



J6 Series

Pressure and vacuum switches

(IMPERIAL AND METRIC UNITS)

United Electric Controls is ISO 9001:2015 certified



J 6 - B 0 7

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Glossary of Terms

Set Point	The value at which the switch is set to actuate. Switches may be set to actuate on rising or falling pressure or temperature.
Deadband	The difference in pressure or temperature between which the switch actuates and de-actuates. Deadband is not adjustable unless specifically noted.
Adjustable Set Point Range	The pressure range within which the set point can be adjusted.
Over Range Pressure	The maximum pressure that may be applied continuously without causing the set point to shift.
Proof Pressure	The maximum pressure that may be occasionally applied without causing damage. May cause the set point to shift resulting in the need for re-adjustment.

Use the following pages to determine the best switch for your applications, then build your part number.

Building a Part Number

EXAMPLE: **J6-126-M201**

Type: Switch type from table below: _____

Type	
Pressure	
Pressure	One SPDT output; epoxy coated enclosure; internal adjustment with no reference dial

Model: Select the range and materials best for your application _____

Models page 3-4

Options: Select any of available options for your switch _____

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Specifications

Ambient Temperature Limits [i]	-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	Models S126B-S164B, 126-364, 680: ± 1% of adjustable range; models 610-614: ± 1.5% 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 classification	Designed to meet enclosure type 4X
Switch Output	One SPDT snap action switch; switch may be wired “normally open” or “normally closed”
Electrical Rating	15 A 125/250/480 VAC resistive. Consult UE regarding DC ratings. DC ratings are not printed on nameplate except for 1070 option.
Weight	Approx. 1 lb., 8 oz. (0.68 kg.)
Electrical connection	1/2" NPT (female)
Pressure Connection	All models 1/4" NPT (female) except models S126B-S164B: 1/2" NPT (female)

[i] Consider use of an instrument siphon when the media temperature exceeds the ambient, operating temperature range. Consult UE for further guidance.

Pressure Models

Vacuum and Ultra Low Pressure Models (Vacuum to 20 psi, 1,4 bar)

PRESSURE								PROCESS CONNECTION			Model
Adjustable Set Point		Deadband		Over Range		Proof		Wetted Material	Thread NPT (F)	Sensor Style	
(psi)	(bar)	(psi)	(mbar)	(psi)	(bar)	(psi)	(bar)				
30 "Hg Vac to 0 psi	-1 to 0	0.2 to 0.8 "Hg	6,8 to 27,1	3	0,2	5	0,3	316L stainless steel	1/2	C	S126B
30 "Hg Vac to 0 psi	-1 to 0	0.2 to 0.8 "Hg	6,8 to 27,1	3	0,2	5	0,3	Brass; Ni pl. Brass	1/4	A	126
30 "Hg Vac to 0 psi	-1 to 0	1 to 2 "Hg	33,9 to 67,7	0	0	30	2,1	Ph. Bronze; Ni pl. Brass	1/4	B	218
0 to 50" wc	0 to 124,5 mbar	3 to 6 "wc	7,5 to 14,9	50 "wc	124,5 mbar	5	0,3	316L stainless steel	1/2	C	S136B
0 to 50" wc	0 to 124,5 mbar	3 to 6 "wc	7,5 to 14,9	50 "wc	124,5 mbar	5	0,3	Brass; Ni pl. Brass	1/4	A	136
30 "Hg Vac to 20 psi	-1 to 1,4	0.1 to 0.4	6,8 to 27,1	20	1,4	25	1,7	316L stainless steel	1/2	C	S134B
30 "Hg Vac to 20 psi	-1 to 1,4	0.1 to 0.4	6,8 to 27,1	20	1,4	25	1,7	Brass; Ni pl. Brass	1/4	A	134

Pressure Models (continued)

Pressure Models (up to 100 psi, 6,7 bar)

