

CLARK SOLUTIONS

400 Series, Pressure, Vacuum, Diff. Pressure & Temp. Switches 1, 2 & 3 Switch output, Adjustable Ranges 30" Vac to 6000 PSI, -180 to 650°F

DESCRIPTION

The 400 Series is a versatile family of pressure, differential pressure and temperature switches for applications which require single or multiple switching capabilities. Dual or triple switch versions provide multi-output in applications such as alarm and shutdown, pre-alarm and alarm, high/low limit or level staging functions. They are available in both hex screw adjustment and dial set point adjustment versions, and have a wide variety of available options.

Triple switch J403's may be used for liquid level control. In this application, three pressure settings correspond to "pumping out" elevations in a sump pump. The 400 Series continues to be widely used throughout the process industries, from industrial gas production, energy generation, and pulp and paper, to applications involving pumps, turbines, compressors and heavy equipment, where threshold protection and control of functions is required.

SPECIFICATIONS

GENERAL

Storage Temperature: -65° to 160°F (-54 to 71°C)
 Ambient Temperature: -40° to 160°F (-40 to 71°C); Set point typically shifts less than 1% of range for a 50°F (28°C) ambient temperature change
 Set Point Repeatability: Temperature models: ± 2% of adjustable range
 Pressure: models 126-376, 520-535, 540-547, 570-572: ± 2% of adjustable range; models 440-457, 550-559: ± 1% of adjustable range; models 610-614: ± 3% of adjustable range
 Shock: Set point repeats after 15 G, 10 millisecond duration
 Vibration: Set point repeats after 2.5 G, 5-500 Hz
 Enclosure: Die cast aluminum, epoxy powder coated, gasketed, captive cover screws
 Enclosure Class: Designed to meet NEMA 4X requirements with option M900 (watertight electrical connection)
 Switch Output: One, two or three SPDT; switches may be separated up to 100% of range; except ranges 521-524, 531-534: 50% and ranges 520, 525, 530, 535, 570-572: 30%
 Electrical Rating: 15 A 125/250/480 VAC resistive
 Weight: 3-7.5 lbs, varies with model
 Electrical Connection: Three 7/8" diameter knockouts
 Pressure Connection: All models 1/4" NPTF except ranges S126B-S164B, 520-535: 1/2" NPTF; ranges 540-547: 1/8" NPTF



Temperature Assembly: 'E' types use the same assemblies as 'F' types; however, range spans are limited due to use of reference dials
 Bulb and capillary: 6 feet 304 stainless steel
 Immersion stem: nickel-plated brass; optional 316L stainless steel
 Fill: Models 1BS are solvent filled, models 2-8 are non-toxic oil filled
 Temperature Deadband: Type F typically 1% and type E typically 2% of range under laboratory conditions (70°F ambient circulating bath at rate of 1/2°F per minute change)
 Approvals: UL listed
 Temperature: UL 873, file #E10667
 Pressure: UL 508, file #E42272 (available types 400 and 402)
 UL Recognized
 Temperature: UL 873, file #E10667
 Pressure: UL 508, file #E42272 (available type 403)
 CSA certified
 Temperature: CSA C22.2, no.24 file #LR7814
 Pressure: CSA C22.2, no.14 file #LR39690
 FM Approval 3510, 3530, 3531 (not all models approved, see the next page for a detailed listing of approved models)
 CE Compliance with Low Voltage Directive (LVD)
 CE Compliance to Pressure Equipment Directive (PED 97/23/EC)

