



100 Series

Weatherproof pressure, vacuum,
differential pressure and temperature switches

United Electric Controls is
ISO 9001:2015 certified



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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 or temperature 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.
Differential Proof Pressure	The maximum pressure difference that may be applied between the high and low ports of a differential pressure switch without causing damage. May cause the set point to shift resulting in the need for re-adjustment.
Working Pressure	The maximum pressure that may be applied simultaneously to the high and low ports. Note: In addition to the Working Pressure limit, the Adjustable Set point Range must be maintained.

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

Building a Part Number

EXAMPLE: **H100-186-0140**

Type: Switch type from table below:

Type	
Pressure	
H100	One SPDT output; epoxy coated enclosure; internal adjustment with "High-Low" reference scale
Differential Pressure	
H100K	One SPDT output; epoxy coated enclosure; internal adjustment with "High-Low" reference scale
Temperature	
B100	Immersion stem; one SPDT output; internal adjustment with reference dial
C100	Immersion stem; one SPDT output; internal adjustment with no reference
E100	Bulb and capillary; one SPDT output; internal adjustment with reference dial
F100	Bulb and capillary; one SPDT output; internal adjustment with no reference

Model: Select the range and materials best for your application

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Options: Select any of available options for your switch

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Specifications

Electrical Ratings without optional switches ^[1]

	Pressure & temperature	Wide Adjustable Deadband Models	Heat Trace (temperature)
Models	All Standard catalog models	15623, 15731 - 15737, 15884	B100-13546 & E100-13545
Electrical rating	15A @ 125/250/480 VAC Resistive; 2A Res. & 1A Inductive @ 24-30 VDC; 0.5A Res. & 0.03A Inductive @ 125 VDC	20A @ 125/250/480 VAC	22A @ 125/250/480 VAC

[1] DC ratings based on experience - Consult UE for further information. VDC ratings are not listed on nameplates.

Set point repeatability (% of full scale)

Temperature	All models	± 1%
Pressure & Differential	Models: 15623, 15731-15737, 171-174, 218, 270-376, 520-535, 540-543, 700-706	± 1%
	Models: 190-194, 183-189, 483-494, 544-548, 565-567, 610-680, 15884	± 1.5%

Temperature Limits ^[2]

		Ambient	Storage
Model	520-525, 540-548, 700-706, 15731-15737	0 to 160 °F (-17 to 71 °C)	-65 to 160 °F (-54 to 71 °C)
	All others	-40 to 160 °F (-40 to 71 °C)	-65 to 160 °F (-54 to 71 °C)

Set point typically shifts less than 1% of range for a 50 °F (28 °C) ambient temperature change; less than 2% for Type E100.

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

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	Certified to enclosure type 4X				
Switch Output	One SPDT snap action switch; switch may be wired “normally open” or “normally closed”				
Electrical connection	1/2” NPT (female); Two 7/8” diameter knockouts				
Deadband	Refer to model charts for details				
Alternate materials for wetted parts	The materials listed below are available on some switch models as an alternate material for wetted parts. Changes may affect the low end of range, deadband and temperature limits of the 100 series switches. Please consult UE when selecting these materials.				
	Aflas®	Buna-N	Kalrez®	Phosphor Bronze	Teflon®
	Aluminum	EPDM/EPR	Kapton®	Polyether / Polyurethane	Viton®
	Brass	Hastelloy®	Monel®	Stainless Steel	

Approx. Weight (lbs.)

Pressure Models	190-194, 490-494, 188-189, 488-489, 218-230, 270-274, 358-376, 700-706, 680, 15731-15736	2 lbs
	171-174, 471-474, 565-567, 610-616, 15884, 15623	2.5 lbs
	183-186, 483-486	3.5 lbs
	520-525, 530-535, 15737	6 lbs
Differential Pressure Models	540-548	6 lbs
Local Temperature	B100 & C100	2.5 lbs
Remote Temperature	F100 & E100	3 lbs

Type H100

Vacuum and Ultra Low Pressure Models (Adjustable Range Vacuum to 10 psi)

