



VALVE ACCESSORIES & CONTROLS



**D400**  
POSITIONER

VAC D400 Digital Positioner

# The D400 Positioner



D400/D400 IS



D400-EX



## VAC D400 Digital Positioner

The VAC D400 is a microprocessor based, "intelligent" instrument that can be mounted to rotary or linear pneumatic actuators for accurate positioner and/or process control. This unit, while sophisticated in its accuracy and performance, is simple to mount, calibrate, and with good filtered air and proper maintenance, can provide very accurate and trouble-free service for many years.

Available with Hart, Foundation Fieldbus, or Profibus communication, the D400 range of applications and communications meets the latest industry standards. The "efficiencies" of the D400 are not only in its microprocessor based technology and accuracy, but also in the pneumatic air handling where air consumption is kept to a very minimum.

# D400 Options



## Features and Benefits:

- Microprocessor based valve positioner
- User friendly, menu driven programming with LCD Display
- Local push button configuration—no handheld device or PC necessary
- Low air consumption and proven dependable mechanical design
- Modular design—available with position feedback, micro switches and “Fail Freeze” options. Same unit for rotary or linear mounting.
- Aluminum Housing—Nema 4X IP 65 Enclosure—Standard—Electrostatically dipped varnish with stove-hardened epoxy resin.
- Unique adaptive control feature offers the ability to enhance valve/actuator package for maximum control without upsetting the process.
- ATEX-FM-CSA-IEC-Ex approvals available



## Ordering Codes:

Digital Positioner	Action	Connections	Spindle	Communications	Options
D400	S-Single	N-NPT	D1-Namur	NO-No Communication	GB-Gauge block w gauges
D400 IS (Intrinsically safe-non incendeive)	D-Double	G-Metric	D2-1/2" square	H-Hart	S2-Micro Switches
**D400 EX (Explosion Proof)			D3-3/8" square	*FB-Foundation Fieldbus	4/20-Transmitter
			D4-round-linear	*PA-Profibus	FRC-Filter Regulator-coalescing
			D5-double "d"		FC-Filter Coalescing
			Dx-linear standard		FF-Fail Freeze
Example: D400-S-N-D1-H-4/20					A-ATEX
*4/20 transmitter and switches are not available on FB and PA Bus units.					G-ATEX/Gost
** D400 EX not available with no communication					PROX-NO
					PROX-NC

When requesting a quote the items that can change pricing are: Positioner version, Action, Communication, Options-please have that information available for quick and accurate quotation.

## VAC D400 Approvals

The D400 digital positioner has approvals for the below agencies. The details and exact listings associated with these approvals are quite extensive. Even the listing between no communication and Hart units vs. Fieldbus and Profibus can be slightly different. We have a supplemental document, entitled D400 Approval Details on our website under the D400 documentation section.

All D400 unit's enclosure are Nema 4X IP 65, Electrostatically dipped varnish with stove-hardened epoxy resin.

