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Find the *Millipore / Tylan VC4900M-4V* at our website: ***Click HERE***

Tylan® VC4900/VC4900M Vapor Controllers

Designed for the demanding requirements of low vapor pressure liquid delivery

Product Profile

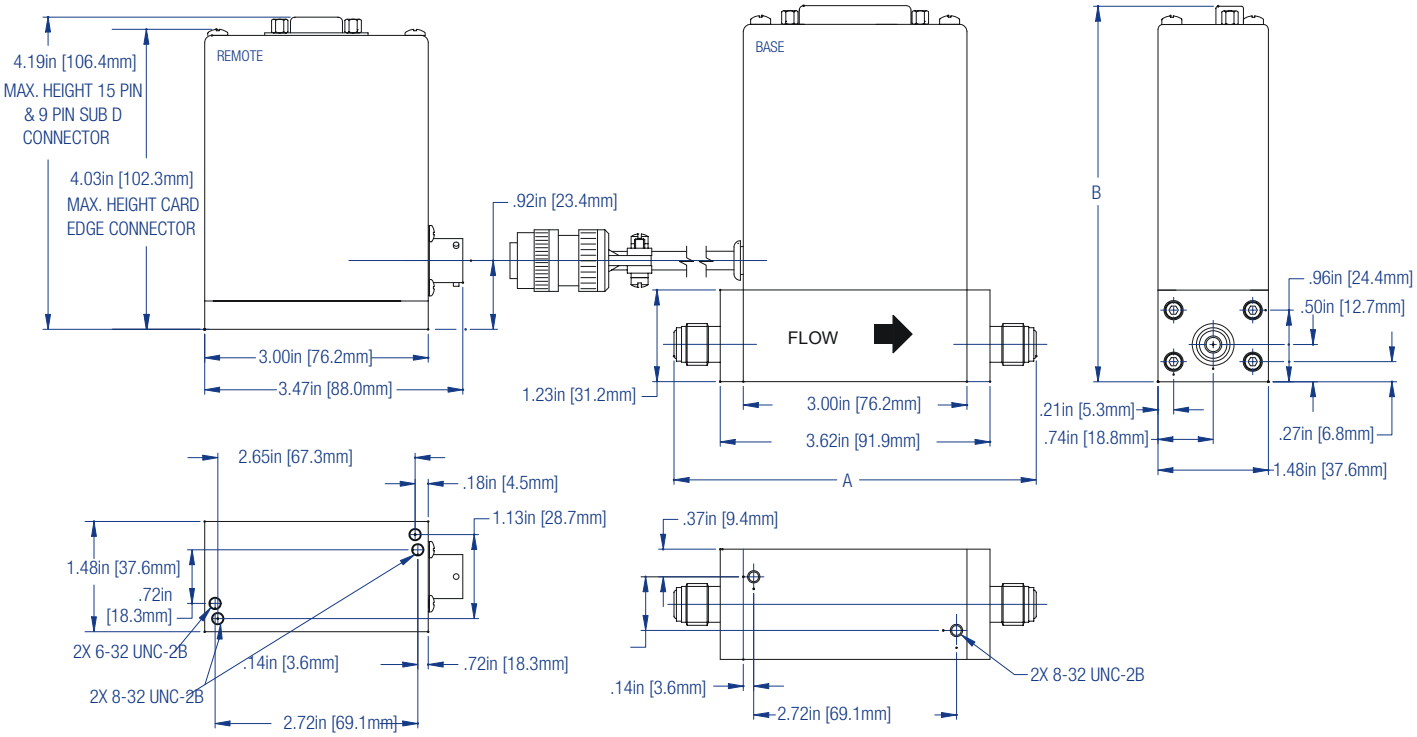


Process Values

Mykrolis's Tylan VC4900 and Tylan VC4900M vapor controllers are designed specifically to meet the exacting requirements of today's semiconductor and industrial processes. The Tylan VC4900 vapor enable the delivery of organometallics such as tetraethoxsilane (TEOS), trimethylphosphate (TMP) and trimethylborate (TMB) with pressure drops as low as 6.7 kPa (50 Torr).

Product Features	Product Benefits
Incorporates a large diameter sensor tube, an enlarged valve orifice, and a high stroke valve to maximize the conductance of the plumbing.	Enables high flow at lower pressure drops than a standard MFC.
Optional remote electronics and heater	Allows high temperature calibration. Prevents calibration shifts due to a change in ambient temperature.
Balanced power load	Low lead current eliminates signal differing from its controlling device.
Autozero circuitry	Automatically resets to zero under no flow conditions, and shifts the entire calibration curve to cancel many effects of temperature coefficients and calibration drift.

