Aqua Series Harsh Duty I/O

for the Smart Distributed System

Data Sheet 4-020-1 0611

Features

- **NEMA 6P/IP68 protection against corrosion, washdown, and temperature extremes.**
- **Polystyrene enclosures that are epoxy-filled and stainless steel connectors for maximum environmental protection.**
- **Variety of I/O types to meet a wide range of application requirements.**
- **Smart Distributed System models that provide extensive flexibility in the application of Aqua modules.**
- **Analog modules allow for scaling of inputs or outputs to provide the host controller with meaningful data.**
- **Analog and frequency modules can have each channel configured as a System address or as an embedded object within a single address.**

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Specifications Subject To Change Without Notice

Description

The Holjeron Aqua Series I/O modules are designed for use where Smart Distributed Systems are being applied in harsh environments such as washdown, high corrosion and those with a wide temperature extremes.

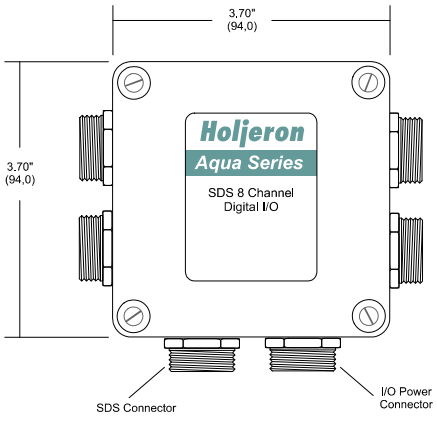
In addition to withstanding harsh conditions, each Aqua module is equipped with a Smart Distributed System interface that is designed to provide maximum flexibility for the user. Each point on a digital module can be configured as an input or an output, the frequency module and accept either encoder or magnetic pulse inputs, and the analog modules can scale their values so the host controller can work with meaningful values.

Ordering Information

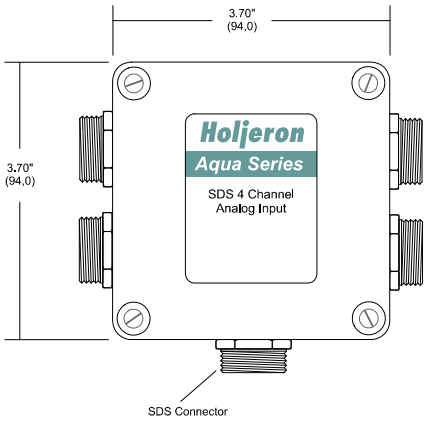
Description	Part Number
Digital I/O Module, 8 point, 10-30 VDC Each point configurable as an input or an output	AQU-DIG108
Analog Input Module, 4 Channel Each channel configurable as 0-20 mA or 0-5 VDC input.	AQU-AIN104
Analog Output Module, 4 Channel, 0-22 mA	AQU-AUT104
Frequency Input Module, 4 Channel Each channel configurable for encoder or magnetic flow meter input.	AQU-FRQ204

Dimensions

DIGITAL I/O MODULE



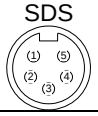
ANALOG I/O MODULE



Specifications

Electrical	Voltage Range (SDS)		11-25 VDC
	Current Consumption	Digital	50 mA maximum
		Analog/Frequency	80 mA plus load
	Protection		Reverse Polarity, Short Circuit
	Data Rates		125, 250, 500 and 1000 kbps
Digital I/O	Type		Current Sinking
	Number		Eight (8)
	Voltage Range		10-30 VDC
	Current Rating		3 amps per point
	Protection		Reverse Polarity, Short Circuit
Analog Inputs	Type		0-20 mA or 0-5 VDC, selectable
	Number		Four (4)
	Resolution		Signed 16-bit (-32768 to 32767)
	Response Time		10 msec per channel
Analog Outputs	Type		0-22 mA
	Number		Four (4)
	Resolution		Unsigned 12-bit (0 to 4095)
	Response Time		10 msec per channel
Frequency Inputs	Type		Encoder or magnetic pulse, selectable
	Number		Four (4)
	Frequency		0-30 KHz
	Voltage Range		Up to 25 VDC
Environmental	Temperature	Operating	-30 to 70 °C (-22 to 158 °F)
		Storage	-40 to 85 °C (-40 to 185 °F)
	Humidity		0%-95% RH, non-condensing
	Vibration		10G at 10-500 Hz
	Shock		20G
	Sealing		NEMA 6P, IP68
Physical	Dimensions		3.70” x 3.70” x 2.24”
	Mounting		¼-20 Bolts through the housing
	Housing Material		Polystyrene, interior epoxy filled
	Terminations	SDS	5 pin male quick connect, stainless steel
		I/O	4 pin female quick connect, stainless steel
		Digital I/O Power	3 pin male quick connect, stainless steel

Connector Pinouts

Pin	SDS 	Analog Input 	Analog Output 	Frequency Input 	Digital I/O 
1	Bus Shield	Not Connected	Not Connected	Not Connected	I/O Point 1
2	Bus Power (DC+)	I/O Power	I/O Power	I/O Power	I/O Power
3	Bus Power (GND)	Input Signal	Output Signal	Input Signal	I/O Point 2
4	Bus Comm (Bus +)	Ground	Ground	Ground	Ground
5	Bus Comm (Bus -)	N/A	N/A	N/A	N/A