PRESSURE				PROCESS CONNECTION				Model
Adjustable Set Point ("wc)	Deadband ("wc)	Over Range (psi)	Proof (psi)	Wetted Material	Thread NPT (F)	Orifice ^[1] Inches	Sensor Style	
300 Vac to 0	0.2 to 8	100	100	Buna-N; Aluminum ^[3]	1/2"	0.62"	E	520
300 Vac to 0	0.2 to 15	50	100	316L SS	1/2"	0.72"	F	530
10 Vac to 10	0.1 to 0.6	100	100	Buna-N; Aluminum ^[3]	1/2"	0.62"	E	521
10 Vac to 10	0.1 to 0.6	50	100	316L SS	1/2"	0.72"	F	531
50 Vac to 50	0.1 to 3	100	100	Buna-N; Aluminum ^[3]	1/2"	0.62"	E	522
50 Vac to 50	0.1 to 3	50	100	316L SS	1/2"	0.72"	F	532
50 Vac to 50	0.5 to 10	100	100	Buna-N; Aluminum ^[3]	1/2"	0.62"	E	15737 ^[2]
0.5 to 5	0.1 to 0.3	100	100	Buna-N; Aluminum ^[3]	1/2"	0.62"	E	523
0.5 to 5	0.1 to 0.3	50	100	316L SS	1/2"	0.72"	F	533
2.5 to 50	0.1 to 0.8	100	100	Buna-N; Aluminum ^[3]	1/2"	0.62"	E	524
2.5 to 50	0.1 to 0.8	50	100	316L SS	1/2"	0.72"	F	534
10 to 250	0.1 to 6	100	100	Buna-N; Aluminum ^[3]	1/2"	0.62"	E	525
10 to 250	0.1 to 10	50	100	316L SS	1/2"	0.72"	F	535
30" Hg Vac to 0	1 to 2"Hg	3	30	Ph. Bronze; Ni pl. Brass	1/4"	0.06"	D	218

[1] Large 0.72" orifice can be used to provide clean-out. Small 0.06" orifice can be used to dampen pulsations from the process.

[2] Models that include adjustable deadband switch.
[3] Alternate wetted materials available.

Pressure Models (up to 100 psi)

PRESSURE				PROCESS CONNECTION				Model
Adjustable Set Point (psi)	Deadband (psi)	Over Range (psi)	Proof (psi)	Wetted Material	Thread NPT (F)	Orifice ^[4] Inches	Sensor Style	
1 to 20	0.3 to 2.5	500	1000	316 SS; Viton ^[6]	1/2"	0.72"	B	183
1 to 20	0.3 to 2.5	500	1000	316 SS; Viton ^[6]	1/2"	0.06"	B	483
1 to 20	0.1 to 1	500	1000	316L SS	1/2"	0.72"	A	171 ^[7]
1.5 to 30	1 to 2	500	600	Buna-N; Ni pl. Brass ^[6]	1/4"	0.06"	H	701
3 to 30	1.5 to 5	500	600	Buna-N; Ni pl. Brass	1/4"	0.06"	H	15731 ^[5]
5 to 30	1 to 6	1500	2500	316 SS	1/2"	0.70"	C	190
5 to 30	1 to 6	1500	2500	316 SS	1/2"	0.06"	C	490
5 to 30	1 to 5	1000	1500	316L SS	1.5" sanitary connection		G	565
2 to 50	0.3 to 3	500	1000	316 SS; Viton ^[6]	1/2"	0.72"	B	184
2 to 50	0.3 to 3	500	1000	316 SS; Viton ^[6]	1/2"	0.06"	B	484
2 to 50	0.1 to 1.5	500	1000	316L SS	1/2"	0.72"	A	172 ^[7]
3 to 100	1 to 4	500	600	Buna-N; Ni pl. Brass ^[6]	1/4"	0.06"	H	702
5 to 100	3 to 9	500	600	Buna-N; Ni pl. Brass	1/4"	0.06"	H	15732 ^[5]
4 to 100	0.5 to 6	500	1000	316 SS; Viton ^[6]	1/2"	0.72"	B	185
4 to 100	0.5 to 6	500	1000	316 SS; Viton ^[6]	1/2"	0.06"	B	485
10 to 100	1 to 15	1500	2500	316 SS	1/2"	0.70"	C	191
10 to 100	1 to 15	1500	2500	316 SS	1/2"	0.06"	C	491
4 to 100	0.1 to 2.5	500	1000	316L SS	1/2"	0.72"	A	173 ^[7]
10 to 100	1 to 12	1000	1500	316L SS	1.5" sanitary connection		G	566

[4] Large 0.72" orifice can be used to provide clean-out. Small 0.06" orifice can be used to dampen pulsations from the process.

