

# **TECHNICAL SPECIFICATIONS / CTRL-500**

### **Overview**





# Advanced pump controller with LoRaWAN connectivity

#### **Key Features**

- Remote monitoring and control for decentralized sites requiring multi-channel, general-purpose I/O
- Fexible 24 VDC power supply suitable for battery and solar-powered applications
- External antenna support for improved signal reception
- Mobile application for configuration and comissioning

## **Typical Applications**

- Control of wastewater packaged pumping stations (1–2 pumps)
- Monitoring of booster stations and water intake facilities
- Motor condition monitoring
- Wireless transmission of 0–20 mA signals
- Monitoring of doors, hatches, and covers
- Optimization of pumping energy consumption
- Monitoring of power outages

### **Technical Data**

Power Supply	24 VDC ±10 %, max. 60 W	
Communication	LoRaWAN EU868, external antenna (max. gain 2.15 dBi)	
	Bluetooth for setup and configuration	
Inputs	16 x Digital Input (selectable for 24 VDC or 230 VAC) (*)(**)	
	<ul> <li>Input impedance approx. 1 MΩ @ 250 VAC</li> </ul>	
	$4 \times Analog Input with galvanic isolation (0-100 mA, passive) (*)(**)$	
	Minimum operating voltage	
	o 7 VDC @ 20 mA	
	o 9 VDC @ 100 mA	
	1 x External temperature sensor	
	1 x Internal temperature sensor	
	(*) All inputs must be configured for the same voltage level  (**) Protected against overcurrent and overvoltage	
Outputs	Output Type	Load Capacity (*)(**)
	2 x NC Relay	3 A @ 30 VDC / 250 VAC, $\cos \varphi = 1$
	2 x NO Relay	2 A @ 250 VAC, cos φ = 0,5
		(*) Relay outputs must be externally fused (EN 62368-1)
0.070	4 0070 041/00	(**) Voltage range must match that of configured digital inputs
GPIO	4 x GPIO 24 VDC, max. 0.2 A (*)	
	24 VDC power output, max. 1.1 A (*)  (*) Protected against overcurrent and overvoltage	
Overvoltage Category	CAT III 300 V (per EN 62368-1), test voltage 8 kV	
Pollution Degree	PD3 (EN 62368-1)	
Ingress Protection	IP 20	
Operating Temperature	-40 °C + 60 °C	
Storage Temperature	-40 °C + 60 °C	
Dimensions ((W x H x D)	170 x 90 x 63 mm	
Country of Manufacture	China, Estonia	
Mounting options	DIN rail (35 mm, 10U)	
Installation Guidelines	Maximum altitude 2,000 m above sea level	
	Installation must be performed by a licensed electrician if device is to be used	
	in 230 VAC mode	
Accessories (sold separately)	Current transformer, external temperature sensor, current loop power supply	
Expansion Options	Available upon request – contact us for further details	