



# 120 Series

Explosion-proof pressure, vacuum,  
differential pressure and temperature switches

METRIC UNITS



United Electric Controls is  
ISO 9001:2015 certified



# Table of Content      Glossary of Terms

**Types** ..... page 2  
**Specifications** ..... page 3  
**Models** ..... page 5  
**Options** ..... page 13  
**Sensors** ..... page 18  
**Dimensional drawings** ..... page 21  
**Certifications** ..... page 23

<b>Adjustable Set Point</b>	The upper and lower limits between which the set point can be adjusted. Low end of range on fall: set points on decreasing pressure or temperature at the lower end of range may be achieved; deadband will effect maximum set point (upper range) on fall. High end of range on rise: set points on increasing pressure or temperature at the upper end of range may be achieved; deadband will effect minimum set point (lower range) on rise.
<b>Over Range Pressure</b>	The maximum pressure that may be applied continuously without causing damage and maintaining set point repeatability
<b>Proof Pressure</b>	The maximum pressure to which a pressure sensor may be occasionally subjected which causes no permanent damage. The unit may require calibration (i.e., start-up, testing).

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

## Building a Part Number

EXAMPLE: **J120-551-M201**

Type: Switch type from table below: \_\_\_\_\_

Type	
Pressure	
<b>J120</b>	One SPDT; epoxy coated enclosure; internal adjustment, dual conduits
<b>H121</b>	One SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
<b>H122</b>	Two SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
Differential Pressure	
<b>J120K</b>	One SPDT; epoxy coated enclosure; internal adjustment, dual conduits
<b>H121K</b>	One SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
<b>H122K</b>	Two SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
Temperature	
<b>B121</b>	Immersion stem; one SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
<b>B122</b>	Immersion stem; two SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
<b>C120</b>	Immersion stem; one SPDT; epoxy coated enclosure; internal adjustment, dual conduits
<b>E121</b>	Bulb and capillary; one SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
<b>E122</b>	Bulb and capillary; two SPDT; epoxy coated enclosure; external adjustment with reference dial, single conduit
<b>F120</b>	Bulb and capillary; one SPDT; epoxy coated enclosure; internal adjustment, dual conduits

Model: Select the range and materials best for your application \_\_\_\_\_

**J120** ..... page 5-7  
**H121 / H122** ..... page 8-9  
**J120K** ..... page 10  
**H121K / H122K** ..... page 11  
**Temperature models** ..... page 12

Options: Select any of available options for your switch \_\_\_\_\_

**J120 and J120K** ..... page 13-14  
**H121/H122 and H121K / H122K** ..... page 15  
**Temperature models** ..... page 16-17

# Specifications

## Electrical Ratings \*

	Pressure & temperature	Specials (pressure)	Specials (temperature)
Model	Standard models	15622, 15834 - 15839, 15875	B121-13272, B122-13322, E121-13273 & E122-13321
<b>125/250/480 VAC</b>	15A Resistive	20A Resistive	22A Resistive
<b>24-30 VDC</b>	2A Resistive - 1A Inductive	6A Resistive	2A
<b>48 VDC</b>	2A Resistive - 1A Inductive		1A
<b>125 VDC</b>	0,5A Resistive - 0,03A Inductive	0,5A	0,5A Resistive - 0,04A Inductive
<b>250 VDC</b>		0,25A	

\* DC ratings based on experience - Consult UE for further information. VDC ratings are not listed on nameplates.

## Set point repeatability (% of full scale)

<b>Temperature</b>	Type B, C & F	± 1%
	Type E	± 2%
<b>Pressure &amp; Differential</b>	450 - 457, 550 - 559	± 0,5%
	36 - 39, 183 - 194, 483 - 494, 544 - 548, 565 - 567, 612 - 680, 15875	± 1,5%
	All Others	± 1%

## Temperature Limits

		Ambient	Storage
<b>Model</b>	36 - 39, 520 - 525, 540 - 548, 701 - 705, 15834 - 15839	-17 to 71 °C	-54 to 71 °C
	All others	-50 to 71 °C	-54 to 71 °C

Set point typically shifts less than 1% of range for a 28 °C ambient temperature change; less than 2% for Types E121 & E122.

<b>Shock</b>	Set point repeats after 15 G, 10 msec duration				
<b>Vibration</b>	Set point repeats after 2.5 G, 5-500 Hz				
<b>Enclosure</b>	Die cast aluminum, epoxy powder coated; gasketed; cover lock Internal set point lock standard on types J, C, F; gasketed stainless steel tamper-resistant dial cover on types B, H, E; Aluminum nameplate.				
<b>Enclosure classification</b>	Certified to enclosure type 4X. Class I, Division 1 product meets enclosure type 7; Class II, Division 1 product meets enclosure type 9. Certified to IP66 requirements. See Certifications (page 23) for hazardous location information.				
<b>Switch Output</b>	One or two SPDT; Dual switch may be separated up to 100% of range. Switch may be wired normally open or closed.				
<b>Reference Scales</b>	Types B, E, & H external dial. Scale divisions vary with range (see model charts).				
<b>Electrical connection</b>	Type H, B, E: one 3/4" NPT (19,1 mm) connection with terminal block. Type J, C, F: two 3/4" NPT (19,1 mm) connections with terminal block.				
<b>Pressure connection</b>	Refer to model charts for details. 1/2", 1/4", and 1/8" NPT female available. 1 1/2" flushmount sanitary fitting also available.				
<b>Deadband</b>	Refer to model charts for details.				
<b>Differential pressure indicator</b>	Option M210: Available for H121K and H122K. Accuracy approximately 1% at 50% range, 3% at ends; window is plexiglass and gasketed; indicator may be field adjusted approximately ±1% accuracy at any set point within range.				
<b>Alternate materials for wetted parts</b>	The materials listed below are available on some switch models as an alternate material for wetted parts. This change may affect the temperature limits of the 120 series switches. Please consult with United Electric when selecting these materials.				
	<b>Aflas®</b>	<b>Buna-N</b>	<b>Kalrez®</b>	<b>Phosphor Bronze</b>	<b>Teflon®</b>
	<b>Aluminum</b>	<b>EPDM/EPR</b>	<b>Kapton®</b>	<b>Polyether / Polyurethane</b>	<b>Viton®</b>
	<b>Brass</b>	<b>Hastelloy®</b>	<b>Monel®</b>	<b>Stainless Steel</b>	

# Specifications

Approx. Weight (lbs.)