[5] Models that include adjustable deadband switch.

[6] Alternate wetted materials available.

[7] The use of metallic diaphragms where higher pressure shock or heavy cycling is expected should be avoided, and not used where system or start-up vacuum might exceed 26" Hg Vac.

Type H100

Pressure Models (up to 5000 psi)

Adjustable Set Point	PRESSURE			PROCESS CONNECTION				Model
	Deadband	Over Range	Proof	Wetted Material	Thread	Orifice ⁽¹⁾	Sensor Style	
(psi)	(psi)	(psi)	(psi)		NPT (F)	Inches		
8 to 200	1 to 11	500	1000	316 SS; Viton ^[4]	1/2"	0.72"	B	186
8 to 200	1 to 11	500	1000	316 SS; Viton ^[4]	1/2"	0.06"	B	486
8 to 200	0.1 to 3.5	500	1000	316L SS	1/2"	0.72"	A	174 ^[3]
4 to 200	1 to 8	200	250	Ph. Bronze; Ni pl. Brass	1/4"	0.06"	D	270
15 to 200	1 to 6	200	800	316L SS	1/4"	0.09"	D	358
20 to 200	12 to 26	500	1000	316 SS; Viton	1/4"	0.06"	H	15623 ^[2]
9 to 300	1 to 5	500	600	Buna-N; Ni pl. Brass ^[4]	1/4"	0.06"	H	703
9 to 300	4 to 16	500	600	Buna-N; Ni pl. Brass	1/4"	0.06"	H	15733 ^[2]
15 to 300	1 to 25	1500	2500	316 SS	1/2"	0.70"	C	192
15 to 300	1 to 25	1500	2500	316 SS	1/2"	0.06"	C	492
15 to 300	3 to 22	1000	1500	316L SS	1.5" sanitary connection		G	567
20 to 300	1 to 7	300	800	316L SS	1/4"	0.09"	D	361
15 to 500	2 to 8	1500	2500	Buna-N; Ni pl. Brass ^[4]	1/4"	0.06"	H	704
15 to 500	8 to 31	1500	2500	Buna-N; Ni pl. Brass	1/4"	0.06"	H	15734 ^[2]
20 to 500	4 to 45	1500	2500	316 SS	1/2"	0.70"	C	193
20 to 500	4 to 45	1500	2500	316 SS	1/2"	0.06"	C	493
6 to 300	1 to 10	300	350	Ph. Bronze; Ni pl. Brass	1/4"	0.06"	D	274
25 to 500	1.5 to 8	500	800	316L SS	1/4"	0.09"	D	376
30 to 1000	3 to 20	1500	2500	Buna-N; Ni pl. Brass ^[4]	1/4"	0.06"	H	705
30 to 1000	9 to 90	1500	2500	Buna-N; Ni pl. Brass	1/4"	0.06"	H	15735 ^[2]
50 to 1000	10 to 125	2000	7000	316 SS; Viton ^[4]	1/2"	0.50"	B	188
50 to 1000	10 to 125	2000	7000	316 SS; Viton ^[4]	1/2"	0.06"	B	488
75 to 1000	30 to 150	6000	10000	303 SS, Buna-N	1/4"	0.06"	C	610
80 to 1700	5 to 150	2000	2500	316 SS	1/2"	0.70"	C	194
80 to 1700	5 to 150	2000	2500	316 SS	1/2"	0.06"	C	494
100 to 1700	10 to 30	2000	2500	Buna-N; Ni pl. Brass	1/4"	0.06"	H	706
100 to 1700	25 to 100	2000	2500	Buna-N; Ni pl. Brass	1/4"	0.06"	H	15736 ^[2]
100 to 1700	9 to 40	1700	2500	316 SS	1/4"	0.06"	D	680 ^[6]
125 to 3000	40 to 250	6000	10000	303 SS, Buna-N	1/4"	0.06"	C	612 ^[5]
250 to 3500	20 to 300	4000	7000	316 SS; Viton ^[4]	1/2"	0.50"	B	189
250 to 3500	20 to 300	4000	7000	316 SS; Viton ^[4]	1/2"	0.06"	B	489
700 to 5000	40 to 375	6000	10000	303 SS, Buna-N	1/4"	0.06"	C	616 ^[5]
700 to 5000	80 to 500	6000	10000	303 SS, Buna-N	1/4"	0.06"	C	15884 ^[2]

