IOMod 4Cs4Vs

Features

- Analog inputs measurement in 16-bit resolution
- 4x low-power (LoPo) current measuring inputs (225 mV)
- 4x low-power (LoPo) voltage measuring inputs (3.25 V/√3)
- Frequency acquisition (nominal frequency 45 to 65 Hz)
- Calculation of RMS values for currents, phase and phase to phase voltages
- Calculation of:
  - Frequency;
  - Active, reactive, and apparent power;
  - Neutral voltage, neutral current;
  - Power factor;
  - Phase angle;
  - Harmonics calculation;
- Drag and Drop firmware upgrade over USB mass storage
- Modbus RTU, IEC-60870-5-101, IEC-60870-5-103 communication over RS485
- Software selectable 120Ω termination resistor for RS485

Concept

IOMod 4Cs4Vs is a stand-alone analog inputs measurement module for voltages and currents based on sensors technology with communication support based on Modbus (RTU), IEC 60870-5-101 and IEC 60870-5-103 protocols. Designed to measure voltage or current values with high accuracy in real-time. IOMod 4Cs4Vs can be used for numerous applications like electrical distribution substations, gas distribution substations, photovoltaic and hydropower plants, pipelines and railway power supplies where user needs. IOMod 4Cs4Vs calculate neutral current and voltage RMS value I0 and U0 as well as meny other measurements like active, reactive, apparent power for every phase, power factors per phase, phase angles for currents and voltages and harmonics.
IOMod 4Cs4Vs is an ideal solution for such applications as data acquisition, observation, control, process monitoring, testing and measurement remotely. It is controlled over Modbus RTU, IEC 60870-5-101 or IEC 60870-5-103 protocol, and can be connected in parallel with other Modbus RTU, IEC 60870-5-101 or IEC 60870-5-103 equipment in a multi-drop installation scheme such as any SCADA system.

When using IOMod 4Cs4Vs with WCC Lite RTU cpu-gateway, it is possible to monitor all measurement values over Ethernet LAN's or 3G/4G(LTE)/GSM/GPRS networks. It is a powerful solution for remote monitoring and control, alarm management and data logging of I/Os on CloudIndustries.eu cloud platform.

Characteristics

System

Analog inputs	8
PC USB connection	Mini USB
Input connectors	Screw terminal plug connector

Software

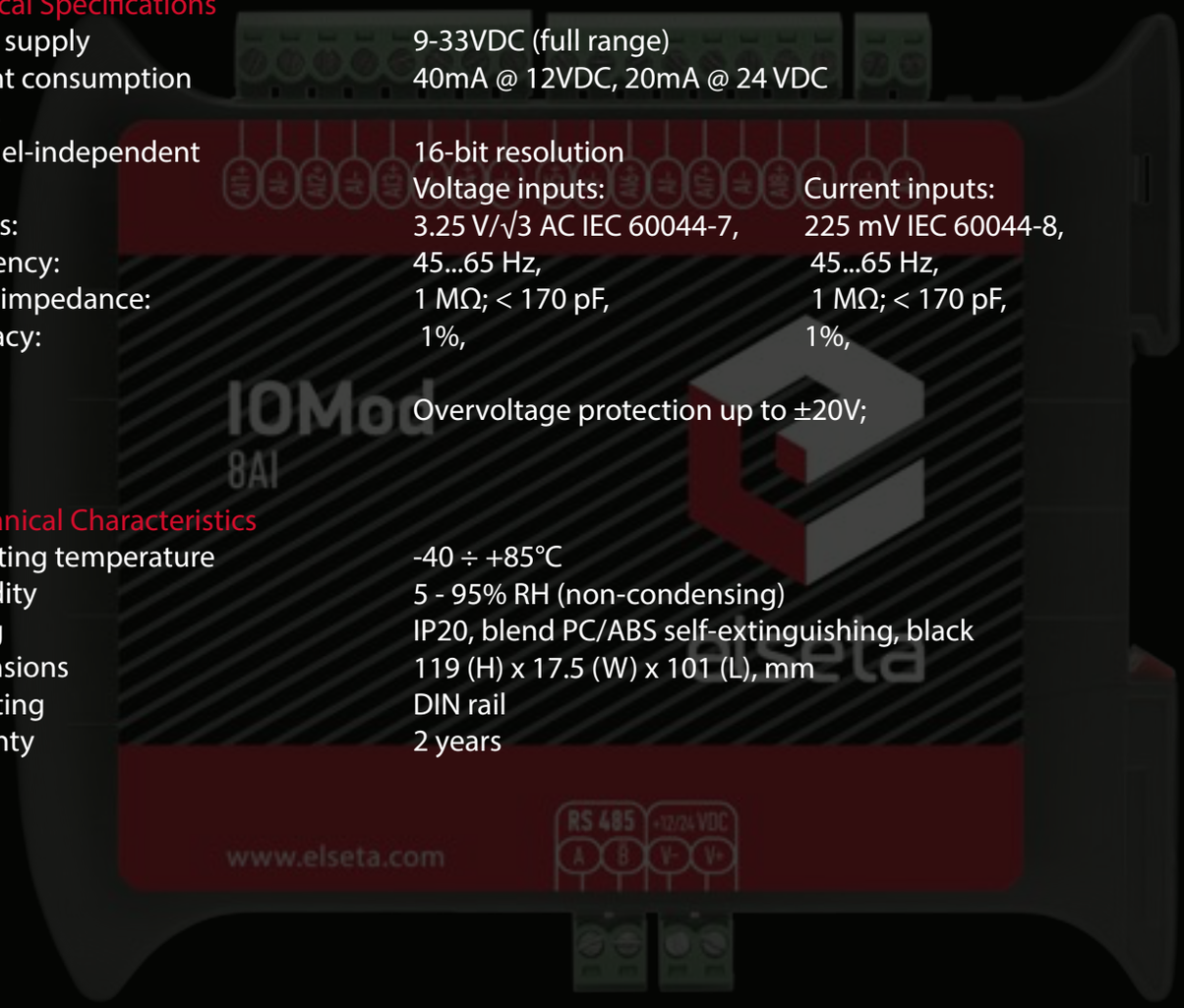
Configuration	Over USB console
Firmware upgrade	Over USB mass storage

Communication

Communication standard	RS485
Communication protocol	Modbus (RTU), IEC 60870-5-101 and IEC 60870-5-103
Speed	300 – 256000 baud

Electrical Specifications

Power supply	9-33VDC (full range)	
Current consumption	40mA @ 12VDC, 20mA @ 24 VDC	
Inputs		
Channel-independent	16-bit resolution	
	Voltage inputs:	Current inputs:
Ranges:	3.25 V/√3 AC IEC 60044-7,	225 mV IEC 60044-8,
Frequency:	45...65 Hz,	45...65 Hz,
Input impedance:	1 MΩ; < 170 pF,	1 MΩ; < 170 pF,
Accuracy:	1%,	1%,
	Overvoltage protection up to ±20V;	



Mechanical Characteristics

Operating temperature	-40 ÷ +85°C
Humidity	5 - 95% RH (non-condensing)
Casing	IP20, blend PC/ABS self-extinguishing, black
Dimensions	119 (H) x 17.5 (W) x 101 (L), mm
Mounting	DIN rail
Warranty	2 years

ELSETA is a company focused on renewables and smart grid technologies. We specialize in substation and critical infrastructure, as well as innovative project development.

Simplifying complexity is our key to cutting-edge product development.
More about ELSETA products: www.elseta.com

elseta