Pressure models		
Type	Model	Weight
J120	126-164, 171-174, 188-194, 270-274, 356-376, 488-489, 490-494, 565-567, 612-616, 680, 701-705, 15622, 15834-15839, 15622	2,0 kg
	183-186, 483-486, S126B-S164B	2,3 kg
	450-454, 550-555	2,7 kg
	520-525, 530-535	3,8 kg
H121	126-164, 270-274, 358-376, 612-614, 15875	2,3 kg
	S126B-S164B, 701-705	2,5 kg
	450-454, 550-555	3,2 kg
H122	126-164, 270-274, 358-376, 612-614, 15875	2,5 kg
	S126B-S164B, 701-705	2,7 kg
	450-454, 550-555	3,4 kg
Differential pressure models		
Type	Model	Weight
J120K	455-457, 559	2,7 kg
	367	2,9 kg
	36-39, 147-157	3,2 kg
	S147B-S157B	3,4 kg
	540-548	4,5 kg
H121K	456-457, 559	3,2 kg
	147-157	3,6 kg
	S147B-S157B	3,8 kg
H122K	456-457, 559	3,4 kg
	147-157	3,8 kg
	S147B-S157B	4,1 kg
Temperature models		
Type	Model	Weight
C120	120, 121	1,8 kg
B121	120, 121, 13272	2,3 kg
B122	120, 121, 13322	2,7 kg
F120	2BS-8BS	1,8 kg
E121	2BSA-8BS, 13273	2,7 kg
E122	2BSA-8BS, 13321	2,9 kg

# J120 Series

Vacuum and Ultra Low Pressure Models (Vacuum to 622,3 mbar)

Adjustable Set Point (mbar)	PRESSURE			PROCESS CONNECTION				Model
	DEADBAND (mbar)	Over Range (bar)	Proof (bar)	Wetted Material	Thread NPT (F)	Orifice <sup>[1]</sup> (mm)	Sensor Style	
<b>-1 to -0,1 bar</b>	3,4 to 13,5	199,2 mbar	15,5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>550</b>
<b>-1 to -0,1 bar</b>	6,8 to 20,3	199,1 mbar	0,3	Brass; nickel plated brass; zinc plated steel	1/4"	1,5	A	<b>126</b>
<b>-1 to -0,1 bar</b>	3,4 to 10,2	199,1 mbar	15,5	316L SS; Buna-N	1/4"	5,6	G	<b>450</b>
<b>-1 to -0,1 bar</b>	6,8 to 20,6	199,1 mbar	0,3	Welded 316L SS	1/2"	3	B	<b>S126B</b>
<b>-746,7 to 0 bar</b>	0,5 to 19,9	6,9	6,9	Buna-N; Epoxy coated Al	1/2"	18,3	H	<b>520</b>
<b>-746,7 to 0 bar</b>	0,5 to 37,3	3,4	6,9	Welded 316L SS	1/2"	18,3	I	<b>530</b>
<b>-24,9 to 24,9 bar</b>	0,2 to 1,5	6,9	6,9	Buna-N; Epoxy coated Al <sup>[2]</sup>	1/2"	18,3	H	<b>521</b>
<b>-24,9 to 24,9 bar</b>	0,2 to 1,5	3,4	6,9	Welded 316L SS	1/2"	18,3	I	<b>531</b>
<b>1,2 to 12,4 bar</b>	0,2 to 0,7	6,9	6,9	Buna-N; Epoxy coated Al <sup>[2]</sup>	1/2"	18,3	H	<b>523</b>
<b>1,2 to 12,4 bar</b>	0,2 to 0,7	3,4	6,9	Welded 316L SS	1/2"	18,3	I	<b>533</b>
<b>-124,4 to 124,5</b>	0,2 to 7,5	6,9	6,9	Buna-N; Epoxy Coated Al <sup>[2]</sup>	1/2"	18,3	H	<b>522</b>
<b>-124,5 to 124,5</b>	0,2 to 7,5	3,4	6,9	Welded 316L SS	1/2"	18,3	I	<b>532</b>
<b>6,2 to 124,5</b>	0,2 to 2,0	6,9	6,9	Buna-N; Epoxy coated Al <sup>[2]</sup>	1/2"	18,3	H	<b>524</b>
<b>6,2 to 124,5</b>	0,2 to 2,0	3,4	6,9	Welded 316L SS	1/2"	18,3	I	<b>534</b>
<b>5 to 199,1</b>	2,5 to 10	199,1 mbar	15,5	Teflon; Viton; 316SS	1/4"	5,6	G	<b>551</b>
<b>5 to 199,1</b>	2 to 5	199,1 mbar	15,5	Buna-N; Aluminum	1/4"	5,6	G	<b>451</b>
<b>37,3 to 199,1</b>	2 to 6	199,1 mbar	0,3	Brass; Ni pl. Brass	1/4"	1,5	A	<b>137</b>
<b>37,3 to 199,1</b>	5 to 14,9	199,1 mbar	0,3	Welded 316L SS	1/2"	3	B	<b>S137B</b>
<b>24,9 to 622,3</b>	0,2 to 14,9	6,9	6,9	Buna-N; Epoxy coated Al <sup>[2]</sup>	1/2"	18,3	H	<b>525</b>
<b>24,9 to 622,3</b>	0,2 to 24,9	3,4	6,9	Welded 316L SS	1/2"	18,3	I	<b>535</b>

[1] Large 0.72" (18,3 mm) orifice can be used to provide clean-out purposes. Small 0.06" (1,5 mm) orifice is used to dampen pulsations from the process.

[2] Alternate wetted materials available.

# J120 Series

Pressure Models (up to 6,9 bar)

