



# Ethernet Modbus TCP to 16 A/D, 2 D/A, 8 Open-Collector Outputs, 8 Isolated Inputs Multi-

**Part:** 470E | **Model:** Seal/O-470E

Designed using the Maxim MAX197 successive approximation-type A/D chip, the Seal/O-470E provides eight differential or 16 single-ended 12-bit inputs and two 12-bit D/A output channels. The A/D inputs are software selectable for 0-5V, 0-10V, +/-5V, and +/-10V ranges and each channel can be configured via hardware for measuring 4-20mA current loop. The two 12-bit D/A channels are jumper selectable for 0-5V and 0-10V output ranges.

Additionally, the Seal/O-470E module provides eight optically isolated inputs rated for 5-30VDC and feature 300V external isolation, while eight open-collector outputs can sink up to 580mA – ideal for switching 24V devices commonly found in industrial environments. Perfect for a variety of data acquisition/control and test & measurement applications, the Seal/O-470E includes removable screw terminals, which simplify field-wiring connections. The Seal/O-470E is powered from your 9-30VDC source, or select from a variety of Sealevel power supply options.

Communicate with the Seal/O-470E using industry-standard Modbus TCP protocol or use the Sealevel SeaMAX API software libraries from your application program. Sealevel's SeaMAX software drivers and utilities make installation and operation easy using Microsoft Windows and Linux operating systems.

The Sealevel Modbus Connect app for iOS allows you to access the registers, coils and discrete I/O of your Sealevel Modbus devices and is available on the App Store. Use the app to remotely access I/O in the field or for testing and troubleshooting during application development.

Expand your I/O network with Seal/O N-series products. Seal/O modules are available with Reed and Form C relays, optically isolated inputs, TTL interfaces, A/D and D/A functionality. Up to 246 additional expansion modules can be added using convenient pass-through connectors.

Get a jump start on your digital I/O development with The Digital I/O Handbook that will provide helpful information that you will use again and again. Check out Chapter 1 for an overview of logic principles.

Features & Specifications

Ethernet Modbus TCP to 16 A/D, 2 D/A, 8 Open-Collector Outputs, 8 Isolated Inputs Multifunction Module

Part: 470E    Model: Seal/O-470E

Features

- 10/100BaseT Ethernet Modbus TCP interface
- 8 differential or 16 single-ended 12-bit inputs
- Two 12-bit D/A output channels
- 8 optically isolated inputs
- 8 open-collector outputs
- Removable screw terminals simplify field wiring
- Status indicator LEDs for Communication, Fault, and Power
- Input power via terminal block or modular connector
- DIN rail or table mount
- Sealevel SeaMAX software supports Microsoft Windows and Linux operating systems

Specifications

A/D Chip	Maxim MAX197
A/D Inputs	8 Differential or 16 Single-Ended
A/D Range	0-5V, 0-10V, +/-5V, +/-10V
A/D Resolution	12-bits
Analog I/O	A/D Inputs, D/A Outputs
Family	Seal/O
D/A Range	0-5V, 0-10V
D/A Resolution	12-bits
Digital I/O	Isolated Inputs, Open-Collector Outputs
Dimensions	7.5 (L) x 5.1 (W) x 1.3 (H)
Extended Temperature	Call for Options
Humidity Range	10 – 90% Relative Humidity, Non-Condensing
Input Isolation	300V
Input Range	5-30 VDC
Host Interface(s)	Ethernet
Number of Inputs/Outputs	8 Inputs, 8 Outputs
Operating Temperature	0°C to 70°C (32°F to 158°F)
Output Dissipation	Max. 500mA (single), Max. 580mA (all)
Output Type	Open-Collector
Output Voltage	Max. 30V
# of Ports	16/2/8/8
Power Requirement	9-30 VDC @ 3.0W
RoHS Compliant	Yes
Storage Temperature	-50°C to 105°C (-58°F to 221°F)