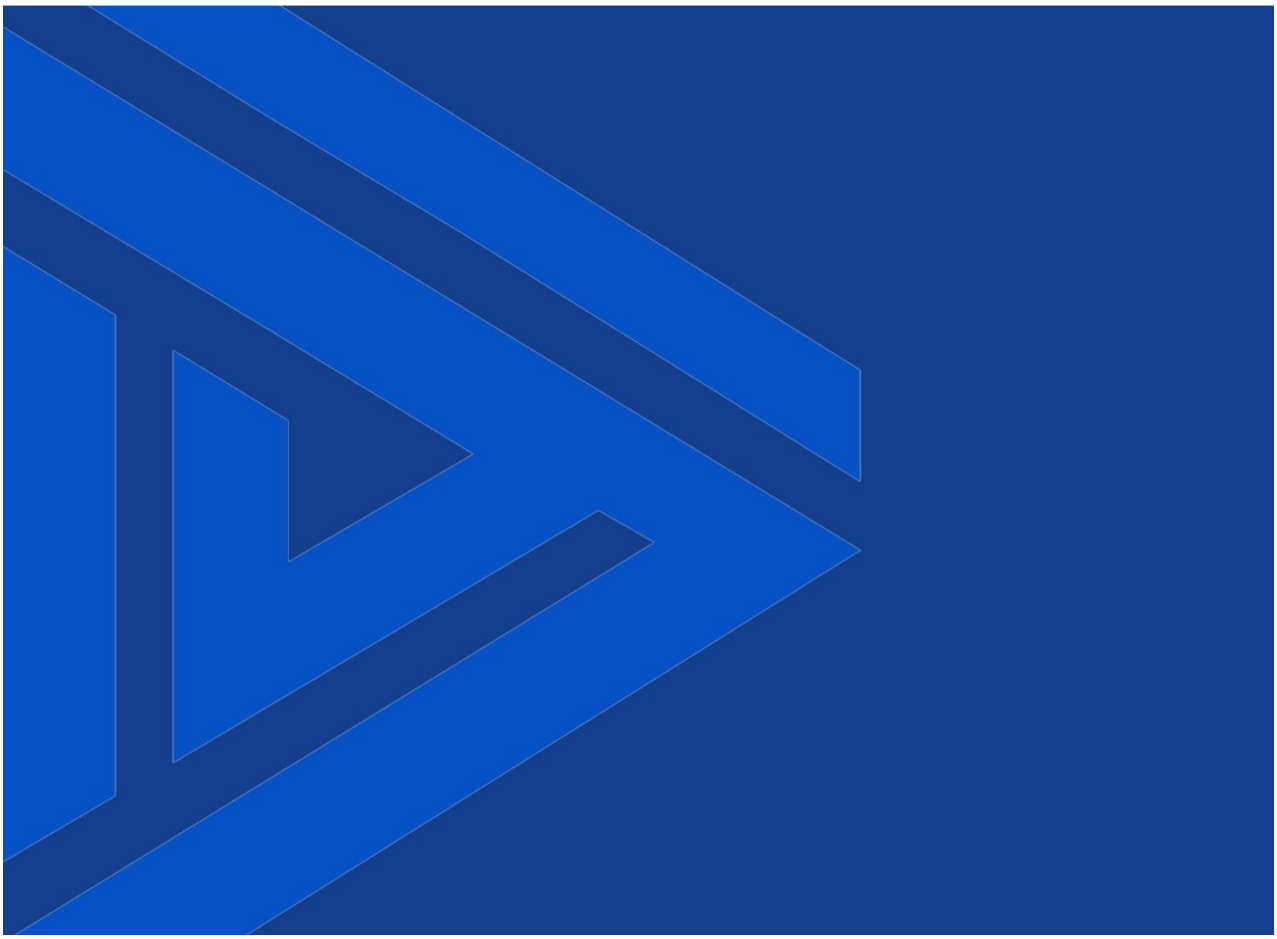
626 Model

Installation, Operation and Maintenance Manual



Delta Controls CORPORATION

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DESIGN FEATURES

- No Pressure Loss at High Flow Rates
- Full Open Bore – No Pipeline Restriction
- Proven Reliable for Over 15 Years
- Magnetic Flow Target to Switch Coupling
- Flow Powered – No Other Power Required
- Alloy Materials Suitable for Seawater
- Insensitive to Seawater Deposits

MODEL 626 FOR A 4" SIZE FIREWATER FLOW LINE

OPERATING PRINCIPLE

The Delta Controls Model 626 is a target actuated flow switch, it is equipped with a body that fits into and becomes part of the pipeline. It is used to detect very low flow rates in offshore deluge firewater piping systems.

