

# 16 POINT I/O EXPANSION MODULE

## OVERVIEW

The UIO-184 offers the ultimate flexibility as the universal input/output expansion module for the Circon 400 and 500 series controllers.

Multiple UIO-184 modules can be connected simultaneously to Circon 400 and 500 series controllers to significantly increase their base input/output point capacity.

This provides the opportunity for the system integrator to control highly complex heating/cooling plants, built-up air custom handling units, multi-module equipment, or any other high point count system. The UIO-184 includes highly accurate universal inputs and outputs, making it well suited for applications in commercial, manufacturing, and pharmaceutical applications.

A variety of input and output types allows the integrator complete freedom to tackle the most complex projects. Pulse counting is also possible on all the UIO inputs, making it ideal for submetering applications.

When combined with Circon 400 or 500 series controllers, the inputs and outputs of the UIO-184 are fully programmable using the power of Circon's Catalyst® graphical programming tool for exceptional application flexibility.

## ORDERING INFORMATION

Part numbers:

10-0560 (Standard Metal Enclosure)

10-0561 (DIN-Rail Mountable Enclosure)



## FEATURES

- Cost effective solution to add additional I/O
- Powerful, industry-leading 32-bit ARM processor
- 16-Bit A/D Converter
- Fully programmable with flexible and easy-to-use Circon Catalyst® programming tool when connected to a main Circon controller for both BACnet® and LON® integration
- Default values for the outputs can be specified if communication is lost with the main controller
- Auto communication recovery with rotary dial address setting
- Software configurable point type configuration
- Over-voltage protection on inputs and outputs (up to 24V AC)
- 8 highly accurate (16-Bit A/D) Universal Inputs with support for the following input types:
  - Dry contact, Resistance, Thermistor type II and III, 1K RTD, Voltage (0-10VDC), Current (0-20mA), Pulse Count (up to 50Hz)
- 4 normally open relay outputs to simplify connecting to a variety of digital-controlled equipment or actuators
- 4 Universal Outputs to simplify connecting to a variety of analog-controlled or digital-controlled actuators, with support for:
  - 0-10 VDC or 4-20mA

## SPECIFICATIONS

**I/O CAPABILITY**

8 Universal Inputs:	16-bit A/D Converter Dry contact • 10 k $\Omega$ thermistor, Precon curve: Type II model 24 Type III model 3 1 k $\Omega$ RTD • 0-10 VDC • 0-20mA • Pulse Counting (50 Hz maximum, 50% duty cycle)
4 Universal Outputs:	0-10 VDC, maximum drive of 100 mA per output • 0/4-20 mA DC
4 Digital Outputs:	Dry contact relay: 2.0 A maximum at 24 VAC or 24 VDC

**HARDWARE**

Processor:	ARM Cortex-M4 • 72MHz
Memory:	128 KB Flash
Communication:	RS-485, Daisy-chain configuration
Device Address:	Rotary Dial

**POWER SUPPLY**

Controller:	2.0 A, 24 VAC, 50-60 Hz, or 24 VDC
Fuse:	2.0 A slow-blow (Bussmann GMD-2.0A, Littelfuse 23902.0A)
Rectifier:	Half-wave

**MECHANICAL**

Operating Temperature:	-40°F to 185°F (-40°C to 85°C)
Operating Humidity:	5% to 95% RH (non-condensing)
Weight:	15 oz. (420 grams)
Enclosure Dimensions:	Part # 10-0560 = 1.0" x 5.6" x 6.1" (25.4mm x 142.2mm x 155.6mm) Part # 10-0561 = 1.9" x 5.0" x 6.9" (47.5mm x 125mm x 172.5mm)
Enclosure Material:	Part # 10-0560 = Metal Part # 10-0461 = PVC, inflammability class V0 (UL94)
Mounting:	Part # 10-0560 = Four sheet metal screws Part # 10-0461 = DIN rail

**AGENCY LISTINGS AND REGULATORY COMPLIANCE (pending)**

Class II device (when powered by a class II supply)  
CSA 22.2 #205-M1983, #950-M89  
UL916 certification for Energy Management Equipment  
Part 15, Class A of the FCC Rule for Radio Frequency Devices  
EMC Directive 89/336/EEC

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