

# TYPE 624 INLINE MECHANICAL FLOW SWITCH PRECALIBRATED SWITCH POINT – FULL SWING DESIGN

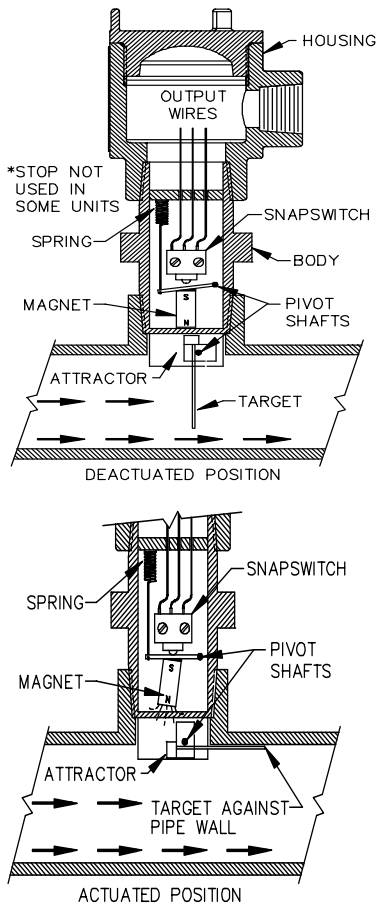
- Non-restricting full open bore
- Highly Reliable Magnetic Coupling
- Over 20 years of proven service

## APPLICATION

The Delta Controls Model 624 is a highly reliable target actuated flow switch whose body fits into and becomes part of the pipeline. It is equipped with a full swing target and has an open bore matching that of the pipeline. The 624 has a flat blade type target that rotates 90° in response to increasing flow rate. At the precalibrated set point, the switch actuates. The target moves until it is flush against the inside of the pipeline wall. The body bore is then unobstructed and the flow is unrestricted. Flow velocities may be in excess of 50 fps(15m/s).

## OPERATING PRINCIPLE

Connection of the target to the output switch is done magnetically. A heavy-duty solid sealing tube separates the process fluid from the switch mechanism. Failures due to seal, diaphragm, bellows corrosion and leaks are eliminated.



624 WITH 4" 150# FLANGED PIPELINE CONNECTIONS

## MODEL NUMBER

**Actuation Point:** Within 10%; basic closer is optional  
**Housing:** Class 1, Division 1, Groups BCD, X-Proof, also 4X, IP67  
 Listed by CSA; NRTL/C (USA & Canada); Intrinsically Safe  
**Body/Tube Connection:** NPT; ANSI flanged; or metric as required.

Basic Type	Wetted Material	Switch Contact	Pipeline O.D./I.D.	Pipeline Conn.	Options
------------	-----------------	----------------	--------------------	----------------	---------

Example 624 - BCB - C - 3.50/3.07 - 3"/150/RF - AA

### WETTED MATERIAL COMBINATIONS BY SIZE

M/N	Flanged or Welded Size	Body	Trim	Target
SCY	2" to 8"	Steel	416 SS	316 SS
SYU	2" to 8"	Steel	316 SS	316 SS
BCB	2" to 8"	304 SS	416 SS	316 SS
YYY	2" to 8"	316 SS	316 SS	316 SS
MMM	2" to 8"	Monel	Monel	Monel
GGG	2" to 4"	Hast. C	Hast. C	Hast. C
CGG	2" to 8"	CPVC	Hast. C	Hast. C

Titanium Alloy 20, Kynar, and other materials are available

M/N	CONTACT	AMPS *	MAX °F
A	SPDT	10	220
B	SPDT	5	450
C	DPDT	10	220
H	DPDT	5	450

\* Ratings up to 250 VAC;  
 all rated 4 amps at 24 VDC  
 Gold contacts for IS service optional

Example: M/N for:  
 2" S40 = 2.37/2.06  
 3" S40 = 3.50/3.07  
 4" S80 = 4.50/3.83

M/N	DESCRIPTION
AA	None
FJ	Body/Tube Flange
SH	304 SS Housing
TS	Wiring Terminals
TC	Traceable Calibration