PRESSURE								PROCESS CONNECTION				Model
Adjustable Set Point		Deadband		Over Range		Proof		Wetted Material	Thread	Sensor Style		
(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)				NPT (F)	
0 to 18	0 to 1,2	0.1 to 0.3	10 to 17,4 mbar	18	1,2	25	1,7	316L stainless steel	1/2	C	S142B	
0 to 18	0 to 1,2	0.1 to 0.3	10 to 17,4 mbar	18	1,2	25	1,7	Brass; Ni pl. Brass	1/4	A	142	
0 to 20	0 to 1,4	0.5 to 1	34,5 to 68,9 mbar	20	1,4	30	2,1	Ph. Bronze; Ni pl. Brass	1/4	B	222	
0 to 30	0 to 2,1	0.5 to 1	34,5 to 68,9 mbar	30	2,1	45	3,1	Ph. Bronze; Ni pl. Brass	1/4	B	224	
0 to 40	0 to 2,8	0.1 to 0.4	6,9 to 27,6 mbar	40	2,8	40	2,8	316L stainless steel	1/2	C	S148B	
0 to 40	0 to 2,8	0.1 to 0.4	6,9 to 27,6 mbar	40	2,8	40	2,8	Brass; Ni pl. Brass	1/4	A	148	
0 to 50	0 to 3,4	0.1 to 0.5	6,9 to 34,5 mbar	50	3,4	75	5,2	316L stainless steel	1/2	C	S152B	
0 to 50	0 to 3,4	0.1 to 0.5	6,9 to 34,5 mbar	50	3,4	75	5,2	Brass; Ni pl. Brass	1/4	A	152	
0 to 50	0 to 3,4	0.7 to 1.3	48,3 to 89,6 mbar	50	3,4	75	5,2	Ph. Bronze; Ni pl. Brass	1/4	B	226	
0 to 50	0 to 3,4	1.5 to 2.5	0,1 to 0,2	50	3,4	75	5,2	316L stainless steel	1/4	E	354	
0 to 50	0 to 3,4	1.5 to 2.5	0,1 to 0,2	50	3,4	75	5,2	Ph. Bronze; Ni pl. Brass	1/4	D	258	
3 to 100	0,2 to 6,9	0.2 to 0.8	13,8 to 55,2 mbar	100	6,9	125	8,6	316L stainless steel	1/2	C	S156B	
0 to 100	0 to 6,9	2 to 4	0,1 to 0,3	100	6,9	150	10,3	316L stainless steel	1/4	F	356	
0 to 100	0 to 6,9	2 to 5	0,1 to 0,3	100	6,9	150	10,3	Ph. Bronze; Ni pl. Brass	1/4	E	266	
0 to 100	0 to 6,9	1 to 2	68,9 mbar to 0,1 bar	100	6,9	110	7,6	Ph. Bronze; Ni pl. Brass	1/4	B	230	
3 to 100	0,2 to 6,9	0.2 to 0.8	13,8 to 55,2 mbar	100	6,9	125	8,6	Brass; Ni pl. Brass	1/4	A	156	

Pressure Models (up to 6000 psi, 413,7 bar)

PRESSURE								PROCESS CONNECTION			Model
Adjustable Set Point		Deadband		Over Range		Proof		Wetted Material	Thread	Sensor Style	
(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)				
50 to 180	3,4 to 12,4	0.3 to 1	20,7 to 68,9 mbar	180	12,4	180	12,4	316L stainless steel	1/2	C	S160B
50 to 180	3,4 to 12,4	0.3 to 1	20,7 to 68,9 mbar	180	12,4	180	12,4	Brass; Ni pl. Brass	1/4	A	160
0 to 200	0 to 13,8	0.3 to 2	20,7 to 137,9 mbar	200	13,8	200	13,8	316L stainless steel	1/2	C	S164B
0 to 200	0 to 13,8	3 to 5	0,2 to 0,3	200	13,8	250	17,2	Ph. Bronze; Ni pl. Brass	1/4	D	270
0 to 200	0 to 13,8	3 to 5	0,2 to 0,3	200	13,8	250	17,2	316L stainless steel	1/4	E	358
0 to 250	0 to 17,2	3 to 5	0,2 to 0,3	250	17,2	330	22,8	316L stainless steel	1/4	E	360
0 to 250	0 to 17,2	3 to 5	0,2 to 0,3	250	17,2	330	22,8	Ph. Bronze; Ni pl. Brass	1/4	D	272
0 to 300	0 to 20,7	4 to 6	0,3 to 0,4	300	20,7	350	24,1	Ph. Bronze; Ni pl. Brass	1/4	D	274
0 to 350	0 to 24,1	2 to 8	0,1 to 0,6	350	24,1	430	29,6	316L stainless steel	1/4	E	362
0 to 500	0 to 34,5	3 to 9	0,2 to 0,62	500	34,5	575	39,6	316L stainless steel	1/4	E	364
75 to 1000	5,2 to 68,9	30 to 150	2,1 to 10,3	1000	68,9	10,000	689,5	303 SS; Buna-N	1/4	F	610
100 to 1700	6,9 to 117,2	9 to 23	0,6 to 1,6	1700	117,2	2500	172,4	316L stainless steel	1/4	E	680
125 to 3000	8,6 to 206,8	40 to 250	2,8 to 17,2	3000	206,8	10,000	689,5	303 SS; Buna-N	1/4	F	612
500 to 6000	34,5 to 413,7	50 to 400	3,4 to 27,6	6000	413,7	10,000	689,5	303 SS; Buna-N	1/4	F	614