PRESSURE				PROCESS CONNECTION				Model
Adjustable Set Point (bar)	DEADBAND (mbar)	Over Range (bar)	Proof (bar)	Wetted Material	Thread NPT (F)	Orifice <sup>[1]</sup> (mm)	Sensor Style	
-1,0 to 1,4	6,8 to 16,9	1,4	15,5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>552</b>
-1,0 to 1,4	6,8 to 20,3	1,4	1,7	Brass; nickel plated brass; zinc plated steel	1/4"	1,5	A	<b>134</b>
-1,0 to 1,4	3,4 to 13,5	1,4	15,5	316L SS; Buna-N	1/4"	5,6	G	<b>452</b>
-1,0 to 1,4	6,8 to 20,3	1,4	1,7	316L SS	1/2"	3,0	B	<b>S134B</b>
34,5 mbar to 1,4	6,9 to 13,8	1,4	15,5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>553</b>
34,5 mbar to 1,4	3,4 to 6,9	1,4	15,5	Buna-N; Aluminum	1/4"	5,6	G	<b>453</b>
34,5 mbar to 1,4	6,9 to 20,7	1,4	1,7	Brass; Ni pl. Brass	1/4"	1,5	A	<b>144</b>
34,5 mbar to 1,4	6,9 to 20,7	1,4	1,7	316L SS	1/2"	3,0	B	<b>S144B</b>
68,9 mbar to 1,4	6,9 to 68,9	34,5	68,9	316L SS	1/2"	18,3	C	<b>171</b> <sup>[2]</sup>
0,1 to 1,4	20,7 to 172,4	34,5	68,9	316 SS; 316L SS Viton <sup>[4]</sup>	1/2"	18,3	D	<b>183</b>
0,1 to 1,4	20,7 to 172,4	34,5	68,9	316 SS; 316L SS Viton <sup>[4]</sup>	1/2"	1,5	D	<b>483</b>
55,2 mbar to 2,1	6,9 to 20,7	2,1	15,5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>554</b>
55,2 mbar to 2,1	3,4 to 13,8	2,1	15,5	Buna-N; Aluminum	1/4"	5,6	G	<b>454</b>
103,4 mbar to 2,1	68,9 to 0,1 bar	34,5	41,4	Buna-N; Ni pl. Brass <sup>[4]</sup>	1/4"	1,5	J	<b>701</b>
0,2 to 2,1	0,1 to 0,3 bar	34,5	68,9	Buna-N; Ni pl. Brass	1/4"	1,5	F	<b>15834</b> <sup>[3]</sup>
0,3 to 2,1	68,9 to 0,3 bar	68,9	103,4	Welded 316L SS	1.5" sanitary fitting		K	<b>565</b>
0,3 to 2,1	0,1 to 0,4 bar	103,4	172,4	316 SS	1/2"	18,3	E	<b>190</b>
0,3 to 2,1	0,1 to 0,4 bar	103,4	172,4	316 SS	1/2"	1,5	E	<b>490</b>
0,1 to 3,4	6,9 to 34,5	3,4	5,2	Brass; Ni pl. Brass	1/4"	1,5	A	<b>152</b>
0,1 to 3,4	6,9 to 34,5	3,4	5,2	316L SS	1/2"	3,0	B	<b>S152B</b>
0,1 to 3,4	6,9 to 103,4	34,5	68,9	316L SS	1/2"	18,3	C	<b>172</b> <sup>[2]</sup>
0,1 to 3,4	20,7 to 206,8	34,5	68,9	316 SS; 316L SS Viton <sup>[4]</sup>	1/2"	18,3	D	<b>184</b>
0,1 to 3,4	20,7 to 206,8	34,5	68,9	316 SS; 316L SS Viton <sup>[4]</sup>	1/2"	1,5	D	<b>484</b>
0,1 to 6,9	13,8 to 27,6	6,9	15,5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>555</b>
0,1 to 6,9	13,8 to 41,4	6,9	8,6	Brass; Ni pl. Brass	1/4"	1,5	A	<b>156</b>
0,1 to 6,9	13,8 to 41,4	6,9	8,6	316L SS	1/2"	3,0	B	<b>S156B</b>
0,2 to 6,9	68,9 to 0,3 bar	34,5	41,4	Buna-N; Ni pl. Brass <sup>[4]</sup>	1/4"	1,5	J	<b>702</b>
0,3 to 6,9	6,9 to 172,4	34,5	68,9	316L SS	1/2"	18,3	C	<b>173</b> <sup>[2]</sup>
0,3 to 6,9	34,5 to 413,7	34,5	68,9	316 SS; 316L SS Viton <sup>[4]</sup>	1/2"	18,3	D	<b>185</b>
0,3 to 6,9	34,5 to 413,7	34,5	68,9	316 SS; 316L SS Viton <sup>[4]</sup>	1/2"	1,5	D	<b>485</b>
0,3 to 6,9	0,2 to 0,6 bar	34,5	41,4	Buna-N; Ni pl. Brass	1/4"	1,5	F	<b>15835</b> <sup>[3]</sup>
0,7 to 6,9	68,9 to 0,8 bar	68,9	103,4	Welded 316L SS	1.5" sanitary fitting		K	<b>566</b>
0,7 to 6,9	0,1 to 1,0 bar	103,4	172,4	316 SS	1/2"	18,3	E	<b>191</b>
0,7 to 6,9	0,1 to 1,0 abr	103,4	172,4	316 SS	1/2"	1,5	E	<b>491</b>
1,0 to 6,9	48,3 to 124,1	6,9	55,2	316L SS	1/4"	1,5	F	<b>356</b>

[1] Large 0.72" (18,3 mm) orifice can be used to provide clean-out purposes. Small 0.06" (1.5 mm) orifice is used to dampen pulsations from the process.

[2] The use of metallic diaphragms where higher pressure shock or heavy cycling is expected should be avoided. Models 171-174 should not be used where system or start-up vacuum might exceed 26 " Hg Vac (-900 mbar).

[3] Model includes adjustable deadband switch.

[4] Alternate wetted materials available.

# J120 Series

Pressure Models (up to 344,7 bar)

