

SIEMENS

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DMT Series Liquid and Gas Multivariable Flow Meter

Analytical Products and Solutions

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Description

The Siemens DMT is an intrinsically safe and self-contained sensor which can be used to measure the flow, temperature and pressure of fluids flowing in a Sample Conditioning System (SCS) connected to a Siemens Maxum or MicroSAM process Gas Chromatograph (GC). The DMT provides flow rate, temperature and pressure in a single unit. Using a scalable, anti-clogging flow restriction technology with integrated high-overpressure relief for protection from accidental pressure upsets and hydraulic hammer effects, it is reliable in long-term operation.

The DMT is certified in Europe and North America for intrinsically safe or non-incident operation in Class 1 Division 1 or 2 or Zone 0, 1 or 2. The intrinsic safe electronics make the DMT ideal for use in modern process analyzer sample conditioning systems by minimizing cost and maximizing the number of measurement points available when designing "smarter" sample conditioning systems.

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
- Ultra-low power consumption on the Siemens I²C bus
- Continuous, simultaneous measurement of three readings: flow, temperature and pressure before the differential pressure cell used for flow measurement
- Indicator LEDs for network status and module status
- Provided with FFKM seal material
- Available in two versions: with down-mount base for mounting in ANSI/ISA 76.00.02-2002 compliant modular constructions systems: or, with FNPT for installation in traditional tube-and-fitting construction systems (SP76 mounting shown above)

Ordering Information

Siemens Part Number	Configuration Number	Range	State	Mounting
A5E30296361	7KQ4150-0AB00-0AA1	0-500 ccm	Vapor	¼" FNPT
A5E30296362	7KQ4150-1AB00-0AA1	0-500 ccm	Vapor	Modular
A5E30296363	7KQ4150-0AB00-0BA1	0-3 lpm	Vapor	¼" FNPT
A5E30296364	7KQ4150-1AB00-0BA1	0-3 lpm	Vapor	Modular
A5E30296365	7KQ4150-0AB00-0CA1	0-6 lpm	Vapor	¼" FNPT
A5E30296366	7KQ4150-1AB00-0CA1	0-6 lpm	Vapor	Modular
A5E30296367	7KQ4150-0AB00-1BA1	0-100 ccm	Liquid	¼" FNPT
A5E30296368	7KQ4150-1AB00-1BA1	0-100 ccm	Liquid	Modular

All vapor ranges are calibrated on air.

All liquid ranges are calibrated on water.