PRESSURE MODEL H400, H402, H403 DIAL ADJUSTMENT VERSIONS

Range/Material Code	Adjustable Set Point Range		Deadband		**Proof Pressure		Scale Division	
	High end of range on rise, low end on fall		(x2 for 2 & 3 switch types)		psi	bar	psi	
	psi	Unless noted	bar	psi	Unless noted	bar	psi	
Welded 316L stainless steel bellows with 1/2" NPT (female) pressure connection								
S126B	30" Hg Vac	to 0	-1 to 0	0.2 to 0.9" Hg	7 to 30.5 mbar	30" Hg Vac	-1	0.5" Hg
S134B	30" Hg Vac	to 20	-1 to 1.4	0.2 to 1.2" Hg	7 to 40.6 mbar	25	1.7	1" Hg & 0.5 psi
S137B	0 to 80" wc		0 to 200 mbar	2 to 6" wc	5 to 15 mbar	5	0.3	2" wc
S144B	0 to 20		0 to 1.4	0.1 to 0.5	6.9 to 34.5 mbar	25	1.7	0.5
S146B	0 to 30		0 to 2.1	0.1 to 0.6	6.9 to 41.4 mbar	40	2.78	0.5
S156B	0 to 100		0 to 6.9	0.2 to 0.8	13.8 to 55.2 mbar	200	13.8	2
S164B	0 to 200		0 to 13.8	0.3 to 2	20.7 to 138 mbar	200	13.8	5
Welded 316L stainless steel bellows with 1/4" NPT (female) pressure connection								
358	0 to 200		0 to 13.8	1.5 to 8	0.1 to 19.9	250	17.2	5
361	0 to 300		0 to 20.7	2 to 9	0.1 to 22.4	350	24.1	10
376	0 to 500		0 to 34.5	3 to 12	0.2 to 29.9	575	39.6	10
Brass bellows with 1/4" NPT (female) nickel plated brass pressure connection; Models 126& 134 have zinc-plated steel spring in media								
126	30" Hg to 0 psi		-1 to 0	0.2 to 0.9" Hg	7 to 35 mbar	30" Hg Vac	-1	0.5" Hg
134	30" Hg to 20 psi		-1 to 1.4	0.2 to 1.2" Hg	7 to 40.6 mbar	25	1.7	1" Hg & 0.5 psi
137	0 to 80" wc		0 to 200 mbar	2 to 6" wc	5 to 15 mbar	5	0.3	2" wc
144	0 to 20		0 to 1.4	0.1 to 0.5	6.9 to 34.5 mbar	25	1.8	0.5
146	0 to 30		0 to 2.1	0.1 to 0.6	6.9 to 41.4 mbar	40	2.8	0.5
156	0 to 100		0 to 6.9	0.2 to 0.8	13.8 to 55.2 mbar	125	8.6	2
164	0 to 200		0 to 13.8	0.3 to 2	20.7 to 138 mbar	200	13.8	5
Phosphor Bronze bellows with 1/4" NPT (female) nickel plated brass pressure connection								
270	0 to 200		0 to 13.8	1.5 to 8	0.1 to 19.9	250	17.2	5
274	0 to 300		0 to 20.7	2 to 10	0.1 to 24.9	350	24.1	10

FM Approved Models:

Range Code
 126, 134, 137, 144, 146
 S126B, S134B, S137B, S144B, S146B
 358
 440-443
 448
 449
 570, 571, 572
 350-454
 520-525
 530-535
 550, 552-555
 551
 610-612

Model
 J400, J402, J403, H400, H402, H403
 J400, J402, J403, H400, H402, H403
 J400, J402, J403, H400, H402, H403
 J400, H400
 J400, J402, J403, H400
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 J400, J402, J403, H400
 J400, J402, J403

PRESSURE MODEL H400, H402, H403 DIAL ADJUSTMENT VERSIONS

Range/Material Code	Adjustable Set Point Range		Deadband (x2 for 2 & 3 switch types)		**Proof Pressure		Scale Division
	High end of range on rise, low end on fall		psi Unless noted	mbar	psi	bar	psi
	psi Unless noted	bar					
Buna-N diaphragm and O-Ring with 1/4" NPT (female) aluminum pressure connection and cap							
440†	0 to 2"wc	0 to 5 mbar	0.07 to 0.25" wc	0.2 to 0.6	225	15.5	0.1"wc
441†	0 to 10"wc	0 to 25 mbar	0.15 to 0.3"wc	0.4 to 0.7	225	15.5	0.5"wc
442†	0 to 20"wc	0 to 50 mbar	0.2 to 0.5"wc	0.5 to 0.12	225	15.5	1"wc
443†	0 to 80"wc	0 to 200 mbar	0.5 to 1.8"wc	1.2 to 4.5	225	15.5	5"wc
448	80"wc Vac to 0	-200 to 0 mbar	1 to 3"wc	2.5 to 7.5	225	15.5	5"wc
450	30" Hg Vac to 0	-1 to 0	0.1 to 0.4" Hg	3.4 to 13.5	225	15.5	0.5" Hg
452	30" Hg Vac to 20	-1 to 1.4	0.2 to 1" Hg	6.8 to 33.9	225	15.5	0.5" Hg & 0.5 psi
453	0 to 20	0 to 1.4	0.05 to 0.2	3.4 to 13.8	225	15.5	0.5
454	0 to 30	0 to 2.1	0.05 to 0.3	3.4 to 20.7	225	15.5	0.5
Teflon® diaphragm, O-Ring with 1/4" NPT (female) 316L stainless steel pressure connection and cap							
550	30" Hg Vac to 0	-1 to 0	0.1 to 0.6" Hg	3.4 to 20.3	225	15.5	0.5" Hg
551	0 to 80"wc	0 to 200 mbar	1.5 to 3.5"wc	3.7 to 8.7	225	15.5	5"wc
552	30" Hg Vac to 20	-1 to 1.4	0.2 to 1" Hg	6.8 to 33.9	225	15.5	0.5" Hg & 0.5 psi
553	0 to 20	0 to 1.4	0.05 to 0.3	3.4 to 20.7	225	15.5	0.5
554	0 to 30	0 to 2.1	0.1 to 0.4	6.9 to 27.6	225	15.5	0.5
555	0 to 100	0 to 6.9	0.25 to 0.75	17.2 to 51.7	225	15.5	2