Adjustable Set Point (bar)	PRESSURE			PROCESS CONNECTION				Model
	DEADBAND (bar)	Over Range (bar)	Proof (bar)	Wetted Material	Thread NPT (F)	Orifice <sup>[1]</sup> (mm)	Sensor Style	
<b>0,3 to 13,8</b>	0,1 to 0,3	13,8	17,2	Ph. Bronze; Ni pl. Brass	1/4"	1,5	F	<b>270</b>
<b>0,3 to 13,8</b>	13,8 to 68,9 mbar	13,8	13,8	Brass; Ni pl. Brass	1/4"	1,5	A	<b>164</b>
<b>0,3 to 13,8</b>	13,8 to 68,9 mbar	13,8	13,8	316L SS	1/2"	3,0	B	<b>S164B</b>
<b>0,6 to 13,8</b>	6,9 to 241,3 mbar	34,5	68,9	316L SS	1/2"	18,3	C	<b>174</b> <sup>[2]</sup>
<b>0,6 to 13,8</b>	0,1 to 0,8	34,5	68,9	316 SS; 316L SS; Viton <sup>[5]</sup>	1/2"	18,3	D	<b>186</b>
<b>0,6 to 13,8</b>	0,1 to 0,8	34,5	68,9	316 SS; 316L SS; Viton <sup>[5]</sup>	1/2"	1,5	D	<b>486</b>
<b>1,0 to 13,8</b>	0,1 to 0,4	13,8	55,2	316L SS	1/4"	1,5	F	<b>358</b>
<b>1,4 to 13,8</b>	0,8 to 1,8	34,5	68,9	316 SS; Viton	1/4"	1,5	J	<b>15622</b> <sup>[3]</sup>
<b>0,4 to 20,7</b>	0,1 to 0,3	20,7	24,1	Ph. Bronze; Ni pl. Brass	1/4"	1,5	F	<b>274</b>
<b>0,6 to 20,7</b>	68,9 mbar to 0,5	34,5	41,4	Buna-N; Ni pl. Brass <sup>[5]</sup>	1/4"	1,5	J	<b>703</b>
<b>0,6 to 20,7</b>	0,3 to 1,1	34,5	68,9	Buna-N; Ni pl. Brass	1/4"	1,5	F	<b>15836</b> <sup>[3]</sup>
<b>1,0 to 20,7</b>	0,2 to 1,5	68,9	103,4	Welded 316L SS	1.5" sanitary fitting		K	<b>567</b>
<b>1,0 to 20,7</b>	0,2 to 1,7	103,4	172,4	316 SS	1/2"	18,3	E	<b>192</b>
<b>1,0 to 20,7</b>	0,2 to 1,7	103,4	172,4	316 SS	1/2"	1,5	E	<b>492</b>
<b>1,4 to 20,7</b>	0,1 to 0,5	20,7	55,2	316L SS	1/4"	1,5	F	<b>361</b>
<b>1,0 to 34,5</b>	0,1 to 0,8	103,4	172,4	Buna-N; Ni pl. Brass <sup>[5]</sup>	1/4"	1,5	J	<b>704</b>
<b>1,0 to 34,5</b>	0,6 to 2,1	103,4	172,4	Buna-N; Ni pl. Brass	1/4"	1,5	F	<b>15837</b> <sup>[3]</sup>
<b>1,4 to 34,5</b>	0,3 to 3,1	103,4	172,4	316 SS	1/2"	18,3	E	<b>193</b>
<b>1,4 to 34,5</b>	0,3 to 3,1	103,4	172,4	316 SS	1/2"	1,5	E	<b>493</b>
<b>1,7 to 34,5</b>	0,1 to 0,6	34,5	55,2	316L SS	1/4"	1,5	F	<b>376</b>
<b>2,1 to 68,9</b>	0,2 to 1,5	103,4	172,4	Buna-N; Ni pl. Brass <sup>[5]</sup>	1/4"	1,5	J	<b>705</b>
<b>2,1 to 68,9</b>	0,6 to 6,2	103,4	172,4	Buna-N; Ni pl. Brass	1/4"	1,5	F	<b>15838</b> <sup>[3]</sup>
<b>3,4 to 68,9</b>	1,7 to 8,6	137,9	482,6	316 SS; 316L SS; Viton <sup>[5]</sup>	1/2"	18,3	E	<b>188</b>
<b>3,4 to 68,9</b>	1,7 to 8,6	137,9	482,6	316 SS; 316L SS; Viton <sup>[5]</sup>	1/2"	1,5	E	<b>488</b>
<b>5,5 to 117,2</b>	0,3 to 10,3	137,9	172,4	316 SS	1/2"	18,3	E	<b>194</b>
<b>5,5 to 117,2</b>	0,3 to 10,3	137,9	172,4	316 SS	1/2"	1,5	E	<b>494</b>
<b>6,9 to 117,2</b>	1,7 to 6,9	137,9	172,4	Buna-N; Ni pl. Brass	1/4"	1,5	F	<b>15839</b> <sup>[3]</sup>
<b>6,9 to 117,2</b>	0,6 to 2,8	117,2	172,4	316 SS	1/4"	1,5	F	<b>680</b> <sup>[6]</sup>
<b>8,6 to 206,8</b>	2,8 to 17,2	413,7	689,5	316 SS, Buna-N	1/4"	1,5	J	<b>612</b> <sup>[4]</sup>
<b>17,2 to 241,3</b>	3,4 to 20,7	275,8	482,6	316 SS; 316L SS; Viton <sup>[5]</sup>	1/2"	18,3	E	<b>189</b>
<b>17,2 to 241,3</b>	3,4 to 20,7	275,8	482,6	316 SS; 316L SS; Viton <sup>[5]</sup>	1/2"	1,5	E	<b>489</b>
<b>48,3 to 344,7</b>	2,8 to 25,9	413,7	689,5	316 SS, Buna-N	1/4"	1,5	J	<b>616</b> <sup>[4]</sup>

[1] Large 0.72" (18,3 mm) orifice can be used to provide clean-out purposes. Small 0.06" (1.5 mm) orifice is used to dampen pulsations from the process.

[2] The use of metallic diaphragms where higher pressure shock or heavy cycling is expected should be avoided. Models 171-174 should not be used where system or start-up vacuum might exceed 26" Hg Vac (-900 mbar).

[3] Model includes adjustable deadband switch.

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

[5] Alternate wetted materials available.

[6] Not recommended for rapid, high cycle applications.

# H121/H122 Series

Vacuum and Ultra Low Pressure Models (Adjustable range Vacuum to 199,1 mbar)

PRESSURE					PROCESS CONNECTION				Model
Adjustable Set Point (bar)	DEADBAND (mbar)	Over Range (bar)	Proof (bar)	Dial Division ( )	Wetted Material	Thread NPT (F)	Orifice <sup>[1]</sup> (mm)	Sensor Style	
<b>-1,0 to 0,0</b>	3,4 to 20,3	0,2	15,5		Teflon; Viton; 316L SS	1/4"	5,6	G	<b>550</b>
<b>-1,0 to 0,0</b>	6,8 to 30,5	0,2	0,3		Brass; nickel plated brass; zinc plated steel	1/4"	1,5	A	<b>126</b>
<b>-1,0 to 0,0</b>	3,4 to 13,5	0,2	15,5		316L SS; Buna-N	1/4"	5,6	G	<b>450</b>
<b>-1,0 to 0,0</b>	6,8 to 30,5	0,2	0,3		Welded 316L SS	1/2"	3,0	B	<b>S126B</b>
	<b>(mbar)</b>	<b>(mbar)</b>	<b>(bar)</b>	<b>( )</b>		<b>NPT (F)</b>	<b>(mm)</b>		
<b>5 to 199,1</b>	5 to 24,9	0,2	0,3		Brass; Ni pl. Brass	1/4"	1,5	A	<b>137 <sup>[2]</sup></b>
<b>6 to 199,1</b>	6 to 24,10	0,2	0,3		Welded 316L SS	1/2"	3,0	B	<b>S137B <sup>[2]</sup></b>

[1] Large 0.72" (18,3 mm) orifice can be used to provide clean-out purposes. Small 0.06" (1.5 mm) orifice is used to dampen pulsations from the process.

[2] Only available as H121.



