configurable analog inputs and 1 configurable analog output in a unit	<a href="#">IL-NT-AIO</a>
IGL-RA15	15 binary LED output (3 colors) packed in a rugged metal unit	<a href="#">IGL-RA15</a>
IL-NT-RS232	Communication module which provides additional RS232 interface for controller	<a href="#">IL-NT-RS232</a>
IL-NT-RS232-485	Communication module which provides additional RS232 and RS485 interface for controller	<a href="#">IL-NT-232-485</a>
IL-NT-S-USB	Communication module which provides additional USB interface for controller	<a href="#">IL-NT-S-USB</a>
IB-Lite	Communication module which provides additional Ethernet interface for controller	<a href="#">IB-Lite</a>
IL-NT-GPRS	Communication module with integrated GSM modem with GPRS Internet connection	<a href="#">IL-NT-GPRS</a>
I-LB+	Direct connection (PC) to all controllers on CAN2	<a href="#">I-LB+</a>
InternetBridge-NT	Multiple Internet connections (PC and Modbus) to all controllers on CAN2 or RS485	<a href="#">IB-NT</a>

## Certificates and standards

<ul style="list-style-type: none"> <li>▶ EN 60068-2-30</li> <li>▶ EN 61000-6-1</li> <li>▶ EN 61000-6-2</li> <li>▶ EN 61000-6-3</li> <li>▶ EN 61000-6-4</li> <li>▶ EN 61010-1</li> </ul>	
<p>All certificates and standards are available on: <a href="https://webstore.iec.ch/publication/">https://webstore.iec.ch/publication/</a>.</p>	



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