† No Switch Options Are Available For These Models

PRESSURE MODEL J400, J402, J403 HEX SCREW ADJUSTMENT VERSIONS

Range/Material Code	Adjustable Set Point Range		Deadband (x2 for 2 & 3 switch types)		*Over Range Pressure		**Proof Pressure	
	High end of range on rise, low end on fall		"wc	mbar	psi	bar	psi	bar
	"wc	mbar						
Buna-N diaphragm and O-Ring with 1/2" NPT (female) epoxy coated aluminum pressure connection								
520	-300 to 0	-746.7 to 0	0.2 to 12	0.5 to 29.9	200	13.8	400	27.6
521	-10 to 10	-24.9 to 24.9	0.1 to 1	0.2 to 2.5	200	13.8	400	27.6
522	-50 to 50	-124.5 to 124.5	0.1 to 5	0.2 to 12.4	200	13.8	400	27.6
533	0.5 to 5.0	1.2 to 12.4	0.1 to 0.3	0.2 to 0.7	200	13.8	400	27.6
524	2.5 to 50	6.2 to 124.5	0.1 to 2	0.2 to 5.0	200	13.8	400	27.6
525	10 to 250	24.9 to 622.3	0.1 to 10	0.2 to 24.9	200	13.8	400	27.6
Welded 316L stainless steel diaphragm with 1/2" NPT (female) 316L pressure connection								
530	-300 to 0	-746.7 to 0	0.2 to 15.0	0.5 to 37.3	50	3.4	100	6.9
531	-10 to 10	-24.9 to 24.9	0.1 to 1	0.2 to 2.5	50	3.4	100	6.9
532	-50 to 50	-124.5 to 124.5	0.1 to 6	0.2 to 14.9	50	3.4	100	6.9
533	0.5 to 5.0	1.2 to 12.4	0.1 to 0.3	0.2 to 0.7	50	3.4	100	6.9
534	2.5 to 50	6.2 to 124.5	0.1 to 2.5	0.2 to 6.2	50	3.4	100	6.9
535	10 to 250	24.9 to 622.3	0.1 to 10.0	0.2 to 24.9	50	3.4	100	6.9
	psi	bar	psi	bar	psi	bar	psi	bar
316L stainless steel diaphragm, Viton® O-Ring with 1/4" (female) 316L stainless steel pressure connection								
570	0 to 20	0 to 1.4	0.2 to 4	14 to 275 mbar	20	1.4	225	15.5
571	0 to 50	0 to 3.4	0.7 to 6	48 to 410 mbar	50	3.4	225	15.5
572	0 to 100	0 to 6.9	1 to 7	69 to 480 mbar	100	6.9	225	15.5
Welded 316L stainless steel diaphragm with 1/2" NPT (female) pressure connection								
S126B	30" Hg Vac to 0	-1 to 0	0.2 to 0.9" Hg	7 to 30.5 mbar	0	0	30" Hg Vac	-1
S134B	30" Hg Vac to 20 psi	-1 to 1.4	0.2 to 1.2" Hg	7 to 40.6 mbar	20	1.4	25	1.7
S137B	0 to 80"wc	0 to 200 mbar	2 to 6" wc	5 to 15 mbar	80"wc	200 mbar	5	0.3
S144B	0 to 20	0 to 1.4	0.1 to 0.5	6.9 to 34.5 mbar	20	1.4	25	1.7
S146B	0 to 30	0 to 2.1	0.1 to 0.6	6.9 to 41.4 mbar	30	2.1	40	2.8
S156B	0 to 100	0 to 6.9	0.2 to 0.8	13.8 to 55.2 mbar	100	6.9	200	13.8
S164B	0 to 200	0 to 13.8	0.3 to 2	20.7 to 138 mbar	200	13.8	200	13.8
Welded 316L stainless steel diaphragm with 1/4" NPT (female) pressure connection								
358	0 to 200	0 to 13.8	1.5 to 8	0.1 to 19.9	200	13.7	250	17.2
361	0 to 300	0 to 20.7	2 to 9	0.1 to 22.4	300	20.7	350	24.1
376	0 to 500	0 to 34.5	3 to 12	0.2 to 29.9	500	34.5	575	39.6
303 stainless steel piston and Buna-N O-Ring with 1/4" (female) pressure connection (not recommended for gas service since drying of the O-Ring seal can allow bleeding of medium into the atmosphere)								
610	100 to 1,000	6.9 to 68.9	30 to 150	2.1 to 10.3	1,000	68.9	10,000	690
612	200 to 3,000	13.8 to 207	40 to 250	2.8 to 17.2	3,000	207	10,000	690
614	500 to 6,000	34.5 to 414	50 to 400	3.4 to 27.6	6,000	414	10,000	690