[1] Large 0.72" orifice can be used to provide clean-out. Small 0.06" orifice can be used to dampen pulsations from the process.

[2] Models that include adjustable deadband switch.

[3] The use of metallic diaphragms where higher pressure shock or heavy cycling is expected should be avoided, and not used where system or start-up vacuum might exceed 26" Hg Vac.

[4] Alternate wetted materials available.

[5] Not recommended for gas service due to potential drying of the O-ring.

[6] Not recommended for rapid, high cycle applications

Type H100K

Low Differential Pressure Models (up to 200" wcd)

Adjustable Set Point ("wcd)	PRESSURE			PROCESS CONNECTION				Model
	Deadband ("wc)	Working Pressure (psi)	Proof (psi)	Wetted Material ^[1]	Thread NPT (F)	Orifice Inches	Sensor Style	
0.2 to 7	0.05 to 0.6	30 "Hg Vac to 200	400	Buna-N; Aluminum	1/8"	0.12"	DF	540
1 to 20	0.1 to 1	30 "Hg Vac to 200	400	Buna-N; Aluminum	1/8"	0.12"	DF	541
5 to 50	0.2 to 2.5	30 "Hg Vac to 200	400	Buna-N; Aluminum	1/8"	0.12"	DF	542
10 to 200	0.5 to 8	30 "Hg Vac to 200	400	Buna-N; Aluminum	1/8"	0.12"	DF	543

[1] Stainless Steel wetted material with option M476

Differential Pressure Models (up to 500 psid)

Adjustable Set Point (psid)	PRESSURE			PROCESS CONNECTION				Model
	Deadband (psi)	Working Pressure (psi)	Proof (psi)	Wetted Material ^[1]	Thread NPT (F)	Orifice Inches	Sensor Style	
2 to 20	0.1 to 1.3	30 "Hg Vac to 1200	2500	Buna-N; Aluminum	1/8"	0.12"	DG	544
5 to 50	0.2 to 2.2	30 "Hg Vac to 1200	2500	Buna-N; Aluminum	1/8"	0.12"	DG	545
10 to 125	0.4 to 5	30 "Hg Vac to 1200	2500	Buna-N; Aluminum	1/8"	0.12"	DG	546
50 to 250	0.8 to 10	30 "Hg Vac to 1200	2500	Buna-N; Aluminum	1/8"	0.06"	DG	547
100 to 500	2 to 15	30 "Hg Vac to 1200	2500	Buna-N; Aluminum	1/8"	0.06"	DG	548

[1] Stainless Steel wetted material with option M476

Type B100, C100

Adjustable Set Point (°F)	TEMPERATURE			Material	STEM Size ^[2] (Diameter x Length)	Sensor Style	Type & Model
	Max (°F)	Dial Div. ^[1] (°F)	Deadband @70 °F TYP				
0 to 225	275	10	2%	Ni plated brass	9/16" x 1 7/8" below 1/2" NPT	TA	120
0 to 225	275	10	2%	316 SS	9/16" x 1 7/8" below 1/2" NPT	TA	120 + M504 option
200 to 425	475	10	2%	Ni plated brass	9/16" x 1 7/8" below 1/2" NPT	TA	121
200 to 425	475	10	2%	316 SS	9/16" x 1 7/8" below 1/2" NPT	TA	121 + M504 option
15 to 140	160	5	2%	304 SS	9/16" x 2-11/16 long	TA	13546 (B100 only) ^[3]

[1] Dial available on B100 only.

[3] Heat tracing

[2] Optional immersion stem lengths available. Consult UE.