The Model 626 is equipped with a "fitted" target that nearly fills the inside area of the in-line pipeline body under no flow conditions. The target is the "full swing" type. It rotates back 90° to rest against the inside of the pipeline when the flow rate exceeds the calibrated alarm activation flow rate.

The target has been "cupped" and "fitted" so that it fills the inside pipe area and is flush against the interior curve of the pipeline during higher flow rates. Only the thin edge of the target, plus its support block, is in the flow. The inside area of the pipeline is not restricted and the result is a full pipe size open bore. This design allows extremely high flow velocities without damage or pressure losses. Even so, the 626 can actuate at the very low flow rate, which occurs when a single nozzle has begun to operate.

The Delta Controls Model 626 has been used to detect seawater flow in deluge fire systems for over 15 years. It has been used on offshore oil platforms in the North Sea, the Gulf of Mexico, the Persian Gulf; as well as near Australia, Indonesia, and Russia. It has also seen service on drill ships and floating production facilities.

MODEL NUMBERING SYSTEM

BASIC TYPE	-	FLOW RATE SWITCHPOINT	-	WETTED MAT'L	-	SWITCH CONTACT	-	PIPELINE I.D. \ O.D.	-	PIPELINE CONN.	-	OPTIONS

EXAMPLE MODEL 626 - 10GPM - YY - AG - 3.07ID\3.50OD - 3"/150R - AA

BASIC TYPE	
M/N	SEAWATER WETTED*
YY	316 S.S.
YG	ALLOY 20
MD	MONEL 400
TI	TITANIUM
ZZ	ANY REQ'D

* ATTRACTOR JACKET - HASTELLOY "C", STD

FLOW RATE SWITCHPOINT	
M/N	UNITS
SPECIFY FLOW	GPM LPM

WETTED MAT'L				
MODEL NO.	WETTED MATERIALS			
	316 S.S	ALLOY 20	MONEL	OTHER
2"/150R 3"/150R				
4"/150R 6"/150R				

SWITCH CONTACT		
M/N	OUTPUT	CONTACT TYPE
AP	SPDT	5 AMP POWER
AG	SPDT	1 AMP GOLD
ZZ	ANY REQUIRED	

APPLICATION NO. NOT REQUIRED FOR THIS SPECIALIZED SERVICE

PIPELINE I.D. \ O.D.		
M/N	SCH	
O.D. /I.D. (INCHES)	10	N/C

OPTIONS	
M/N	DESCRIPTION
AA	NONE
GPB	GOLD PLATED TERMINAL BLOCK
TC	TRACEABLE CALIBRATION
BF	BLANKING FLANGE
ZZ	ANY REQUIRED

BASIC SPECIFICATIONS

Actuation Flow Rate: Calibrated to within 10% closer optional
Output Switch: 1 or 2 Micro style
Switch Operating: -50 to +220°F (-45 to 105°C)
Switch Contact Configuration: SPDT or DPDT
Switch Contact Material & Rating:
Metal oxide; 5 amp at 240 VAC or 24 VDC
Gold; 1 amp at 24 VDC (for IS use)
Output Switch Failsafe Position: Spring loaded inside conduit connection housing
Terminals: Copper nickel-plated; clamp type;
wire up to 12 AWG (2.1MM)
Housing: 304 S.S., O-Ring sealed; 3 / 4" NPT or 20mm; Class 1, Division 1, Groups BCD & 4X, CSA, NRTL/C; IP67, CE
Body Gasket:: Metal spiral; PTFE seal
Studs and Bolts: A-193BB, A-194; stainless steel
Options: Any modification or change required by the service or installation