# H121/H122 Series

Pressure Models (up to 413,7 bar)

Adjustable Set Point (bar)	PRESSURE				PROCESS CONNECTION				Model
	DEADBAND (mbar)	Over Range (bar)	Proof (bar)	Dial Division (kPa)	Wetted Material	Thread NPT (F)	Orifice <sup>[1]</sup> (mm)	Sensor Style	
<b>-1,0 to 1,4</b>	6,8 to 33,9	1,4	15,5	5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>552</b>
<b>-1,0 to 1,4</b>	6,8 to 40,6	1,4	1,7	5	Brass; nickel plated brass; zinc plated steel	1/4"	1,5	A	<b>134</b>
<b>-1,0 to 1,4</b>	6,8 to 33,9	1,4	15,5	5	316L SS; Buna-N	1/4"	5,6	G	<b>452</b>
<b>-1,0 to 1,4</b>	6,8 to 40,6	1,4	1,7	5	Welded 316L SS	1/2"	3,0	B	<b>S134B</b>
<b>0,0 to 1,4</b>	3,4 to 20,7	1,4	15,5	5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>553</b>
<b>0,0 to 1,4</b>	3,4 to 13,8	1,4	15,5	5	Buna-N; Aluminum	1/4"	5,6	G	<b>453</b>
<b>0,0 to 1,4</b>	6,9 to 34,5	1,4	1,7	5	Brass; Ni pl. Brass	1/4"	1,5	A	<b>144</b>
<b>0,0 to 1,4</b>	6,9 to 34,5	1,4	1,7	5	Welded 316L SS	1/2"	3,0	B	<b>S144B</b>
<b>0,0 to 2,1</b>	6,9 to 27,6	2,1	15,5	5	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>554</b>
<b>0,0 to 2,1</b>	3,4 to 20,7	2,1	15,5	5	Buna-N; Aluminum	1/4"	5,6	G	<b>454</b>
<b>0,0 to 2,1</b>	6,9 to 41,4	2,8	2,8	5	Brass; Ni pl. Brass	1/4"	1,5	A	<b>146</b>
<b>0,0 to 2,1</b>	6,9 to 41,4	2,8	2,8	5	Welded 316L SS	1/2"	3,0	B	<b>S146B</b>
<b>(bar)</b>	<b>(bar)</b>	<b>(bar)</b>	<b>(bar)</b>	<b>(kPa)</b>		<b>NPT (F)</b>	<b>(mm)</b>		
<b>0,2 to 2,1</b>	0,1 to 0,2	34,5	41,4	5	Buna-N; Ni pl. Brass <sup>[2]</sup>	1/4"	1,5	J	<b>701<sup>[5]</sup></b>
<b>0,0 to 6,9</b>	0,0 to 0,1	6,9	15,5	25	Teflon; Viton; 316L SS	1/4"	5,6	G	<b>555</b>
<b>0,0 to 6,9</b>	0,0 to 0,1	6,9	8,6	25	Brass; Ni pl. Brass	1/4"	1,5	A	<b>156</b>
<b>0,0 to 6,9</b>	0,0 to 0,1	6,9	8,6	25	Welded 316L SS	1/2"	3,0	B	<b>S156B</b>
<b>0,7 to 6,9</b>	0,1 to 0,3	34,5	41,4	25	Buna-N; Ni pl. Brass <sup>[2]</sup>	1/4"	1,5	J	<b>702</b>
<b>0,0 to 13,8</b>	0,1 to 0,6	13,8	17,2	0.05 MPa	Ph. Bronze; Ni pl. Brass	1/4"	1,5	L	<b>270</b>
<b>0,0 to 13,8</b>	0,0 to 0,1	13,8	13,8	0.05 MPa	Brass; Ni pl. Brass	1/4"	1,5	A	<b>164</b>
<b>0,0 to 13,8</b>	0,0 to 0,1	13,8	13,8	0.05 MPa	Welded 316L SS	1/2"	3,0	B	<b>S164B</b>
<b>0,0 to 13,8</b>	0,1 to 0,6	13,8	17,2	0.05 MPa	316L SS	1/4"	1,5	L	<b>358</b>
<b>0,0 to 20,7</b>	0,1 to 0,7	20,7	24,1	0.1 MPa	Ph. Bronze; Ni pl. Brass	1/4"	1,5	L	<b>274</b>
<b>0,0 to 20,7</b>	0,1 to 0,6	13,8	24,1	0.1 MPa	316L SS	1/4"	1,5	L	<b>361</b>
<b>2,1 to 20,7</b>	0,1 to 0,5	34,5	41,4	0.1 MPa	Buna-N; Ni pl. Brass <sup>[2]</sup>	1/4"	1,5	J	<b>703</b>
<b>0,0 to 34,5</b>	0,2 to 0,8	13,8	39,6	0.1 MPa	316L SS	1/4"	1,5	L	<b>376</b>
<b>3,4 to 34,5</b>	0,2 to 0,8	103,4	172,4	0.1 MPa	Buna-N; Ni pl. Brass <sup>[2]</sup>	1/4"	1,5	J	<b>704</b>
<b>13,8 to 68,9</b>	0,3 to 1,7	103,4	172,4	0.25 MPa	Buna-N; Ni pl. Brass <sup>[2]</sup>	1/4"	1,5	J	<b>705</b>
<b>13,8 to 206,8</b>	2,8 to 17,2	413,7	689,5	0.5 MPa	316 SS, Buna-N <sup>[3]</sup>	1/4"	1,5	J	<b>612<sup>[4]</sup></b>
<b>34,5 to 413,7</b>	10,3 to 51,7	413,7	689,5	1 MPa	303 SS, Buna-N <sup>[3]</sup>	1/4"	1,5	L	<b>15875<sup>[4]</sup> [5]</b>
<b>34,5 to 413,7</b>	3,4 to 41,4	413,7	689,5	2 MPa	316 SS, Buna-N <sup>[3]</sup>	1/4"	1,5	J	<b>614<sup>[4]</sup></b>

[1] Large 0.72" (18,3 mm) orifice can be used to provide clean-out purposes. Small 0.06" (1.5 mm) orifice is used to dampen pulsations from the process.

[2] Alternate wetted materials available.

[3] Model includes adjustable deadband switch.

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

[5] Only available as H121.

# J120K Series

Low Differential Pressure Models (up to 497,8 mbar)

PRESSURE				PROCESS CONNECTION				Model
Adjustable Set Point (mbar)	DEADBAND (mbar)	Working (bar)	Proof (bar)	Wetted Material	Thread NPT (F)	Orifice (mm)	Sensor Style	
0,5 to 17,4	0,1 to 1,5	13,8	27,6	Buna-N; Aluminum	1/8"	3,0	DF	<b>540</b>
2,5 to 49,8	0,2 to 2,5	13,8	27,6	Buna-N; Aluminum	1/8"	3,0	DF	<b>541</b>
12,4 to 124,5	0,5 to 6,2	13,8	27,6	Buna-N; Aluminum	1/8"	3,0	DF	<b>542</b>
12,4 to 199,1	2,5 to 10,0	15,5	15,5	Buna-N; Aluminum	1/4"	3,0	DD	<b>455</b>
24,9 to 497,8	1,2 to 19,9	13,8	27,6	Buna-N; Aluminum	1/8"	3,0	DF	<b>543</b>

Differential Pressure Models (up to 34,5 bar)