Common Options

Option	Description	Models						
		126-160	218-230	258-274	354-364	610-614	680	S126B-S164B
Switch options								
0140	Gold Contact, 1A 125 VAC resistive	•	•	•	•	•	•	•
0500	Close deadband, 5A 125/250 VAC resistive	•	•	•	•	•	•	•
1070 ^[1]	10 A 125 VDC resistive; deadband and minimum set point will increase	•	•	•	•	•	•	•
1520 ^[2]	Adjustable deadband, 15A 120/250/277 VAC resistive. Adjustment wheel changes rise setting only - if adjustment on fail setting is required, use primary adjustment. Note: Must select this option for models previously listed as J6D.	•	•					•
1530	External manual reset, latches on rise only, 15A 120/250/480 VAC resistive	•	•	•	•	•	•	•
2000 ^[1]	20A 120/250/480 VAC resistive	•	•	•	•	•	•	•
Misc. Options								
M201 ^[3]	Factory set one switch; specify increasing or decreasing pressure and set point	•	•	•	•	•	•	•
M444	Paper ID tag	•	•	•	•	•	•	•
M446	Stainless Steel tag	•	•	•	•	•	•	•
M277	Range indicated on nameplate in kPa or MPa factory selected	•	•	•	•	•	•	•
M278	Range indicated on nameplate in kg/cm²	•	•	•	•	•	•	•
M319	Diaphragm seal, consult UE.	•	•	•	•	•	•	•
M540 ^[4]	Viton elastomer					• ^[4]		
M550 ^[5]	Oxygen service cleaning	•	•		•	•	•	•
M913	1/4" NPT (female) 316L stainless steel pressure connection.							•
M914	1/2" NPT (female) 316L stainless steel pressure connection.				•			

• Available

[1] Deadband will increase with this switch option. Consult UE.

[2] Adjustable deadband switches are shipped with the minimum deadband setting as default. If M201 factory setpoint option is selected, the desired deadband must be provided with the set-point and if switched on rise or fall.