MINIMUM RECOMMENDED FLOW SWITCH RATE

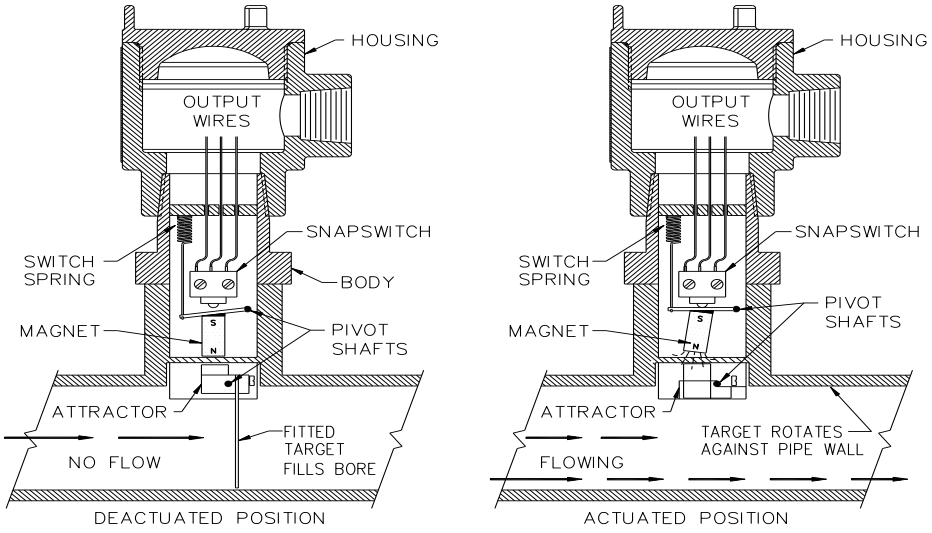
SWITCH ACTION * AT FLOW RATE	PIPE SIZE - SHOWN FOR ANSI SCHEDULE 40							
	2"		3"		4"		6"	
	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM
ACTUATE	3.0	11.4	4.8	18.2	8.5	32.1	17.5	66.2
DEACTUATE	1.4	5.3	2.2	8.3	3.8	14.4	7.9	30.0

* (1) Switch Point is normally selected to detect that a single nozzle is discharging; but it can be calibrated for higher flow rates as required

(2) Based on seawater at STP; 77°(25°C) and 1 Bar

OPERATING SCHEMATIC

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

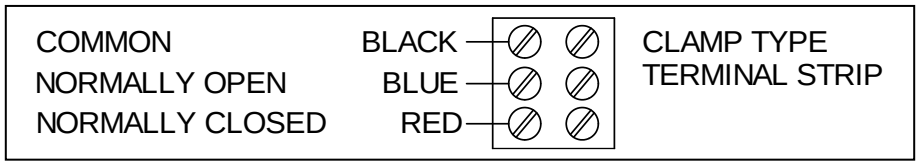


INSTALLATION

Install the Model 626 flow switch in a horizontal section of the flow line to be monitored. It is important that the vertical centerline of the body be plumb. It is necessary that the arrow on the body be parallel with and point in the direction of flow. The flow rate setpoint of the Model 626 is fixed at the factory and is not field adjustable

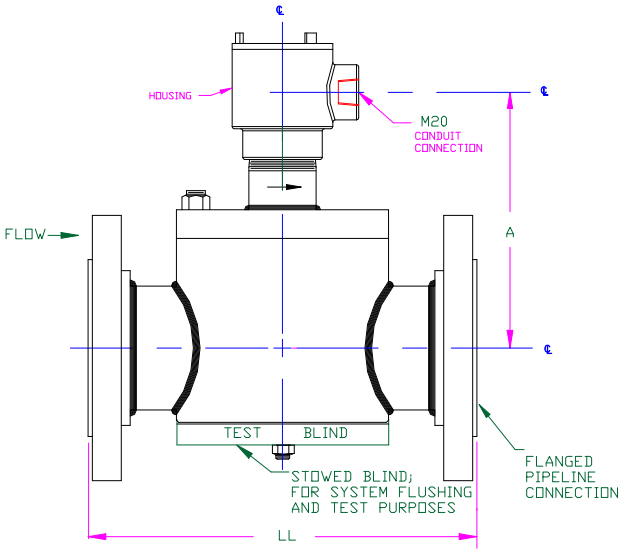
WIRING

Wire the unit in accordance with the National Electrical or other governing code. Do not miswire or overload the electrical contacts as this can destroy the unit or result in unsafe conditions.



NOTE: Units with DPDT output have two individual switches and dual sets of the same wire colors.

BASIC OUTLINE DIMENSIONS



PIPELINE (ANISI SHOWN)*		PIPELINE CONNECTION			
		150# RF		BUTTWELD	
SIZE	DIM	INCH	MM	INCH	MM
2”	“LL”	10.0	254	9.6	244
	“A”	7.0	152	6.0	152
3”	“LL”	12.0	305	11.6	245
	“A”	7.6	193	7.6	193
4”	“LL”	14.0	356	13.6	345
	“A”	8.8	224	8.8	224
6”	“LL”	17.0	432	16.6	422
	“A”	8.4	213	8.4	213

* METRIC PIPE AND OTHER SIZES ARE OPTIONAL

NOTES

Engineered Reliability

585 Fortson Street
Shreveport, La. 71107 - USA
P: +1(318) 424-8471
F: +1(318) 425-2421
sales@deltacnt.com
www.deltacnt.com