PRESSURE				PROCESS CONNECTION				Model
Adjustable Set Point (bar)	DEADBAND (bar)	Working (bar)	Proof (bar)	Wetted Material	Thread NPT (F)	Orifice (mm)	Sensor Style	
0,1 to 1,4	6,9 to 20,7 mbar	15,5	15,5	Buna-N; Aluminum	1/4"	3,0	DD	<b>456</b>
0,1 to 1,4	6,9 to 89,6 mbar	82,7	172,4	Buna-N; Aluminum	1/8"	3,0	DG	<b>544</b>
0,2 to 2,1	0,1 to 0,3	24,1	68,9	316 SS; Buna-N	1/4"	1,5	DB	<b>36</b>
0,2 to 2,1	20,7 to 103,4 mbar	6,9	12,4	Brass; Ni pl. Brass	1/4"	1,5	DC	<b>147</b>
0,2 to 2,1	20,7 to 103,4 mbar	6,9	20,7	316L SS	1/2"	3,0	DE	<b>S147B</b>
0,2 to 2,1	6,9 to 27,6 mbar	15,5	15,5	Buna-N; Aluminum	1/4"	3,0	DD	<b>457</b>
0,3 to 3,4	13,8 mbar to 0,2	82,7	172,4	Buna-N; Aluminum	1/8"	3,0	DG	<b>545</b>
0,7 to 6,9	34,5 to 137,9 mbar	10,3	12,4	Brass; Ni pl. Brass	1/4"	1,5	DC	<b>157</b>
0,7 to 6,9	34,5 to 137,9 mbar	12,4	20,7	316L SS	1/2"	3,0	DE	<b>S157B</b>
0,7 to 6,9	0,1 to 0,6	34,5	68,9	316 SS; Buna-N	1/4"	1,5	DB	<b>37</b>
0,7 to 6,9	0,3 to 0,7	24,1	34,5	316L SS	1/4"	1,5	DA	<b>367</b>
0,7 to 6,9	13,8 to 68,9 mbar	15,5	15,5	Buna-N; Teflon; Aluminum	1/4"	3,0	DD	<b>559</b>
0,7 to 8,6	27,6 mbar to 0,3	82,7	172,4	Buna-N; Aluminum	1/8"	3,0	DG	<b>546</b>
3,4 to 17,2	0,1 to 0,7	82,7	172,4	Buna-N; Aluminum	1/8"	3,0	DG	<b>547</b>
2,1 to 20,7	0,1 to 1,0	68,9	172,4	316 SS; Buna-N	1/4"	1,5	DB	<b>38</b>
3,4 to 34,5	0,2 to 1,4	68,9	172,4	316 SS; Buna-N	1/4"	1,5	DB	<b>39</b>
6,9 to 34,5	0,1 to 1,0	82,7	172,4	Buna-N; Aluminum	1/8"	3,0	DG	<b>548</b>

# H121K/H122K Series

Differential Pressure Models (up to 6,9 bar)

Adjustable Set Point (bar)	PRESSURE				PROCESS CONNECTION				Model
	DEADBAND (mbar)	Over Range (bar)	Proof (bar)	Dial Division (kPa)	Wetted Material	Thread NPT (F)	Orifice (mm)	Sensor Style	
<b>0,1 to 1,4</b>	6,9 to 20,7	15,5	15,5	5	Buna-N; Aluminum	1/4"	3,0	DD	<b>456</b>
<b>0,2 to 2,1</b>	20,7 to 137,9	6,9	12,4	5	Brass; Ni pl. Brass	1/4"	1,5	DC	<b>147</b>
<b>0,2 to 2,1</b>	20,7 to 137,9	6,9	20,7	5	316L SS	1/2"	3,0	DE	<b>S147B</b>
<b>0,2 to 2,1</b>	6,9 to 27,6	15,5	15,5	5	Buna-N; Aluminum	1/4"	3,0	DD	<b>457</b>
<b>0,7 to 6,9</b>	34,5 to 206,8	10,3	12,4	25	Brass; Ni pl. Brass	1/4"	1,5	DC	<b>157</b>
<b>0,7 to 6,9</b>	34,5 to 206,8	12,4	20,7	25	316L SS	1/2"	3,0	DE	<b>S157B</b>
<b>0,7 to 6,9</b>	13,8 to 68,9	15,5	15,5	25	Buna-N; Teflon; Aluminum	1/4"	3,0	DD	<b>559</b>

# B, C, E & F Series

## Type B121 & B122, C120

TEMPERATURE				Material	STEM Size <sup>[2]</sup> (Diameter x Length)	Sensor Style	Model
Adjustable Set Point (°C)	Max (°C)	Dial Div. <sup>[1]</sup> (°C)	Deadband @21 °C TYP				
-18 to 107	135	5	2%	Ni plated brass	14.3 mm x 47.7 mm below 1/2" NPT	TA	<b>120</b>
-18 to 107	135	5	2%	316SS	14.3 mm x 47.7 mm below 1/2" NPT	TA	<b>120 + M504</b>
93 to 218	246	5	2%	Ni plated brass	14.3 mm x 47.7 mm below 1/2" NPT	TA	<b>121</b>
93 to 218	246	5	2%	316SS	14.3 mm x 47.7 mm below 1/2" NPT	TA	<b>121 + M504</b>
-9 to 60	71	2	2%	304SS	14.3 mm x 68.3 mm long	TA	<b>13272 (B121 only) <sup>[3]</sup></b>
-9 to 60	71	2	2%	304SS	14.3 mm x 68.3 mm long	TA	<b>13322 (B122 only) <sup>[3]</sup></b>

[1] Dial available on B121 and B122 only.

[3] Heat tracing

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

## Type E121 & E122

TEMPERATURE				Material <sup>[2]</sup>	BULB Size <sup>[1]</sup> (Diameter x Length)	Sensor Style	Model
Adjustable Set Point (°C)	Max (°C)	Dial Div. (°C)	Deadband @21 °C TYP				
-84 to 38	66	5	2%	304SS	9.6 mm x 66.7 mm	TB	<b>2BSA</b>
-1 to 121	149	5	2%	304SS	9.6 mm x 66.7 mm	TB	<b>2BSB</b>
38 to 204	232	5	2%	304SS	9.6 mm x 54 mm	TB	<b>3BS</b>
-4 to 38	66	1	2%	304SS	9.6 mm x 171.5 mm	TB	<b>4BS</b>
-29 to 27	54	2	2%	304SS	9.6 mm x 127 mm	TB	<b>5BS</b>
177 to 338	366	5	2%	304SS	9.6 mm x 82.6 mm	TB	<b>8BS</b>
-4 to 163	182	5	2%	304SS	6.4 mm x 241.3 mm	TB	<b>13273 (E121 only) <sup>[3]</sup></b>
-4 to 163	182	5	2%	304SS	6.4 mm x 241.3 mm	TB	<b>13321 (E122 only) <sup>[3]</sup></b>

[1] Optional capillary lengths available. Standard capillary length is 6ft, except models 13321 and 13273 which are 10 ft. Consult UE.