PRESSURE MODEL J400, J402, J403 HEX SCREW ADJUSTMENT VERSIONS

Range/Material Code	Adjustable Set Point Range		Deadband		*Over Range Pressure		**Proof Pressure	
	High end of range on rise, low end on fall		(x2 for 2 & 3 switch types)		psi	bar	psi	bar
	psi Unless noted	bar	psi Unless noted	bar				
Brass bellows with 1/4" NPT (female) nickel-plated brass pressure connection; Models 126 & 134 have zinc-plated steel spring exposed to media								
126	30" Hg Vac to 0	-1 to 0	0.2" to 0.9" Hg	7 to 30.5 mbar	0	0	30" Hg	-1
134	30" Hg Vac to 20 psi	-1 to 1.4	0.2" to 1.2" Hg	7 to 40.6 mbar	20	1.4	25	1.7
137	0 to 80"wc	0 to 200 mbar	2 to 6"wc	5 to 15 mbar	80"wc	200 mbar	5	0.3
144	0 to 20	0 to 1.4	0.1 to 0.5	6.9 to 34.5 mbar	20	1.4	25	1.8
146	0 to 30	0 to 2.1	0.1 to 0.6	6.9 to 41.4 mbar	30	2	40	2.8
156	0 to 100	0 to 6.9	0.2 to 0.8	13.8 to 55.2 mbar	100	6.9	125	8.6
164	0 to 200	0 to 13.8	0.3 to 2.0	20.7 to 138 mbar	200	13.8	200	13.8
Phosphor bronze bellows with 1/4" NPT (female) nickel-plated brass pressure connection								
270	0 to 200	0 to 13.8	1.5 to 8	0.1 to 19.9	200	13.8	250	17.2
274	0 to 300	0 to 20.7	2 to 10	0.1 to 24.9	300	20.7	350	24.1
Buna-N diaphragm and O-Ring with 1/4" NPT (female) aluminum pressure connection and cap								
440†	0 to 2"wc	0 to 5 mbar	0.07 to 0.25"wc	0.2 to 0.6 mbar	3	0.2	225	15.5
441†	0 to 10"wc	0 to 25 mbar	0.15 to 0.3"wc	0.4 to 0.7 mbar	3	0.2	225	15.5
442†	0 to 20"wc	0 to 50 mbar	0.2 to 0.5"wc	0.5 to 1.2 mbar	3	0.2	225	15.5
443†	0 to 80"wc	0 to 200 mbar	0.5 to 1.8"wc	1.2 to 4.5 mbar	3	0.2	225	15.5
448	80 to 0"wc Vac	-200 to 0 mbar	1 to 3"wc	2.5 to 7.5 mbar	3	0.2	225	15.5
449	0 to 20"wc	0 to 50 mbar	1 to 2"wc	2.5 to 5.0 mbar	3	0.2	225	15.5
450	30" Hg Vac to 0	-1 to 0 mbar	0.1 to 0.4"wc	3.4 to 13.5 mbar	3	0.2	225	15.5
451	0 to 80"wc	0 to 200 mbar	1 to 3"wc	2.5 to 7.5 mbar	3	0.2	225	15.5
452	30" Hg Vac to 20 psi	-1 to 1.4 mbar	0.2 to 1" Hg	6.8 to 33.9 mbar	20	1.4	225	15.5
453	0 to 20	0 to 1.4 mbar	0.05 to 0.2	3.4 to 13.8 mbar	20	1.4	225	15.5
454	0 to 30	0 to 2.1 mbar	0.05 to 0.3	3.4 to 20.7 mbar	30	2.1	225	15.5
Teflon® diaphragm and O-Ring with 1/4" NPT (female) 316L stainless steel pressure connection and cap								
550	30" Hg Vac to 0	-1 to 0	0.1 to 0.6" Hg	3.4 to 20.3	0	0	225	15.5
551	0 to 80"wc	0 to 200 mbar	1.5 to 3.5"wc	3.7 to 8.7	80"wc	200 mbar	225	15.5
552	30" Hg Vac to 20 psi	-1 to 1.4	0.2 to 1" Hg	6.8 to 33.9	20	1.4	225	15.5
553	0 to 20	0 to 1.4	0/05 to 0.3	3.4 to 20.7	20	1.4	225	15.5
554	0 to 30	0 to 2.1	0.1 to 0.4	6.9 to 27.6	30	2.1	225	15.5
555	0 to 100	0 to 6.9	0.25 to 0.75	17.2 to 51.7	100	6.9	225	15.5