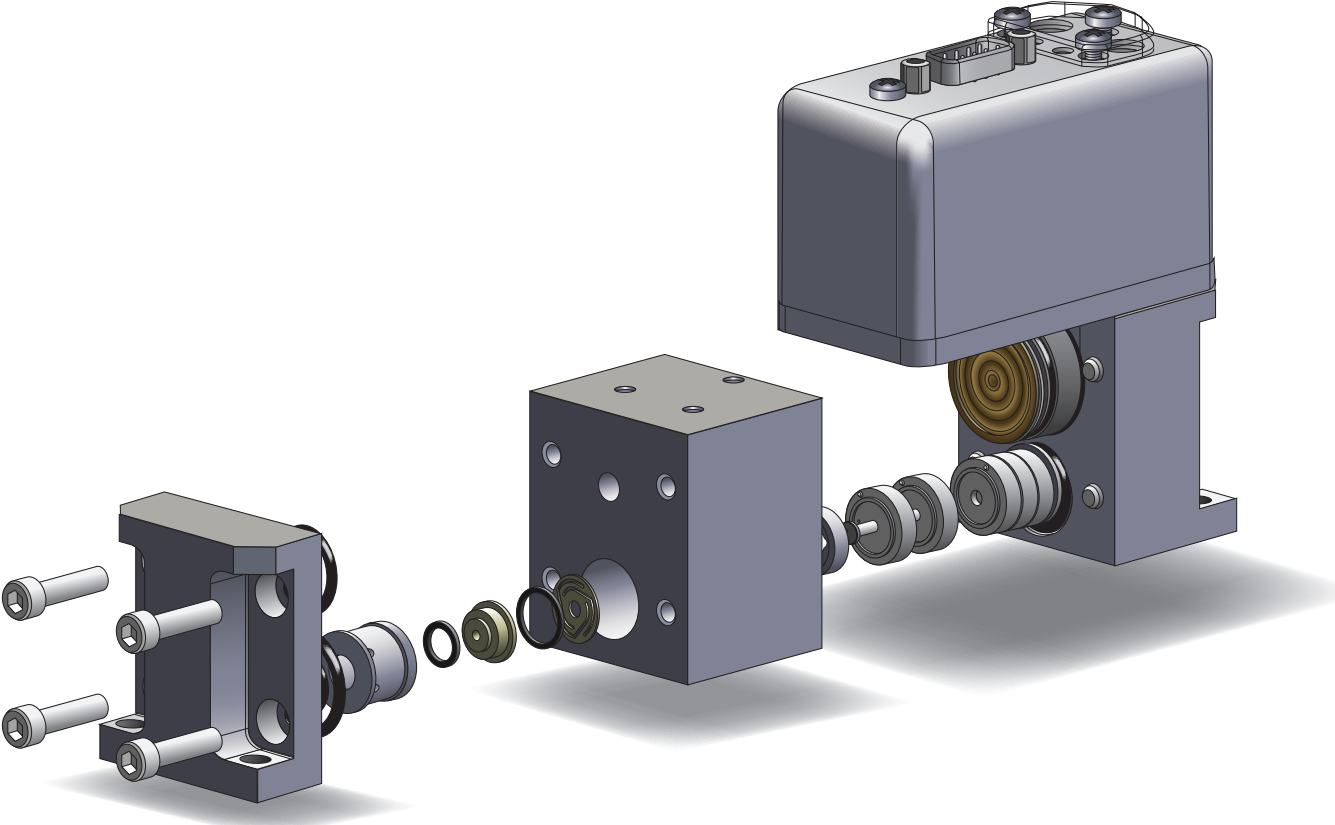
Contact your Siemens Account Manager for current pricing and delivery information.

Specifications

Parameter	Value
Accuracy	± 2% of Full Scale for flow and pressure outputs
Repeatability	± 0.25% Full Scale
Leak Integrity (External)	Helium Leak Test: 1×10^{-5} atm-cc/sec He for gas applications; bubble tight at 50 psi for liquid applications
Turn Down Ratio for Flow Rate (Rangeability)	10:1 typical
Max Common Mode (Average) Operational Pressure	500 psig
Differential Pressure Range	2-60 psid (integrated pressure relief will protect sensor at overpressure conditions)
Wetted Materials	SS 316 body and sensor, PEEK® or 316SS flow restriction, FFKM O-rings
Temperature Range	0 - 70°C (32 - 158°F)
Excitation Voltage	9.5V ± 10%
Power Consumption (max)	0.30W, <math><30\text{mA}</math> @ 9.5V
Hazardous Area Approvals	Class 1, Div 1 Groups A-D, T4 EEx ia IIC, T4 and Class 1, Div 2 (Zone 2)
Electrical Connectors	9-pin D-Sub
Ingress Protection	IP54, NEMA 4X, 304SS enclosure
Fluid Connections	Inlet and outlet ports in accord with ANSI/ISA-76 specification or ¼" FNPT inlet/outlet

*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).