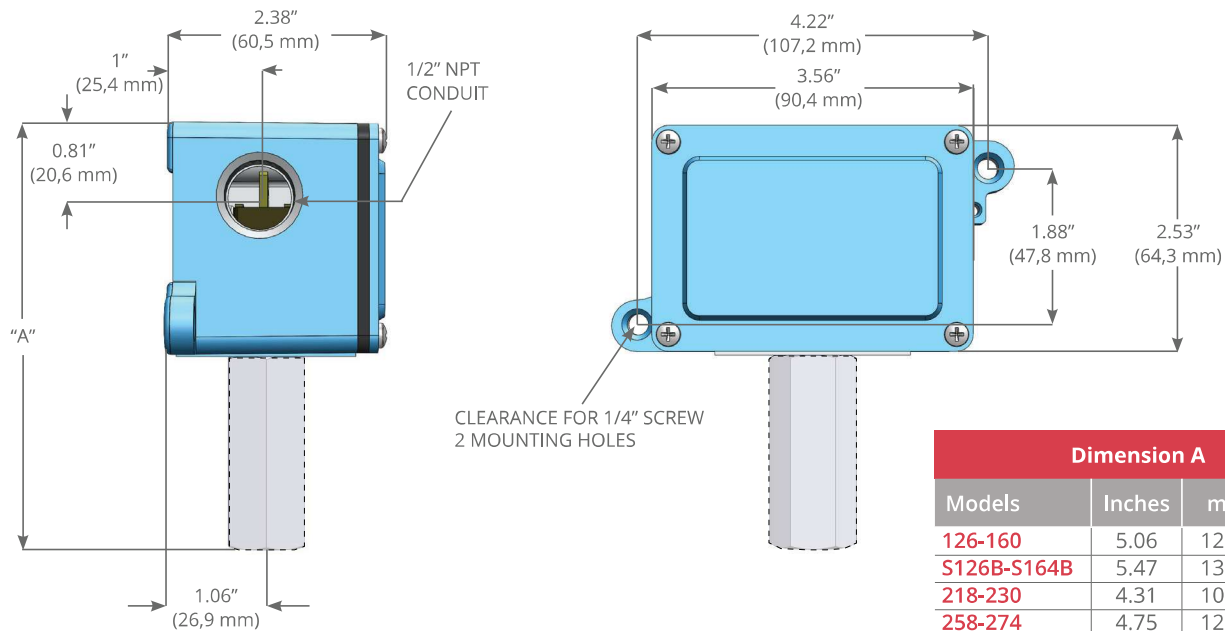
[3] Factory setpoint requires the setpoint, units of measure, and on rise or fall to be specified at the time of order. Selection of special switch options may require additional information. Consult UE.

[4] O-ring changes to Viton. Deadband and low end of range may increase; ambient temperature limits may be affected. Consult UE.

[5] O₂ cleaning in accordance with ASTM G93, verification type 1, tests 1-3.

Dimensional Drawings

Dimensions are for reference only. Drawings for all models may be found at www.ueonline.com



Dimension A			
Models	Inches	mm	NPT
126-160	5.06	128,5	1/4
S126B-S164B	5.47	138,9	1/2
218-230	4.31	109,5	1/4
258-274	4.75	120,7	1/4
354-364	4.78	121,4	1/4
610-614	5.72	145,3	1/4
680	4.97	126,2	1/4

Sensors

A



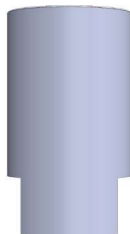
Bellows sensor with
1/4" NPT (F) pressure
connection
Models: 126-160

D



258-274

B



Model 218-230

E



354-364, 680

C



Welded bellows sensor
with 1/2" NPT (F)
pressure connection
Models: S126B-S164B

F



610-614

Certifications

	Region	Agency	Classification
	North America	UL	cULus Listed ANSI/UL 508 CSA-C22.2 No. 14
	Europe	ATEX	For intrinsic safety certification only. Must order option M405 (includes PESO) II 1 G Ex ia IIC T6 Ga Ta = -50 °C to +60 °C Compliant to Pressure Equipment Directive (PED) (2014/68/EU) Compliant to Low Voltage Directive (LVD) (2014/35/EU)
	International	IECEx	For intrinsic safety certification only. Must order option M405 (includes PESO) Ex ia IIC T6 Ga Ta = -50 °C to +60 °C UEC compliant to IEC 61058-1

Regional Certifications

	Country	Option	Classification
	China (CCC)	M408	Ex ia IIC T6 Ga Ta = -50 °C to +60 °C
	India (PESO)	M405	Ex ia IIC T6 Ga Ta = -50 °C to +60 °C
	United Kingdom (UKCA)	M462	II 1 G Ex ia IIC T6 Ga Ta = -50 °C to +60 °C
	Eurasian Economic Union	M406	0Ex ia IIC T6 Ga X Ta = -50 °C to +60 °C
	Taiwan		ITRI available through Taiwanese channel partner. Consult United Electric.

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