Type E100

Adjustable Set Point (°F)	TEMPERATURE			Material	BULB Size (Diameter x Length)	Sensor Style ^{[4] [5]}	Model
	Max (°F)	Dial Div. (°F)	Deadband @70 °F TYP				
-120 to 100	150	10	2%	304 SS	3/8 x 2 5/8"	TB	2BSA
-120 to 100	150	10	2%	Copper	3/8 x 2 5/8"	TB	2BCA
30 to 250	300	10	2%	304 SS	3/8 x 2 5/8"	TB	2BSB
30 to 250	300	10	2%	Copper	3/8 x 2 5/8"	TB	2BCB
100 to 400	450	10	2%	304 SS	3/8 x 2 1/8"	TB	3BS
100 to 400	450	10	2%	Copper	3/8 x 2 1/8"	TB	3BC
25 to 100	150	2	2%	304 SS	3/8 x 6 3/4"	TB	4BS
25 to 100	150	2	2%	Copper	3/8 x 6 3/4"	TB	4BC
-20 to 80	130	5	2%	304 SS	3/8 x 5"	TB	5BS
-20 to 80	130	5	2%	Copper	3/8 x 5"	TB	5BC
350 to 640	690	10	2%	304 SS	3/8 x 3 1/4"	TB	8BS
350 to 640	690	10	2%	Copper	3/8 x 3 1/4"	TB	8BC
25 to 325	360	10	2%	304 SS	1/8 x 11 5/8"	TB	13545 ^[3]

[3] Heat tracing

[4] Standard capillary length is 6ft, except model 13545 which are 10 ft. Optional capillary lengths available. Consult UE.

[5] Optional stainless steel armored or Teflon covered capillary available. Consult UE.

All temperature sensors use non-toxic oil fill.

Type F100

TEMPERATURE			Material	BULB		Sensor Style ^[1] ^[2]	Model
Adjustable Set Point (°F)	Max (°F)	Deadband @70 °F TYP		Size (Diameter x Length)			
-125 to 350	400	1%	304 SS	3/8 x 2 5/8"		TB	2BS
-125 to 350	400	1%	Copper	3/8 x 2 5/8"		TB	2BC
-125 to 500	550	1%	304 SS	3/8 x 2 1/8"		TB	3BS
-125 to 500	550	1%	Copper	3/8 x 2 1/8"		TB	3BC
-40 to 120	170	1%	304 SS	3/8 x 6 3/4"		TB	4BS
-40 to 120	170	1%	Copper	3/8 x 6 3/4"		TB	4BC
-40 to 180	230	1%	304 SS	3/8 x 5"		TB	5BS
-40 to 180	230	1%	Copper	3/8 x 5"		TB	5BC
0 to 250	300	1%	304 SS	3/8 x 4.5"		TB	6BS
0 to 250	300	1%	Copper	3/8 x 4.5"		TB	6BC
0 to 400	450	1%	304 SS	3/8 x 3"		TB	7BS
0 to 400	450	1%	Copper	3/8 x 3"		TB	7BC
50 to 650	700	1%	304 SS	3/8 x 3 1/4"		TB	8BS
50 to 650	700	1%	Copper	3/8 x 3 1/4"		TB	8BC

[1] Standard capillary length is 6ft. Optional capillary lengths available. Consult UE.

[2] Optional stainless steel armored or Teflon covered capillary available. Consult UE.