Construction Technique – Illustration



Dimensional Data

Illustration with tubing adapter assembly

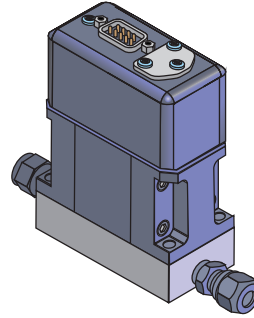
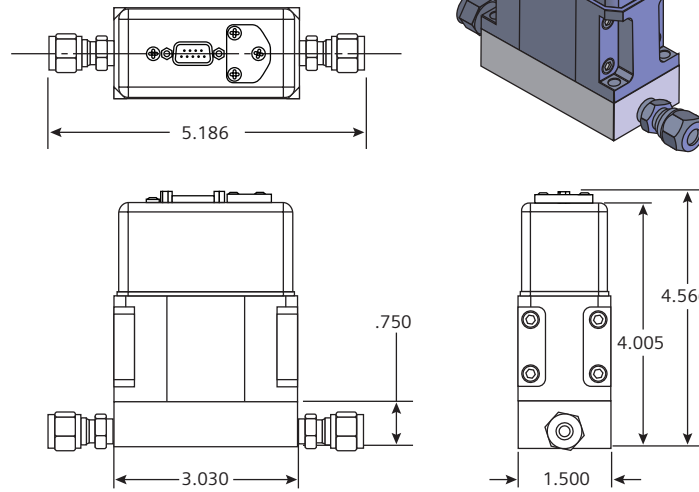


Illustration with modular mounting

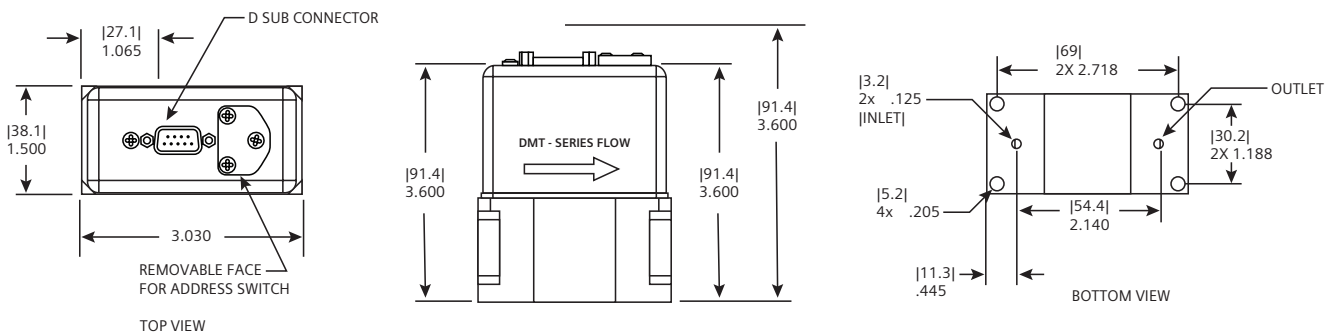
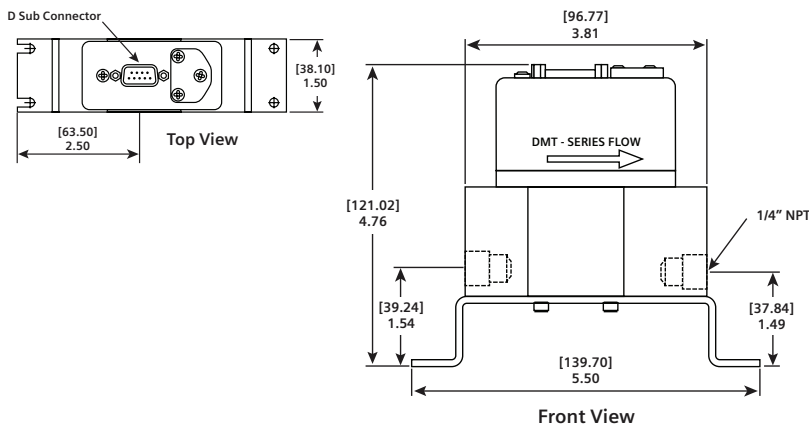


Illustration with tube mounting



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