† no switch options available for these models

DIFFERENTIAL PRESSURE MODEL J400K, J402K HEX SCREW ADJUSTMENT VERSIONS

Range/Material Code	Adjustable Set Point Range		Deadband		***Working Pressure		**Proof Pressure	
	High end of range on rise, low end on fall		(x2 for 2 & 3 switch types)		psi	bar	psi	bar
	"wcd/psid	mbar/bar	"wc/psi	mbar/bar				
Welded 316L bellows with 1/2" NPT (female) pressure connections								
S147B	3 TO 30 psid	0.2 TO 2.1 bar	0.5 TO 2 psi	34.5 to 138 mbar	30" Hg Vac to 100	-1 to 6.9	300	20.7
S157B	10 TO 100 psid	0.7 TO 6.9 bar	0.5 TO 3 psi	34.5 to 207 mbar	30" Hg Vac to 180	-1 to 12.4	300	20.7
Brass bellows with 1/4" NPT (female) nickel-plated brass pressure connections								
147	3 to 30 psid	0.2 to 2.1 bar	0.5 to 2 psi	34.5 to 138 mbar	30" Hg Vac to 100	-1 to 6.9	180	12.4
157	10 to 100 psid	0.7 to 6.9 bar	0.5 to 3 psi	34.5 to 207 mbar	30" Hg Vac to 150	-1 to 10.3	180	12.4
Buna-N diaphragm and O-Ring with 1/4" NPT (female) aluminum pressure connections								
455	5 to 80 "wcd	12 to 100 mbar	1 to 4" wcd	2.5 to 10 mbar	30" Hg Vac to 225	-1 to 15.5	225	15.5
456	2 to 20 psid	0.1 to 1.4 bar	0.1 to 0.3 psi	6.9 to 20.7 mbar	30" Hg Vac to 225	-1 to 15.5	225	15.5
457	3 to 30 psid	0.2 to 2.1 bar	0.1 to 0.4 psi	6.9 to 27.6 mbar	30" Hg Vac to 225	-1 to 15.5	225	15.5
Kapton® diaphragm, Buna-N sealing diaphragms and epoxy coated aluminum 1/8" NPT (female) pressure connections								
540	1 to 7" wcd	2.5 to 17.4 mbar	0.1 to 0.5" wc	0.2 to 1.2 mbar	200	13.8	400	27.6
541	2 to 20" wcd	5 to 49.8 mbar	0.5 to 5.0" wc	1.2 to 5 mbar	200	13.8	400	27.6
542	5 to 50" wcd	12.4 to 124.4 mbar	0.5 to 2.5" wc	1.2 to 12.4 bar	200	13.8	400	27.6
543	15 to 100" wcd	37.3 to 249 mbar	0.5 to 7" wc	1.2 to 17.4 mbar	200	13.8	400	27.6
544	2 to 20 psid	0.1 to 1.4 bar	1 to 2.5 psi	0.1 to 0.2 bar	1200	82.7	2500	172.4
545	5 to 50 psid	0.3 to 3.4 bar	1 to 3 psi	0.1 to 0.2 bar	1200	82.7	2500	172.4
546	10 to 100 psid	0.7 to 6.9 bar	1 to 5.0 psi	0.1 to 0.3 bar	1200	82.7	2500	172.4
547	20 to 200 psid	1.4 to 13.8 bar	1 to 7 psi	0.1 to 0.5 bar	1200	82.7	2500	172.4
Teflon® and Buna-N diaphragms, Buna-N O-Ring with 1/4" (female) aluminum pressure connections								
559	10 to 100 psid	0.7 to 6.9 bar	0.2 to 1 psi	14 to 69 mbar	30" Hg Vac to 225	-1 to 15.5	225	15.5

DIFFERENTIAL PRESSURE MODEL H400K, H402K DIAL ADJUSTMENT VERSIONS

Buna-N diaphragm and O-Ring with 1/4" NPT (female) aluminum pressure connections								
455	5 to 80" wcd	12 to 200 mbar	1 to 4" wc	2 to 10 mbar	30" Hg Vac to 225	-1 to 15.5	225	15.5
456	2 to 20 psid	0.1 to 1.4 bar	0.1 to 0.3 psi	7 to 21 mbar	30" Hg Vac to 225	-1 to 15.5	225	15.5
457	3 to 30 psid	0.2 to 2.1 bar	0.1 to 0.4 psi	7 to 28 mbar	30" Hg Vac to 225	-1 to 15.5	225	15.5
Teflon® and Buna-N diaphragms, Buna-N O-Ring with 1/4" NPT (female) aluminum pressure connections								
559	10 to 100 psid	0.7 to 6.9 bar	0.2 to 1 bar	14 to 69 bar	30" Hg Vac to 225	-1 to 15.5	225	15.5

*Over Range Pressure: The maximum pressure that may be applied continuously without causing damage and maintaining setpoint repeatability.

**Proof Pressure: The maximum pressure to which a pressure sensor may be occasionally subjected, which causes no permanent damage. The unit may require calibration (e.g., start-up, testing).

***Working Pressure Range: The pressure range within which two opposing sensors can be safely operated and still maintain set point adjustability provided the difference in pressure between them does not exceed the designated adjustable range.