Common Options

Option	Description	Models														Temperature Models	
		171-174, 471-474, 190-194, 490-494	183-189, 483-489	218-230	270-274	358-376	520-525	530-535	565-567	610-616	680	700-706	540-548	15623, 15731-15737	15884	All Temp. Models	13545 & 1546
Switch options																	
0140	Gold Contact, 1A 125 VAC resistive	•	•	•	•	•	•	•	•	•	•	•	•			•	
0500 ^[1]	Narrow deadband, 5A 125/250 VAC resistive	•	•	•	•	•			•	•	•	•					
1010 ^[1]	DPDT switch, 10A 250 VAC resistive			•	•	•				•		•					
1070 ^[1]	High DC, 10A 125 VDC resistive			•	•	•				•	•	•	•			•	
1519 ^{[1][2]}	Adjustable deadband, 15A 120/250/480 VAC resistive			•	•	•	•	•			•	•	•			•	
1530	External manual reset, latches on rise only, 15A 120/250/480 VAC resistive	•	•	•	•	•	•	•	•	•	•	•	•			•	
1535	High ambient up to 250 °F (121 °C) 15 A 250 VAC resistive	•	•	•	•	•			•	•	•	•	•			•	
2000 ^[1]	20A 120/250/480 VAC resistive	•	•	•	•	•			•	•	•	•				•	
3000 ^[1]	30A 120/250/277 VAC resistive			•	•	•				•		•				•	
Misc. Options																	
M020	External red light	•	•	•	•	•	•	•	•	•	•	•	•			•	
M201 ^[4]	Factory setting	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M400	SIL2 Certification	•	•	•	•	•	•	•	•	•	•	•	•			•	
M444	Paper ID tag	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•
M446	Stainless Steel tag	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Accessories																	
6361-704	Mounting bracket kit	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SD6286-51	1/2" NPT (F) conduit kit	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Available

[1] Deadbands will decrease or increase with these switch options. Consult UE.

[2] Not available on Types B100 and E100.

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

[4] Factory setpoint requires the setpoint, units, and rise or fall setting to be specified at the time of order. Selection of switch options may require additional information, consult UE.

Pressure Options

H100 & H100K

Option	Description	Models													
		171-174, 471-474, 190-194, 490-494	183-189, 483-489	218-230	270-274	358-376	520-525	530-535	565-567	610-616	680	700-706	540-548	15623, 15731-15737	15884
Wetted material options & other miscellaneous options															
M277	Range in KPa/MPa	●	●	●	●	●	●	●	●	●	●	●	●	●	
M278	Range in Kg/cm²	●	●	●	●	●	●	●	●	●	●	●	●	●	
M319	Diaphragm seal (Consult UE)	●	●	●	●	●	●	●	●	●	●	●	●		
M401	NACE MR0175 Compliance	● ^[1]	●												
M438 ^[2]	EN 10204 type 2.1 Declaration of Material Compliance	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M439 ^[2]	EN 10204 type 3.1 Declaration of Material Compliance with specific Material Certifications	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M449	Mounting bracket						●	●					●		
M476	Stainless steel differential pressure sensor option												●		
M540 ^[3]	Viton elastomer									●		● ^[4]	●		
M550 ^{[3] [5]}	Oxygen service cleaning	●	●	●	●	●	●	●	●	●	●	●	●	●	
M914	1/2" NPT (F) connection					●				●					
M921	Brass connection									●					
XC001 ^[3]	Viton Diaphragm and O-ring						●								
XC002 ^[6]	Kapton Diaphragm						●								
XC003 ^[3]	Kapton Diaph. / Viton seal						●								
XC004 ^[3]	316 Stainless Steel Diaph. /Viton seal						●								
XC005 ^[3]	316L Stainless Steel / Viton diaph.						●								
XC007 ^[3]	316L Stainless Steel / Teflon & Viton						●								
XD002	Hastelloy C276 Diaph.		●												
XD003	Monel 400 Diaph.		●												
XP112	Hastelloy C276 P/C		●												
XP113	Monel 400 P/C		●												
XR211 ^[6]	Kalrez O-ring		●												
XR213 ^[6]	EPR O-ring		●												
XR214 ^[6]	Aflas O-ring		●												

• Available

[1] Not available on model 194 & 494

[2] Consult UE for availability with wetted material option.

[3] O-ring changes to Viton, diaphragm material may change to Viton or Teflon, and pressure connection may change to 316 stainless steel depending on model. Deadband and low end of range may increase; ambient temperature limits may be affected. Consult UE.

[4] Not available on model 706

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

[6] Deadbands will decrease or increase with these switch options. Consult UE.