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

[3] Heat tracing

## Type F120

TEMPERATURE			Material	BULB Size <sup>[1]</sup> (Diameter x Length)	Sensor Style	Model
Adjustable Set Point (°C)	Max (°C)	Deadband @21 °C TYP				
-87 to 177	204	1%	304SS	9.6 mm x 66.7 mm	TB	<b>2BS</b>
-87 to 260	288	1%	304SS	9.6 mm x 54 mm	TB	<b>3BS</b>
-40 to 49	77	1%	304SS	9.6 mm x 171.5 mm	TB	<b>4BS</b>
-40 to 82	110	1%	304SS	9.6 mm x 122.5 mm	TB	<b>5BS</b>
-18 to 121	149	1%	304SS	9.6 mm x 110.3 mm	TB	<b>6BS</b>
-18 to 204	232	1%	304SS	9.6 mm x 76.2 mm	TB	<b>7BS</b>
10 to 343	371	1%	304SS	9.6 mm x 82.6 mm	TB	<b>8BS</b>

[1] Optional capillary lengths available. Consult UE.

# Pressure Options

## J120

Option	Description	J120 Models																J120K Models											
		126-164	171-174	183-186	188-189	190-194	270-274	356-376	450-454	483-486	488-489	490-494	520-525	530-535	550-555	565-567	612-616	680	701-705	15622	15834-15839	S126B-S164B	36 - 39	147 - 157	367	455 - 457	540-548	559	S147B - S157B
<b>Switch options</b>																													
<b>0140</b>	1A Gold Contact	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>0500</b>	5A low Deadband	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>1010</b>	10A 250VAC DPDT	•																											
<b>1070</b>	10A 125VDC																												
<b>1180</b>	11A Hermetic switch SPDT	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>1190</b>	11A Hermetic switch DPDT, set on Rise	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>1195</b>	11A Hermetic switch DPDT, set on fall	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>1519<sup>[2]</sup></b>	Adjustable deadband	•																											
<b>2000</b>	20A 480VAC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>3000</b>	30A 277VAC	•																											
<b>Miscellaneous options</b>																													
<b>M201<sup>[3]</sup></b>	Factory set one switch	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>M277</b>	Range in KPa/MPa	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>M278</b>	Range in Kg/cm2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>M400</b>	SIL2 (Consult factory)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>M401</b>	NACE® MR0175 <sup>[1]</sup>	•	•	•	•	•																							
<b>M444</b>	Paper ID tag	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>M446</b>	Stainless steel tag	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>M449</b>	Mounting bracket																												
<b>M550</b>	O <sub>2</sub> service cleaning	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard

[1] Consult UE. Potential impact on sensor repeatability, dead-band and overpressure limits. Excludes 194 and 494.

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

[3] 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

# Pressure Options

J120

Option	Description	J120 Models																J120K Models											
		126-164	171-174	183-186	188-189	190-194	270-274	356-376	450-454	483-486	488-489	490-494	520-525	530-535	550-555	565-567	612-616	680	701-705	15622	15834-15839	S126B-S164B	36 - 39	147 - 157	367	455 - 457	540-548	559	S147B - S157B
Pressure Connection Materials (Listed as "Pressure connection; diaphragm; O-Ring" unless otherwise noted)																													
M319	Diaphragm seal (consult factory)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M476	Stainless diff. diaphragm																												
M540	Standard + Viton <sup>[1]</sup>							•								•		•					•			•	•		
M913	1/4" NPT(F) stainless steel				•																	•							
M914	1/2" NPT(F) stainless steel						•										•												
XC001	Aluminum; Viton; Viton											•																	
XC002	Aluminum; Kapton; Buna N											•																	
XC003	Aluminum; Kapton; Viton											•																	
XC004	316LSS; 316LSS; Viton <sup>[2]</sup>											•																	
XC005	316LSS; Viton; Viton											•																	
XC007	316LSS; Teflon; Viton											•																	
XD002	Hastelloy C276 diaphragm			•	•				•	•																			
XD003	Monel 400 diaphragm			•	•				•	•																			
XP112	Hastelloy C276 press. Conn.			•	•				•	•																			
XP113	Monel 400 press. Conn.			•	•				•	•																			
XR211	Kalrez O-ring seal			•	•				•	•																			
XR213	EPR O-ring seal			•	•				•	•																			
XR214	Aflas O-ring seal			•	•				•	•																			
Accessories																													
6361-704	Mounting bracket kit	•	•	•	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
6361-761	1/4" NPT to G1/2 male adapter	•				•	•	•							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
6361-762	1/2" NPT to G1/2 male adapter	•	•	•	•				•	•	•	•	•									•							•

• Standard

[1] Includes adjustable deadband switch.

[2] Deadband and low end of range may increase.

# Pressure Options

H121 / H122

Option	Description	PRESSURE																DIFFERENTIAL PRESSURE											
		H121 Models								H122 Models								H121K models			H122K models								
		15875[i]	126 - 164	270 - 274	358 - 376	450 - 454	550 - 555	612 - 614	701 - 705	704 - 705	S126B - S164B	126 - 164	270 - 274	358 - 376	450 - 454	550 - 555	612 - 614	701 - 705	704 - 705	S126B - S164B	147 - 157	456 - 457	559	S147B - S157B	147 - 157	456 - 457	559	S147B - S157B	
<b>Switch options</b>																													
0140	1A Gold Contact		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
0500	5A low Deadband		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
1010	10A 250VAC DPDT		●	●	●	●	●	●	●	●												●	●	●	●	●			
1070	10A 125VDC		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
1180	11A Hermetic switch SPDT		●	●	●	●	●	●	●	●																			
1190	11A Hermetic switch DPDT, set on rise		●	●	●	●	●	●	●	●																			
1195	11A Hermetic switch DPDT, set on fall		●	●	●	●	●	●	●	●																			
2000	20A 480VAC		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<b>Miscellaneous options</b>																													
M201 [2]	Factory set one switch	●	●	●	●	●	●	●	●	●												●	●	●	●				
M202 [2]	Factory set two switches									●	●	●	●	●	●	●	●	●	●	●	●					●	●	●	●
M210	Differential press. indicator																					●		●	●			●	
M277	Range in KPa/MPa		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
M278	Range in Kg/cm2		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
M400	SIL2 (Consult factory)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
M444	Paper ID tag		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
M446	Stainless Steel Tag	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
M550	O <sub>2</sub> service cleaning		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<b>Pressure Connection Materials</b>																													
M319	Diaphragm seal (Consult factory)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
M540	Standard + Viton [1]				●		●	●														●				●			
M913	1/4" NPT(F) stainless steel								●										●										
914	1/2" NPT(F) stainless steel			●			●				●			●			●												
<b>Accessories</b>																													
6361-704	Mounting bracket kit	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
6361-761	1/4" NPT to G1/2 male adapter	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●	
6361-762	1/2" NPT to G1/2 male adapter								●										●					●				●	