Range/Material Code	Adjustable Set Point		Max. Temp		Scale Division		Stem/Bulb Size OD x Length
	°F	°C	°F	°C	°F	°C	
TEMPERATURE MODEL B400, B402, B403 INTERNAL ADJUSTMENT VIA REFERENCE DIAL							
120	0 to 225	-17.8 to 107.2	275	135	5	5	9/16" x 1-7/8" below 1/2" NPT thread (nickel-plated brass)
121	200 to 425	93.3 to 218.3	475	246.1	5	5	9/16" x 1-7/8" below 1/2" NPT thread (nickel-plated brass)
TEMPERATURE MODEL C400, C402, C403 INTERNAL ADJUSTMENT, NO REFERENCE DIAL							
120	0 to 225	-17.8 to 107.2	275	135	-	-	9/16" x 1-7/8" below 1/2" NPT thread (nickel-plated brass)
121	200 to 425	93.3 to 218.3	475	246.1	1-	-	9/16" x 1-7/8" below 1/2" NPT thread (nickel-plated brass)
TEMPERATURE MODEL E400, E402, E403 INTERNAL ADJUSTMENT VIA REFERENCE DIAL							
2BSA	-120 to 100	-84.4 to 37.8	150	65.5	10	5	3/8 x 2-5/8"
2BSB	30 to 250	1.1 to 121.1	300	148.9	10	5	3/8 x 2-5/8"
3BS	100 to 400	37.8 to 204.4	450	232.2	10	10	3/8 x 2-1/8"
4BS	25 to 100	-3.9 to 37.8	150	65.5	5	2	3/8 x 6-3/4"
5BS	-20 to 80	-28.9 to 26.7	130	54.4	5	2	3/8 x 5"
8BS	350 to 640	176.7 to 337.8	690	365.6	10	10	3/8 x 3-1/4"
TEMPERATURE MODEL F400, F402, F403 INTERNAL ADJUSTMENT, NO REFERENCE DIAL							
Stainless steel bulb & capillary							
1BS	-180 to 120	-115 to 48.9	170	76.6	-	-	3/8 x 3-3/4"
2BS	-125 to 350	-87.2 to 176.7	400	204.4	-	-	3/8 x 2-5/8"
3BS	-125 to 500	-87.2 to 260	550	287.7	-	-	3/8 x 2-1/8"
4BS	-40 to 120	-40 to 48.9	170	76.6	-	-	3/8 x 6-3/4"
5BS	-40 to 180	-40 to 82.2	230	110	-	-	3/8 x 5"
6BS	0 to 250	-17.8 to 121.1	300	148.8	-	-	3/8 x 4-1/2"
7BS	0 to 400	-17.8 to 204.4	450	232.2	-	-	3/8 x 3"
8BS	50 to 650	10 to 343.3	700	371.1	-	-	3/8 x 3-1/4"

ORDERING INFORMATION

SPECIFY MODEL NUMBER, RANGE CODE (FROM CHARTS) THEN OPTIONS IF REQUIRED

EXAMPLE: J400-570-0140-M201(10 PSI RISING)

Model- Pressure

J400- One SPDT output; internal adjustment with no reference dial
 J402-Two SPDT outputs; internal adjustment with no reference dial
 J403-Three SPDT outputs; internal adjustment with no reference dial
 H400- One SPDT output; internal adjustment with reference dial
 H402- Two SPDT outputs; internal adjustment with reference dial
 H403- Three SPDT outputs; internal adjustment with reference dial

Model- Differential Pressure

J400K- One SPDT output; internal adjustment with no reference dial
 J402K-Two SPDT outputs; internal adjustment with no reference dial
 H400K- One SPDT output; internal adjustment with reference dial
 H402K- Two SPDT outputs; internal adjustment with reference dial

Model- Temperature

B400- Immersion stem; one SPDT output; internal adjustment with reference dial
 B402- Immersion stem; two SPDT outputs; internal adjustment with reference dial
 B403- Immersion stem; three SPDT outputs; internal adjustment with reference dial
 C400- Immersion stem; one SPDT output; internal adjustment with no reference dial
 C402- Immersion stem; two SPDT outputs; internal adjustment with no reference dial
 C403- Immersion stem; three SPDT outputs; internal adjustment with no reference dial
 E400- Bulb and capillary; one SPDT output; internal adjustment with reference dial
 E402- Bulb and capillary; two SPDT outputs; internal adjustment with reference dial
 E403- Bulb and capillary; three SPDT outputs; internal adjustment with reference dial
 F400- Bulb and capillary; one SPDT output; internal adjustment with no reference dial
 F402- Bulb and capillary; two SPDT outputs; internal adjustment with no reference dial
 F403- Bulb and capillary; three SPDT outputs; internal adjustment with no reference dial