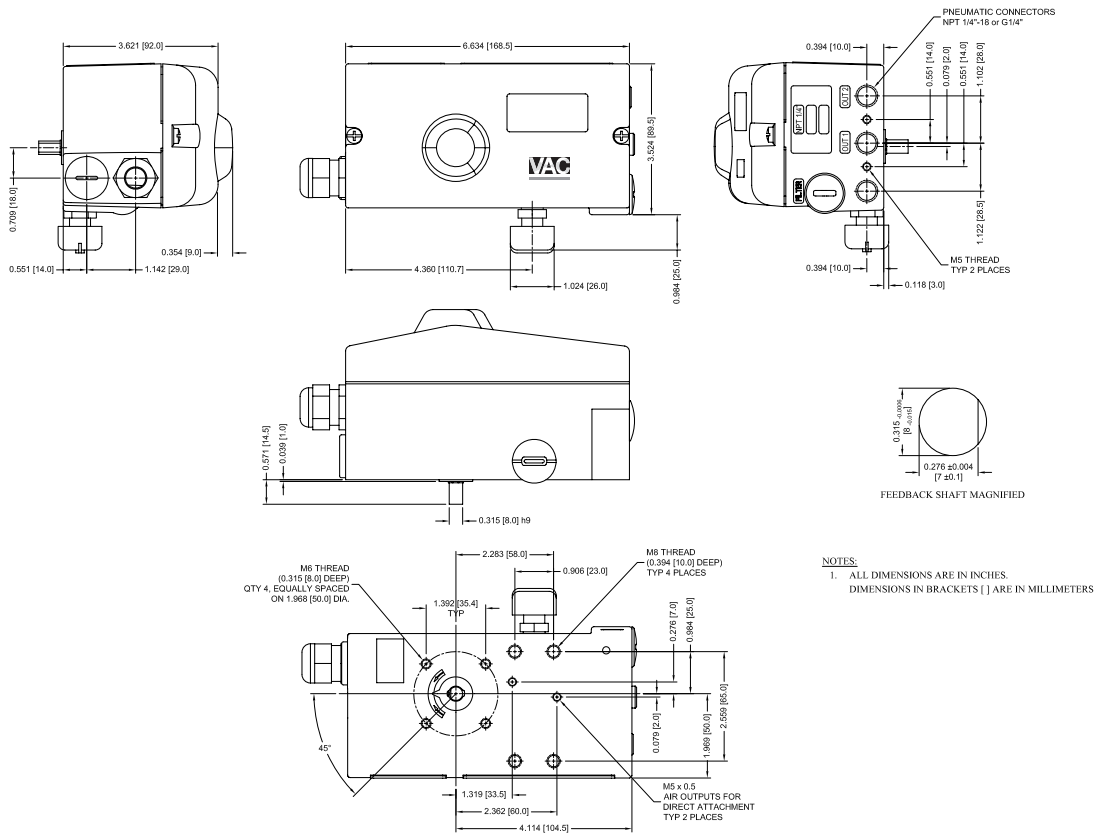
<b>D400 IS</b>	Intrinsically safe	<b>D400 EX</b>	Explosion Proof
FM	J.I 30005029 (3610, 3611)	FM	HLC 8/02 3010829
CSA	Certificate 1052414	Intrinsically safe	4X, T5 max 82°C
Non-incendive	Enclosure 4X, max 65°C	Non-incendive	4X, T4, max 85°C
ATEX/		Dust Ignition proof	4X, T5, max 82°C
GOST Russia	II 2G EEx ib IIC T6	CSA	Certificate 1393820
GOST Ukraine	II 2G EEx ib IIC T6	ATEX/	
ATEX	II 2G EEx ia IIC T6	GOST Russia	
	II 3G EEx n A II T6	GOST Ukraine	II 2G EEx d II C T4/T5/T6
	II 2 D IP 6X T 46°C	ATEX	II 2G EEx ib IIC T6
IECEX	Ex ib IIC T6	IECEX	EXIB IIC T6

## Technical Information

Rotation Rev 3:	25-120 degrees	Stroke: .4 to 4" (longer strokes-POA)
Rotation Rev 5:	25-270 degrees	Connections: 1/4" NPT Air 1/2" NPT Cable
Max Air supply	90 PSI	Air consumption: ≤.015 SCFM
Air delivery	6.0 SCFM @ 90 PSI	
Ambient temperature	-40 to 185° F	
Characteristic curves	linear, equal %, 1:25, 1:50, 25:1, 50:1 or user configurable with 20 reference points	
Characteristic deviation	≤ 0.5%	
Deadband	0.1%, adjustable to 10%	
Resolution (A/D conversion)	16,000 steps	
Sample rate	20 msec	
Seismic vibration	Meets requirements to DIN IEC 68-3-3 Class III for strong and strongest earthquakes	
Mechanical vibration	≤ 1% up to 10 g and 10...80 Hz	
Mounting orientation	≤ 0.5% at 90° change	
EMI	complies with EMC directive 89/336/EEC as of May 1989 (increased EMI shielding to EN 50082-2 PR as of 11/93)	

**Air Supply-Must be free of oil, water, and dust to DIN/ISO 8573-1 pollution and oil contents according to Class 3 dew point 10 K below operating temperatures.**

# D400, D400 IS



# D400 EX