Temperature Options

Option	Replacement Part #	Material	Description	Local Stem Models ^[1]			Bulb and Capillary Models ^[2]							
				120	121	13546	2BS, 2BC, 2BSA, 2BCA, 2BSB, 2BCB	3BS, 3BC	4BS, 4BC	5BS, 5BC	6BS, 6BC	7BS, 7BC	8BS, 8BC	13545
M504		316L SS	Immersion Stem	•	•									
M550 ^[3]			O ₂ service cleaning	•	•		•	•	•	•	•	•	•	
Union Connectors for bulb & capillary models														
W027	SD6213-27	Brass	1/2" NPT W/3/4" bushing				•	•	•	•	•	•	•	
W028	SD6213-28	304 SS	1/2" NPT W/3/4" bushing				•	•	•	•	•	•	•	
W045	SD6213-45	Brass	3/4" NPT				•	•	•	•	•	•	•	
W046	SD6213-46	304 SS	3/4" NPT				•	•	•	•	•	•	•	
W051	SD6213-51	Brass	1/2" NPT				•	•	•	•	•	•	•	
W050	SD6213-50	304 SS	1/2" NPT				•	•	•	•	•	•	•	
Thermowells for bulb & capillary models														
W075	SD6225-75	Brass	4" BT, 1/2" NPT with 3/4" NPT adapter bushing				•	•				•	•	
W076	SD6225-76	316 SS	4.5" BT, 3/4" NPT				•	•				•	•	
W191	SD6225-191	Brass	4" BT, 1/2" NPT				•	•				•	•	
W193	SD6225-193	316 SS	4.5" BT, 1/2" NPT				•	•				•	•	
W118	SD6225-118	Brass	7" BT, 1/2" NPT with 3/4" NPT adapter bushing				•	•	•	•	•	•	•	
W119	SD6225-119	316 SS	7.5" BT, 3/4" NPT				•	•	•	•	•	•	•	
W192	SD6225-192	Brass	7" BT, 1/2" NPT				•	•	•	•	•	•	•	
W177	SD6225-177	316 SS	7.5" BT, 1/2" NPT				•	•	•	•	•	•	•	
Thermowells for all immersion stem models														
W139	SD6225-139	Brass	3/4" NPT x 1-23/32" Below Thread	•	•									
W140	SD6225-140	316 SS	3/4" NPT x 1-23/32" Below Thread	•	•									
W000 ^[4]		Brass	No thread	•	•									
W097	SD6225-97	Brass	1/2" NPT x 1-23/32" Below Thread	•	•									
W099	SD6225-99	316 SS	1/2" NPT x 1-23/32" Below Thread	•	•									

• Available

[1] Optional stem length and thermowells available. Consult UE.

[2] Optional capillary length and thermowells available. Consult UE.

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

[4] Option W000 is a special immersion stem construction that has no external thread. This option may be used with the following UE thermowells W097/W099 or customer supplied thermowell. It is secured with a set-screw.

Sensors

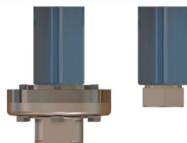
Pressure sensors

A



Models 171-174

B



[1]

[2]

[1] Models 183-186,
483-486

[2] Models 188-189,
488-489

C



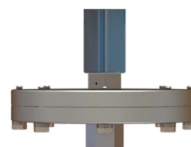
Models 190-194, 490-
494, 610-616 and 15584

D



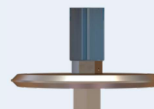
Models 218-274, 358-
376 and 680

E



Models 520-525 and
15737

F



Models 530-535

G



Models 565-567

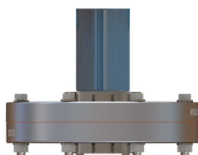
H



Models 701-706, 15623
and 15731-15736

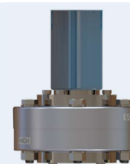
Differential Pressure sensors

DF



Models 540-543

DG



Models 544-548

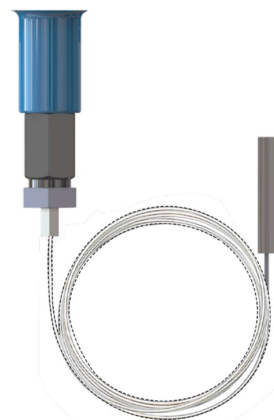
Temperature sensors

TA



Immersion stem with
1/2" NPT (M)
Models 120-121, 13272*,
13322*
* No NPT connection
available on these
models

