



The **Presco-Switch** is a Dual-Seal pressure-responsive device that opens or closes one or more integral electrical switches at predetermined setpoints in order to start or stop pump motors for pump jacks and electric submersible pump systems, stop gas engines, control valve operations and shutdown wellhead and flowline pressure.

Presco has an internally adjustable set point and offers both fixed and variable differential switches available in automatic and manual reset. The Canadian-made product can also be easily re-built, repaired and modified to different spring ranges, while offering a larger selection than competitors.

Switch Features:

- Convenient microswitch adjustments make field setting easy
- Versatile switching arrangements satisfy most applications
- Switch housings explosion-proof design is CSA approved for Class 1 Div.1 Group D hazardous locations
- Dual-Seal design is certified to meet ANSI/ISA-12.27.01-2003 requirement for process sealing between electrical systems and combustible process fluids. Comes with weep holes for primary seal indication.



General Specifications:

Repeatability	1% to 2% of adjustable range
Service	Standard and H ₂ S NACE MR0175 on Select Models
Electrical Temperature Rating	-58°F to 180°F (-50°C to 82°)
Electrical Rating	5A - 125/250/480 VAC; 0.5A - 125VDC; 0.25A - 250VDC
Electrical Classification	CSA c/us approved per C22.2/UL1203/UL508; Class 1, Group D Hazardous Locations; Dual Seal Compliant per ANSI/ISA-12.27.01 requirements
Electrical Housing	Cast Aluminum; 3-1/2" OD
Electrical Connection	1/2"-14 NPT (female)
Pressure Connection	2" NPT (male); Zinc Electroplated High Strength Carbon Steel
Pressure Rating (ASME B31-3)	Type D: 3,000psig (20,684kPag); -58°F to 180°F (-50°C to 82°C) Type S: 5,000psig (34,474kPag); -58°F to 180°F (-50°C to 82°C)
Canadian Registration Number	0F20302.213
Quality Program	AQP-5164

Presco®-Switch Model Breakdown

Base Arrangement Type:

- Type **D** – Diaphragm model for mildly sour and corrosive gas, crude oil and water service
- Type **S** – Plunger model for sour and corrosive gas, crude oil and water service

Switch Housing Arrangement Type:

- Type **F** – Single Fixed Differential Switch, approximately +/- 4% differential
- Type **FF** – Dual Fixed Differential Switch, with independent circuits
- Type **FV** – One Fixed Differential Switch, One Variable Differential Switch
- Type **V** – Single Variable Differential Switch, for high / low setting differential
- Type **VV** – Dual Variable Differential Switch, with independent circuits
- Type **M** – Single Switch, manually reset after trip

Spring Pressure Range Number:

See spring range from the chart below

DFF - 100 (This is the Presco-Switch Model Number for Ordering)

Table 1 – Presco-Switch Spring Range Chart

Range No.	Piston Dia.	Type D Base		Plunger Dia.	Type S Base	
		kPa	Psi		kPa	psi
7	* 1.25"	69 – 483	10 – 70	-	-	-
15	* 1.25"	103 – 621	15 – 90	-	-	-
20	* 1.25"	138 – 1,379	20 – 200	-	-	-
30	-	-	-	0.87"	276 – 2,068	40 – 300
40	* 0.63"	276 – 2,758	40 – 400	0.87"	345 – 2,758	50 – 400
50	-	-	-	0.87"	414 – 3,447	60 – 500
60	* 0.63"	414 – 4,137	60 – 600	0.87"	483 – 4,137	70 – 600
70	-	-	-	0.87"	621 – 4,826	90 – 700
80	-	-	-	* 0.63"	689 – 5,516	100 – 800
100	* 0.63"	689 – 6,895	100 – 1,000	* 0.63"	862 – 6,895	125 – 1,000
125	* 0.63"	1,034 – 8,618	150 – 1,250	* 0.63"	1,103 – 8,618	160 – 1,250
150	* 0.63"	2,068 – 10,342	300 – 1,500	* 0.63"	1,379 – 10,342	200 – 1,500
200	* 0.63"	2,758 – 13,789	400 – 2,000	0.38"	1,896 – 13,790	275 – 2,000
250	* 0.63"	3,447 – 17,237	500 – 2,500	0.38"	2,413 – 17,237	350 – 2,500
300	* 0.63"	4,137 – 20,684	600 – 3,000	0.38"	2,930 – 20,684	425 – 3,000

*Component wetted parts meeting the requirements of NACE MR0175 available on select models

Presco®-Switch Accessories



Isolation Valves

32-385631	2" MNPT x 2" FNPT, Low Temp A350-LF2 body, NACE 3-Piece Design, 4000WOG c/w two 1/2" NPT instrument ports
32-388416	2"-600# RF x 2" FNPT, Low Temp A350-LF2 body, NACE 3-Piece Design, 1480psig c/w two 1/2" NPT instrument ports
32-388417	2"-1500# RF x 2" FNPT, Low Temp A350-LF2 body, NACE 3-Piece Design, 3705psig c/w two 1/2" NPT instrument ports
32-388724A	2"-2500# RTJ x 2" FNPT, Low Temp A350-LF2 body, NACE 3-Piece Design, 6170psig c/w two 1/2" NPT instrument ports

Sealed Cables

31-040	40ft (12m) long, 3C #14AWG SOOW Water Resistant Cable c/w elbow, union and poured seal for Class 1 Div.1 areas
31-060	60ft (18m) long, 3C #14AWG SOOW Water Resistant Cable c/w elbow, union and poured seal for Class 1 Div.1 areas

Instrument Valves

404-MFS-P1	316SS Needle valve, 6000psig, 1/2" MxF NPT c/w PTFE adjustable packing and hard seat
504-MFS-P1	316SS Needle valve, 6000psig, 1/2" MxF NPT c/w PTFE adjustable packing and Acetal replaceable soft seat

Pressure Gauges

40-500-1500 -psi/kpa -GY40	4" dial stainless steel pressure gauge 0-1500psig, dual scale, 1/2" NPT -40°C liquid filled
40-500-3000 -psi/kpa -GY40	4" dial stainless steel pressure gauge 0-3000psig, dual scale, 1/2" NPT -40°C liquid filled



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