Switch Options

NO SWITCH OPTIONS ARE AVAILABLE FOR PRESSURE RANGES 440 TO 443
 0140- Gold contacts, 1A 125 VAC resistive
 0500- Close deadband, 5A 125/250 VAC resistive
 1010- DPDT switch, 10A 125/250 VAC resistive NOT AVAILABLE TEMPERATURE VER-
 SIONS OR MODEL J403 AND RANGE CODES 448-449, 520-535, 540-547, 570-572
 1070- 10 A 125 VDC resistive; deadband and minimum set point will increase.
 NOT AVAILABLE ON MODELS B & E OR RANGE CODES 448-449, 520-535, 540-547,
 570-572
 1520- Adjustable deadband, 15 A 125/250/277 VAC resistive. NOTE: FOR MODEL J403,
 NOT AVAILABLE ON MIDDLE SWITCH. NOT AVAILABLE ON MODEL TYPES
 B,E,H,C403,F403 OR RANGE CODES 520-535, 540-547, 570-572, 610-614
 1530- External manual reset, 15 A 125/250/480 VAC resistive; latches on rise only.
 NOT AVAILABLE ON MODEL 403 OR RANGE CODES 520-535, 570-572
 1535- High ambient, 15 A 125/250 VAC resistive; temperatures up to 250 °F (145 °C).
 NOT AVAILABLE ON MODELS 520-535
 1537- Vapor sealed switch, 15 A 125/250 VAC resistive. NOT AVAILABLE ON RANGE
 CODES 520-535
 1539- Fungus resistant case, 15 A 125/250 VAC resistive. NOT AVAILABLE ON RANGE
 CODES 520-535
 2000- 20 A 125/250/300 VAC resistive. NOT AVAILABLE ON RANGE CODES 520-535, 540-
 547, 570-572

Other Options

M020- Red status light, 115 VAC only. Specify whether light goes on or off with increas-
 ing or decreasing pressure or temperature.
 M201- Factory set one switch; specify increasing or decreasing pressure or
 temperature and setpoint
 M202- Factory set two switches. NOT AVAILABLE SINGLE SWITCH VERSIONS
 M203 Factory set three switches; note: the third or middle switch must always be set to
 highest pressure or temperature when switches are set apart. NOT AVAILABLE
 SINGLE OR DUAL SWITCH VERSIONS
 M276- Range indicated on nameplate in bars/mbars. NOT AVAILABLE ON
 TEMPERATURE VERSIONS
 M278- Range indicated on nameplate in Kg/cm2. NOT AVAILABLE ON
 TEMPERATURE VERSIONS
 M321- Gasketed Lexan® window. NOT AVAILABLE ON J,C,F TYPES
 M444- Paper ID tag
 M446- Stainless steel ID tag & wire attachment
 M504- 316L stainless steel immersion stem. AVAILABLE ON MODELS 120,121 ONLY
 M540- Viton® construction (deadband and low end range may increase
 slightly); wetted parts include Viton® diaphragm and O-ring plus
 standard connection material. Deadbands increase approximately 15% and low
 end of range will increase 10%. AVAILABLE MODELS 448-457,610-614,540-547
 M550- Oxygen service cleaning; internal construction may change. NOT AVAILABLE ON
 MODELS 440-443
 M900- Watertight conduit fitting; converts 7/8" hole to 1/2" NPT fitting. Required for
 product to meet NEMA 4X
 6361-704- Surface Mounting Hardware required for models 520-535, 540-547
Optional Sensor Material for "WC Ranges. Available Models 520-525
 XC001- Aluminum pressure connection, Viton® diaphragm, Viton® O-ring
 XC002- Aluminum pressure connection, Kapton® diaphragm, Buna-N O-ring
 XC003- Aluminum pressure connection, Kapton® diaphragm, Viton® O-ring
 XC004- 316L Stainless steel pressure connection, 316L stainless steel diaphragm,
 Viton® O-ring. (Over range pressure is limited to 100 psi)
 XC005- 316L Stainless steel pressure connection, Viton® diaphragm, Viton® O-ring
 XC006- 316L Stainless steel pressure connection, Kapton® diaphragm, Viton® O-ring
 XC007- 316L Stainless steel pressure connection, Teflon® diaphragm, Viton® O-ring
 Viton® is a registered trademarks of DuPont Dow Elastomers.
 Kapton® and Teflon® are registered trademarks of E.I.DuPont.
 Lexan® is a registered trademark of General Electric Company

