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RVCM - Remote Valve Control Module for Maxum Gas Chromatograph

Analytical Products and Solutions

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Description

The Siemens RVCM provides six solenoid pilot valves that can be used to control pneumatically operated stream switching or other discrete valves in a Sample Conditioning System (SCS) connected to a Siemens Maxum or MicroSAM process Gas Chromatograph (GC). The RVCM connects directly to an I²C bus coming from the Maxum GC and each solenoid can be individually selected to be on or off by GC commands.

Due to its intrinsically safe technology and high temperature operation, the RVCM can be mounted directly inside a SCS cabinet in close proximity to the pneumatic valves it is controlling. This mounting arrangement significantly reduces the cost of construction and maintenance by eliminating the bundles of pneumatic tubing between the GC and the SCS.

Features

- Communicates with the Siemens Process Gas Chromatograph via the Maxum's I²C communications bus
- CSA and ATEX certified for use in Division 1 / Zone 1 or Division 2 / Zone 2 hazardous areas
- 316 Stainless steel construction
- Suitable for use up to 70° C
- Ultra low power consumption on the Siemens I²C bus
- Simultaneous and individual valve actuation with ported exhaust
- Indicator LEDs for pilot valve state, network status and module status
- Mounts directly on back panel mounting plate of the sample conditioning system

Ordering Information

Siemens Part Number	Swagelok Reference Number	Description
A5E30278813	7KQ4150-0CC00-0AA0	Remote Valve Control Module

Specifications

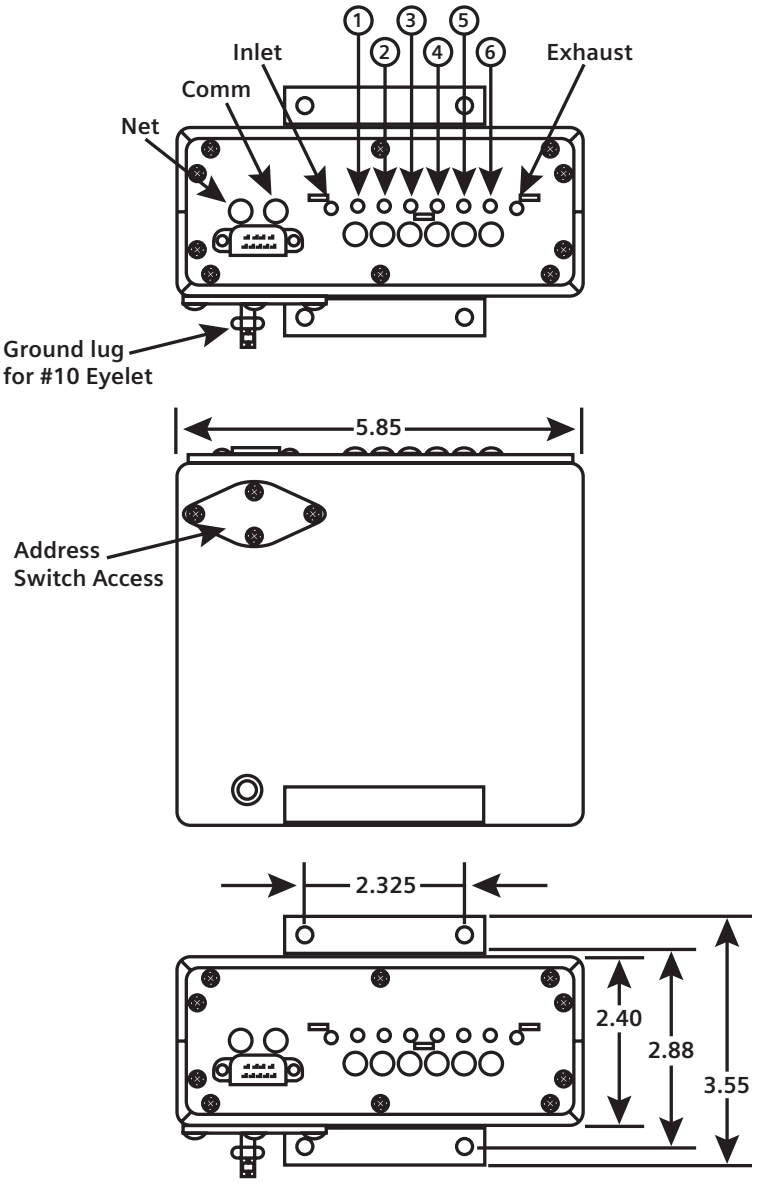
Parameter	Value
Positions	
Total number of valves	6
Maximum number of simultaneously energized valves	4
Minimum time between valve actuations	1 second
Instrument Air	
Operating minimum	40 psig
Operating maximum	116 psig
Air quality class	3:4:4, Per ISO 8573-1
Power Input	
Power from control bus	8.5VDC minimum, 9.5VDC maximum
Power Consumption	
Operating minimum, 0 valves open	62.5 mWatts
Operating maximum, 4 valves open	775 mWatts
Each actuated valve	<180 mWatts per valve
Ambient Temperature Range	
Ambient surrounding device	-5° to 70°C
Hazardous Location Certifications	
USA	UL Class 1, Division 1, intrinsic safety. Groups A, B, C, and D. Temp code T4. -5°C ≤ Tamb ≤ +70°C (per UL 913)
Canada	cUL Class 1, Division 1 intrinsic safety. Groups A, B, C, and D. Temp code T4. -5°C ≤ Tamb ≤ +70°C (per CSA 157)
Europe	ATEX Group II Category 1G intrinsic safety, “EEx ia”. Groups A, B, C and D. Temp code T4. -5°C ≤ Tamb ≤ +70°C (per EN 60079-0 & -11))
Indicators	
Valve State/Error Code LEDs	Blue
Network Interface Status LED	Red/Green
Module Status LED	Red/Green

Specifications (continued)

Parameter	Value	
Intrinsic Safety Entity Parameters	Power Connections	Communication Connections
Ii	1A	1A
Ui	9.5 VDC	9.5 VDC
Li	3 uH	0 uH
Ci	0 uF	0 uF
Pi	9.5W	0.57W
Other Design Standards		
Electromagnetic Compatibility	EN61326-1 (2006) •RF Emissions: EN55011 •ESD Immunity: EN 61000-4-2 •RF Immunity: EN 61000-4-3 •EFT Immunity: EN 61000-4-4 •Conducted Immunity: EN 61000-4-6	
Vibration	Sinusoidal 9-200Hz, 5g acceleration Random 20-500Hz, 15.5g average acceleration	
Shock	Pulse 70 M/sec2 (7.2G)	
Ingress Protection	IP54	

*Note, component carries Intrinsic Safety certifications as indicated. Entity parameters and other component information necessary to use this component in a complete system as also indicated. However, complete system design, system safety certification or other system suitability for installation in any particular instance is the responsibility of the system designer and system owner. Intrinsic Safety certification is valid only when the system configuration is consistent with the entity parameters and other conditions specified in the applicable certificate(s).

Dimensional Data



Dimensions in Inches

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