Tylan VC4900/VC4900M MFCs and Flowmeters - Dimensions



FITTING & SIZE	DIM A
1/4" VCR	4.88in [124mm]
3/8" VCR	5.18in [132mm]

CONNECTOR OPTION ON BASE	DIM B MAX. HEIGHT
ALL UNITS WITH REMOTE	5.05n [128.3mm]
15 PIN SUB D	5.11n [129.8mm]
CARD EDGE	4.92n [125.0mm]

Tylan VC4900/VC4900M MFCs and Flowmeters - Ordering Information

Performance

Full Scale (N_2 equivalent)	10 sccm - 35 slm
Turndown Ratio	20:1
Step Response Time (0 to 100%)	< 1.5 sec (dependent on step response and conditions)
Accuracy	± 1% full scale
Linearity	± 0.5%
Repeatability	± 0.2% full scale
Pressure Coefficient	Upstream Pressure .67 - .133 bar (50-100 Torr) .133 - .267 bar (100-200 Torr) .267 – 1.07 bar (200-800 Torr) % per bar (Torr) .0112 per bar (± 0.150% per Torr) .0015 per bar (± 0.020% per Torr) .0003 per bar (± 0.004% per Torr)
Temperature Coefficient	0.05% per °C (zero and span)

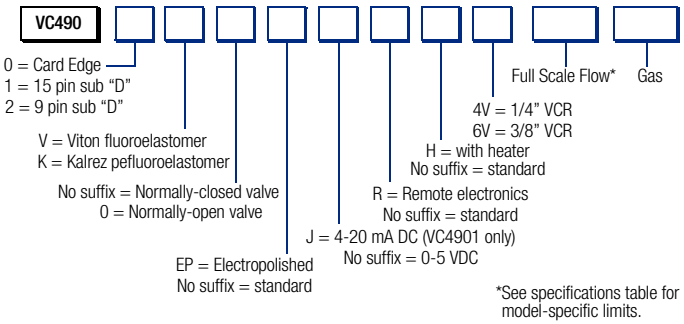
Mechanical

Valve	Normally-open or normally-closed solenoid
Materials	316L stainless steel, 416 stainless steel, Teflon® fluoropolymer, Viton® fluoroelastomer
Leak Integrity	Viton Seals: 5 x 10^{-9} atm-cc per sec (He) inboard Viton Seals: 1 x 10^{-9} atm-cc per sec (He) inboard
Leak Through the Valve	< 2% full scale
Weight	Without remote electronics, 0.9 kg (2 lbs.) With remote electronics, 1.7 kg (2 lbs.)

Electrical

Power Supply Sensitivity	< 0.01 % per volt
Power Consumption	3.5 watts (typical)
Supply Voltage	± 15 VDC nominal ± 20%
Input/Output Signal	0-5 VDC
Supply Current	110 mA nominal (125 mA max @ ± 18 VDC)
Input Impedance	500K ohms (minimum)
Minimum Load Impedance	2000 ohms
Option (VC4901)	4-20 mADC
Supply Current	130 mA nominal (145 mA max ± 18 VDC)
Input Impedance	250 ohms
Maximum Load Impedance	250 ohms

Ordering Information



Electrical Connection	Card Edge	15-Pin "D"	9-Pin "D"
+ 15 VDC	4	5	3
Common	C	10	4
- 15 VDC	F	6	5
0-5 out	3	2	2
Common	2	1	7
0-5 V IN	A	8	6
Common	B	9	
V Ref	6	11	
Press. IN	5	13	9*
Az STORE	K		
AZ INHIBIT	J	3	
Valve Test	D	12	8*
Valve Off	L	15	
Override			1
4-20 mA IN		7	6*
4-20 mA OUT		4	2*
Case Ground	1	14	9*

* Optional

Environmental

Operating Temperature	5 – 50° C (ambient and gas) 0 – 100° C with remote electronics
Humidity	0 – 95% relative humidity, non-condensing
Maximum Operating Pressure	11.5 bar (150 psig)
Differential Pressure	Customer specified

Note: In accordance with SEMI Standard E12-91, Standard Temperature is 0° C and Standard Pressure is 760 mm Hg (14.7 psia).

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