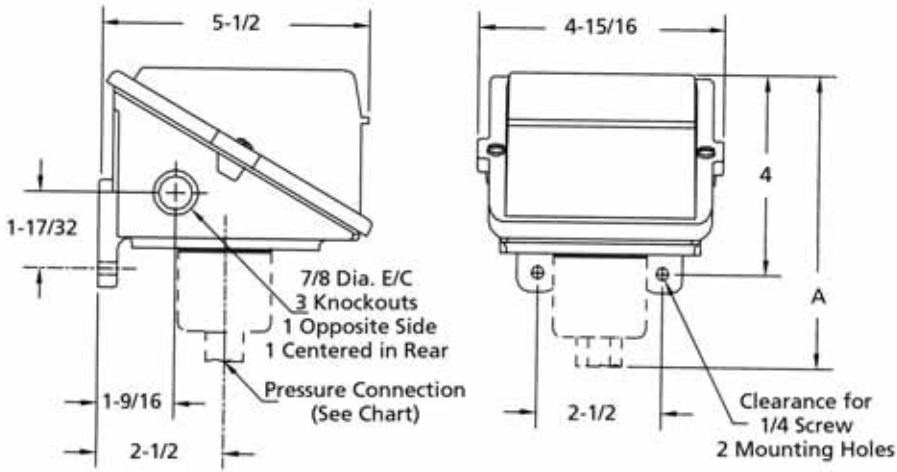
DIMENSIONS (INCHES)

Set Point Adjustment via Reference Dial

Types H400, H402, H403, H400K, H402K, B400, B402, B403, E400, E402, E403

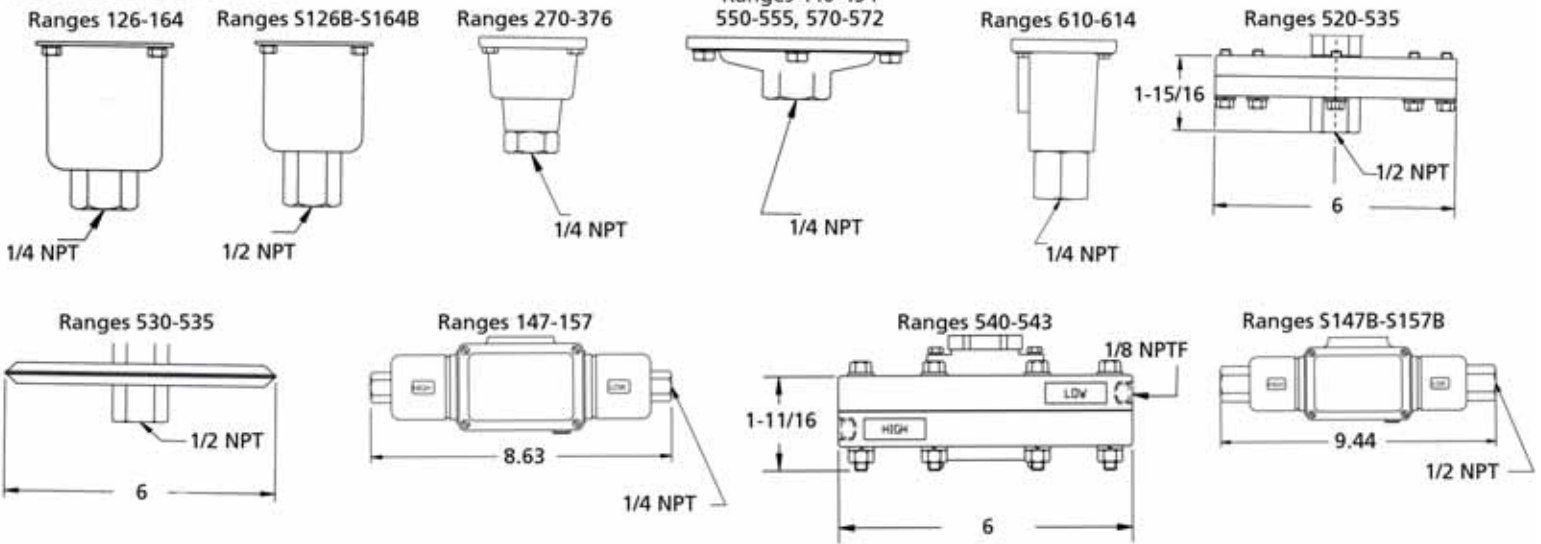
Internal Set Point Adjustment

Types J400, J402, J403, J400K, J402K, C400, C402, C403, F400, F402, F403



Dimension A		
Range Code	Inches	NPT
126-124	5.81	1/4
S126B-S164B	6.19	1/2
270-376	5.50	1/4
440-443, 449 451, 453, 454	4.28	1/4
448, 450, 452	5.03	1/4
520-525	8.25	1/2
530-535	8.12	1/2
551, 553-555	4.56	1/4
550, 552	5.03	1/4
570-572	4.56	1/4
610-614	6.44	1/4
Differential Pressure		
147-157	6.13	1/4
S147B-S157B	6.13	1/2
455-559	7.00	1/4
540-543	7.97	1/8
544-547	8.03	1/8
Temperature		
120, 121	10.88	Immersion Stem
1BS-8BS	7.00	Bulb & Capillary

Sensors-Pressure



Sensors-Temperature

