

IO9004 Module (connects through auxiliary port), includes multiple 0/4-20 mA outputs and inputs

Product #: **9494600**

AED Price: Contact Hach

The IO9004 Module allows the use of analogue inputs and outputs with the AS950 sampler. With the IO9004 module, the AS950 provides more input and output options than any other Hach sampler before.

Maximum versatility
The IO9000 Module allows the use of analogue inputs and outputs with the AS950 sampler. With the IO9000 module, the AS950 provides more input and output options than any other Hach sampler before it. For added versatility the IO9000 is available in two versions; IO9001 is available for simple applications that only require 1 high voltage relay while the IO9004 is fully loaded. See specifications for more detail.

Outputs
The digital outputs can be used to indicate an alarm or an event. Analogue 0/4-20 mA outputs can be used to send information to a SCADA system for parameters such as level, velocity, flow and pH. Examples of alarms and events include: sensor outside of limits (flow related, water quality related, internal temperature or ambient temperature), program started, program completed, sample being taken, bottle full (single bottle), pump running forward, pump running in reverse, pump error, distributor error, power failure, or main battery low.

Inputs
Analogue 0/4-20mA inputs can be used to trigger a sample from water quality sensors or flow meters and can be logged.

Relays
Like the digital outputs, these relay outputs are used to indicate alarms or events. The difference is that relays can be used for switching AC mains line voltage to control higher power functions. Examples for use are for a warning light or sound signal, switching a diversion valve or gate or a control signal to another machine.

Specifications

Altitude:	2000 Meters
Analogue inputs:	(2) 0/4-20 mA inputs generic to map external processes to logable measurements (ex. third party ultrasonic level). Current input mode: • Accuracy: 0.5% of FSR over -40 to 50 °C, 0.3% of FSR over -10 to 50 °C • Resolution: <0.05% of FSR • Loop power supply voltage: 18 V max. (referenced to (-) input) • Burden: 108 Ω max. + 0.4 V max. Voltage pulse input mode: • Input resistance: 11 kΩ typical

	• Pulse high level: 4 V min. to 15 V max. • Pulse low level: 0 V min. to 2 V max. • Hysteresis: 0.5 V typical • Pulse width (high state or low state): 50 ms min. Wire size: 24 AWG to 16 AWG solid or stranded copper
Analogue outputs:	(3) 0/4-20 mA outputs that map logged analogue measurements (ex. Level, velocity, flow, pH) - Can function as loop-powered or self-powered. • Accuracy: 0.8% of FSR over -40 to 50 °C, 0.4% of FSR over -10 to 50 °C • Resolution: <0.05% of FSR • External Loop Power Supply Voltage: 18 V max. • Internal Loop Power Supply Voltage: 14 V min., 18 V max. • Loop Minimum Resistance: 0 Ω • Burden Voltage: 3.6 V max. at 25 mA Wire size: 24 AWG to 16 AWG solid or stranded copper
Base Type:	N/A
Cable length:	1.22 m
Calibration:	2 point linear user calibration via controller UI
Certifications:	CETLus
Digital outputs:	(4) Low-voltage contact closure mapped to alarm events. • ±30 VDC max., 150 mADC • 20 VAC-RMS, 150 mAAC-RMS Wire Size: 24 AWG to 16 AWG solid or stranded copper
Dimensions:	Enclosure with supplied mounting brackets: 24.7 cm (9.71") length, 30 cm (11.82") width, 13 cm (5.12") depth
Enclosure waterproof rating:	IP66 / NEMA 4X
Housing material:	Polycarbonate (UL94 VO), hardware 18-8SS
Inputs:	Enclosure inputs cable entry: - High voltage ports: 4 cable bushings (accomodate cable diameters 4.3 - 11.4 mm) - Low voltage ports: 4 cable bushings (accomodate cable diameters 4.3 - 11.4 mm) All ports accept user installed ½" (16 mm) trade size conduit
Model:	IO9004 - Multiple IN/OUT
Mounting:	Mounting brackets and hardware included.
Operating conditions:	Temperature: -40 - 50 °C Humidity: 100% (non-condensing)
Power input:	Powered by controller
Power requirements (Voltage):	N/A
Probes included?:	N/A
Rain gauge input:	N/A
Relay functions:	(4) Form C (SPDT)

	• Voltage rating (contacts open): 20 VAC-RMS to 230 VAC-RMS • Current rating (contacts closed): 6 mAAC-RMS to 500 mAAC-RMS Wire size: 20 AWG to 14 AWG solid or stranded copper
Sample container:	N/A
Storage conditions:	Temperature: -40 to 80 °C, Humidity: 100% (non-condensing)
Weight:	2.5 kg