TB

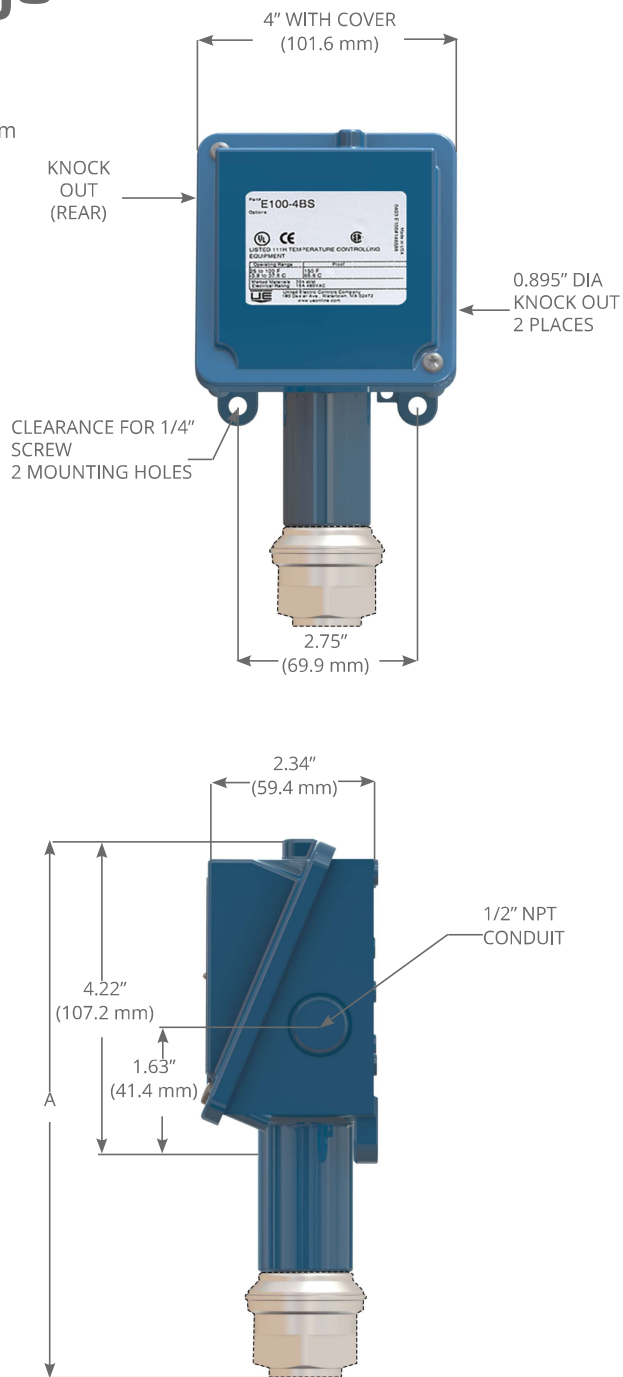


Bulb and capillary for
remote installations
Models 2BS-8BS,
2BC-8BC, 13273,
13321

Dimensional Drawings

All dimensions stated in inches (millimeters)
Dimensional drawings for all models may be found at www.ueonline.com

Dimension A		
Models	Inches	mm
Pressure		
171-174	7.63	193.8
183-186, 484-486	7.56	192.0
188-189, 488-489	6.63	168.4
190-194, 490-494	6.63	168.4
218	6.56	166.4
270-274	7.00	177.8
358-376	7.00	177.8
520-525, 15737	8.44	214.4
530-535	8.00	203.2
565-567	6.63	168.4
610-616, 680, 15884	7.00	177.8
701-706, 15623, 15731-15736	6.63	168.4
Differential Pressure		
540-543	8.47	215.2
544-548	8.53	216.7
Temperature		
120, 121, 13546	9.38	238.3
2BC-8BC, 2BS-8BS, 13545	8.69	220.7



Certifications

	Region	Agency	Classification
	North America	UL	Pressure Switch: UL E42272 ANSI/UL 508; CSA-C22.2 No. 14 Temperature Switch: UL E10667 UL 873; CSA-C22.2 No. 24
	Europe	ATEX	For intrinsic safety certification, 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, 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
	Brazil (INMETRO)	M391	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 UE.

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