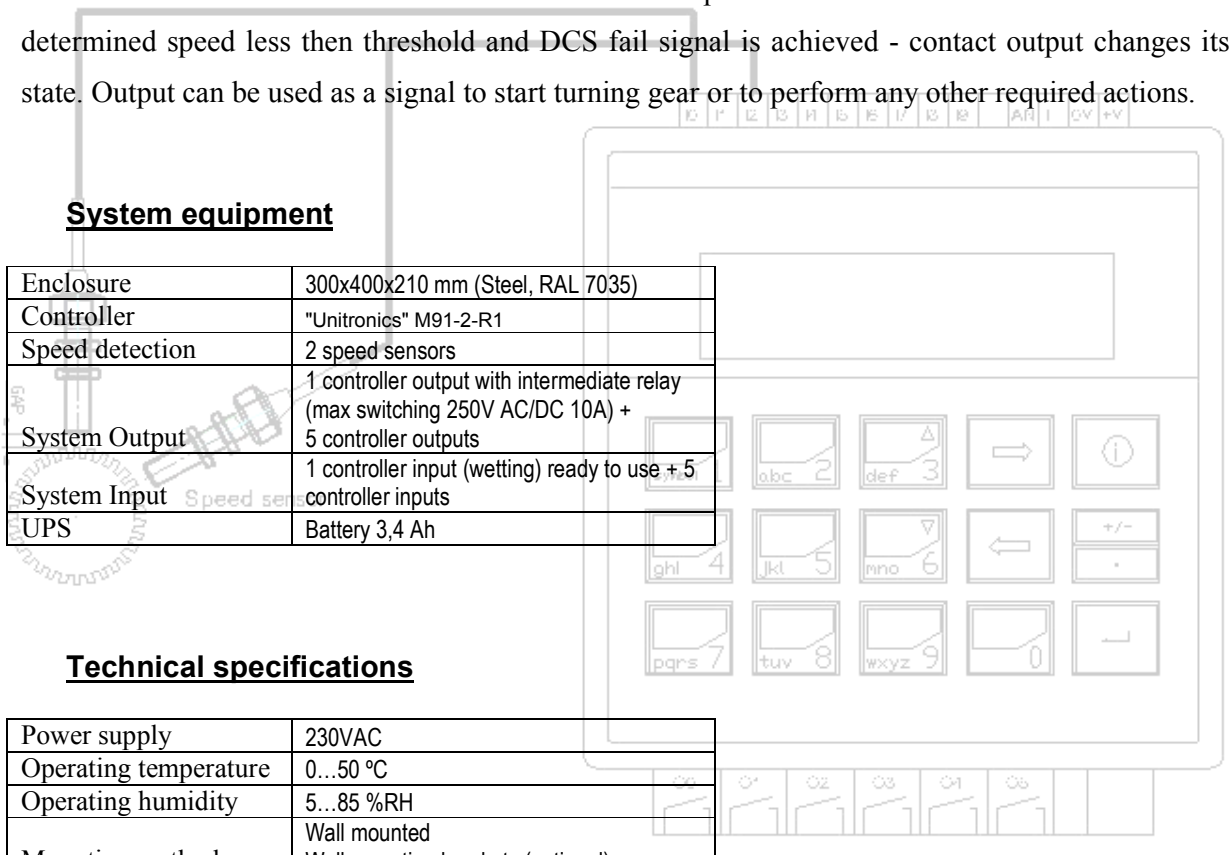
Multi-channel Programmable ZERO SPEED DETECTION system ZSD-1

- Three 10 kHz High-speed counters;
- 1 Analog input;
- 6 Relay outputs;
- 10 Digital inputs;
- 2 line STN LCD display;
- RS232/RS485, Supports MODBUS (Master-Slave).

Introduction

Zero speed detection (DCS independent) system - increases reliability and safety of steam turbines or any other rotating machines. Measured machines speed is compared with preset threshold. When speed is out of preset limit and DCS live signal is not available output signal is set to start turning gear.

Solution described in this document is performed by small PLC Unitronics series M91. Two speed probes (type enabling to detect pulses with frequencies from 0 Hz) connected to the two high speed counter channels are used to determine machines speed RPM. When one of two channels determined speed less then threshold and DCS fail signal is achieved - contact output changes its state. Output can be used as a signal to start turning gear or to perform any other required actions.



System equipment

Enclosure	300x400x210 mm (Steel, RAL 7035)
Controller	"Unitronics" M91-2-R1
Speed detection	2 speed sensors
System Output	1 controller output with intermediate relay (max switching 250V AC/DC 10A) + 5 controller outputs
System Input	1 controller input (wetting) ready to use + 5 controller inputs
UPS	Battery 3,4 Ah

Technical specifications

Power supply	230VAC
Operating temperature	0…50 ºC
Operating humidity	5…85 %RH
Mounting method	Wall mounted Wall mounting brackets (optional)

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