### BUTT WELD ENDS

SIZE	SCHEDULE
2" to 8"	10 thru 80

**BASIC W.P. IS 2000 PSIG;  
 C/F FOR 5000 PSIG W.P.**

### FLANGED CONNECTION

SIZE	RATING	FACE
2" to 8"	150# to 900#	RF, FF, ANSI RTJ

METRIC EQUIVALENT

## SWITCH POINT CALIBRATED TO ORDER; NIST TRACEABLE OPTION

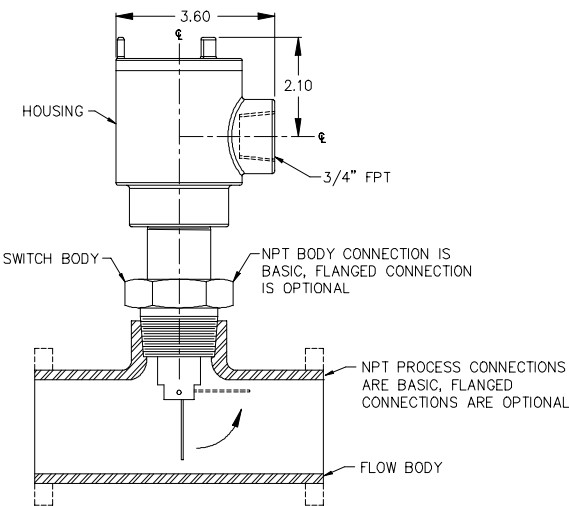
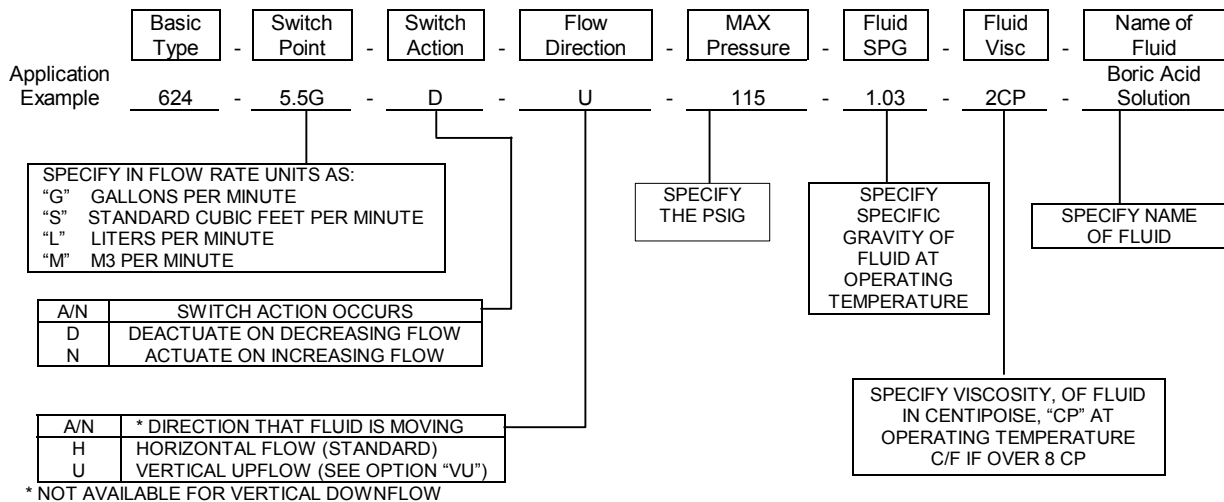
Select the Switch Point Flow Rate between the maximum and minimum values shown in the range table below:

Media	Switch Action at Flow Rate	BODY SIZE (EQUAL TO ANSI SCHEDULE 40 PIPE)					
		2	2 1/2	3	4	6	8
Water at 77EF	Min Actuate – GPM	7.0	14	21	32	56	74
	Min Deactuate - GPM	3.9	7.7	12	18	31	41
	Max Actuate – GPM	60	80	130	220	500	870
	Max Deactuate - GPM	42	56	91	154	254	440
Air at STP	Min Actuate – SCFM	40	50	60	70	118	210
	Min Deactuate - SCFM	22	28	33	39	65	115
	Max Actuate – SCFM	115	200	310	440	690	1220
	Max Deactuate - SCFM	83	140	220	310	460	670

### FACTORS FOR LIQUIDS OR GASES WITH DENSITIES DIFFERENT FROM WATER OR AIR AT STP

Density	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.05	1.10	1.15	1.20	1.25	1.30	1.35	1.40	1.45	1.50
Multiply by	1.41	1.35	1.29	1.24	1.19	1.15	1.12	1.08	1.05	1.02	0.97	0.95	0.93	0.91	0.90	0.88	0.86	0.84	0.82	0.80

**Complete information is required to calibrate the switch point.  
Provide the service details by building up an application number as shown below:**



LINE SIZE	NPT CONN.	BUTT WELD	FLANGED
			150
2	7.5	5.00	6.25
3	10.25	6.75	8.50
4	N.A.	8.25	9.25
6	N.A.	AS REQ'D	13.00
8	N.A.	AS REQ'D	16.00

Note: Contact factory for face-to-face dimensions of butt weld, other pressure ratings, and sizes

MAXIMUM PRESSURE RATINGS:  
 2100 PSIG at 100°F (145 Bar at 38°C)  
 5000 PSIG at 100°F (345 Bar at 38°C)

**DELTA CONTROLS CORP**  
 Engineered Sensors – For Difficult Services

585 Fortson Street  
 Shreveport, La. 71107 - USA



Voice: 318-424-8471  
 Fax: 318-425-2421  
 E-mail: [delta@deltacnt.com](mailto:delta@deltacnt.com)  
 Web Site: <http://www.deltacnt.com>