● Standard

[1] Deadband and low end of range may increase

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

# Temperature Options

B, C, E and F temperature model options

Option #	Description	C120	B121		B122		F120	E121		E122	
		120 - 121	120 - 121	13272	120 - 121	13322	2BS - 8BS	2BSA - 8BS	13273	2BSA - 8BS	13321
<b>Switch options</b>											
0140	1A Gold Contact	•	•		•		•	•		•	
0500	5A low Deadband	•	•		•		•	•		•	
1070	10A 125VDC	•	•				•	•		•	
1180	11A Hermetic switch SPDT	•	•				•	•			
1190	11A Hermetic switch DPDT, set on Rise	•	•				•	•			
1195	11A Hermetic switch DPDT, set on fall	•	•				•	•			
1519 <sup>[1]</sup>	Adjustable deadband	•					•				
2000	20A 480VAC	•	•		•		•	•		•	
3000	30A 277VAC	•					•	•			
<b>Miscellaneous options</b>											
M201	Factory setting	•	•	•			•	•	•		
M202	Factory setting				•	•				•	•
M400	SIL2 (Consult factory)	•	•		•		•	•		•	
M444	Paper ID tag	•	•	•	•	•	•	•	•	•	•
M446	SS tag	•	•	•	•	•	•	•	•	•	•
M504	316L SS Immersion Stem	•	•		•						
M550	O <sub>2</sub> service cleaning	•	•		•		•	•		•	
<b>Accessories</b>											
6361-704	Mounting bracket kit	•	•	•	•	•	•	•	•	•	•

• Standard

[1] Adjustable deadband switch can only be set on rise. It will ship with the lowest deadband setting.

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



# Temperature Options

B, C, E and F temperature model options

Option	Description	Material	Replacement Part
Union Connectors for bulb & capillary models except for 13273 & 13321			
<b>W027</b>	1/2" NPT with 3/4" bushing	Brass	SD6213-27
<b>W028</b>	1/2" NPT with 3/4" bushing	304 SS	SD6213-28
<b>W045</b>	3/4" NPT	Brass	SD6213-45
<b>W046</b>	3/4" NPT	304 SS	SD6213-46
<b>W050</b>	1/2" NPT	304 SS	SD6213-50
<b>W051</b>	1/2" NPT	Brass	SD6213-51



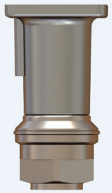

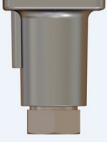

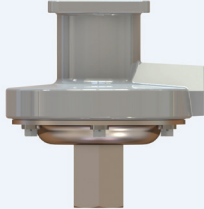
Option	Description	Material	Replacement Part
Thermowells for bulb & capillary <sup>[2]</sup> models except for 13272 & 13322			
<b>W075</b>	4" BT (101,6 mm BT), 1/2" NPT with 3/4" NPT adapter bushing	Brass	SD6225-75
<b>W076</b>	4.5" BT (114,3 mm BT), 3/4" NPT	316 SS	SD6225-76
<b>W191</b>	4" BT (101,6 mm BT), 1/2" NPT	Brass	SD6225-191
<b>W193</b>	4.5" BT (114,3 mm BT), 1/2" NPT	316 SS	SD6225-193
<b>W118</b>	7" BT (177,8 mm BT), 1/2" NPT with 3/4" NPT adapter bushing	Brass	SD6225-118
<b>W119</b>	7.5" BT (190,5 mm BT), 3/4" NPT	316 SS	SD6225-119
<b>W192</b>	7" BT (177,8 mm BT), 1/2" NPT	Brass	SD6225-192
<b>W177</b>	7.5" BT (190,5 mm BT), 1/2" NPT	316 SS	SD6225-177

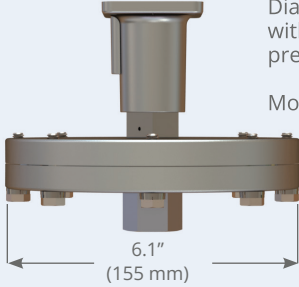
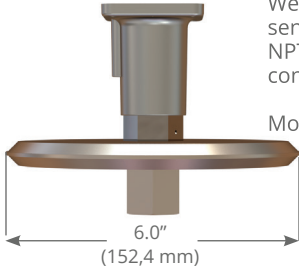
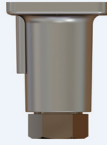


[2] Make sure that the bulb length is equal or less than the "Below Thread" length of the thermowell.

Option	Description	Material	Replacement Part
Thermowells for all immersion stem models except for 13272 & 13322			
<b>W139</b>	3/4" NPT x 1-23/32" BT (44mm BT)	Brass	SD6225-139
<b>W140</b>	3/4" NPT x 1-23/32" BT (44mm BT)	316 SS	SD6225-140
<b>W000</b>	No thread	Brass	
<b>W097</b>	1/2" NPT x 1-23/32" BT (44mm BT)	Brass	
<b>W099</b>	1/2" NPT x 1-23/32" BT (44mm BT)	316 SS	

# Sensors

## Pressure sensors

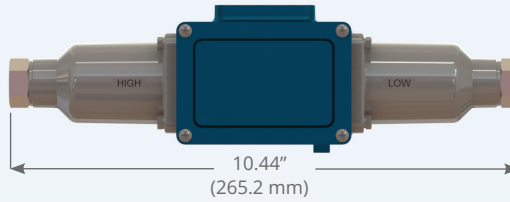
A		<p>Bellows sensor with 1/4" NPT (F) pressure connection</p> <p>Models: 126-164</p>
B		<p>Welded bellows sensor with 1/2" NPT (F) pressure connection</p> <p>Models: S126B-S164B</p>
C		<p>Welded diaphragm sensor with 1/2" NPT (F) pressure connection</p> <p>Models: 171-174</p>
D		<p>Diaphragm sensor with 1/2" NPT (F) pressure connection</p> <p>Models: 183-186, 483-486</p>
E		<p>Diaphragm sensor with 1/2" NPT (F) pressure connection</p> <p>Models: 188-199, 488-499</p>
F		<p>Bellows sensor with 1/4" NPT (F) pressure connection</p> <p>Models: 270-376, 680 (J120)</p>
G		<p>Diaphragm sensor with 1/4" NPT (F) pressure connection</p> <p>Models: 450-454, 550-555</p>

H		<p>Diaphragm sensor with 1/2" NPT (F) pressure connection</p> <p>Models: 520-525</p> <p>6.1" (155 mm)</p>
I		<p>Welded diaphragm sensor with 1/2" NPT (F) pressure connection</p> <p>Models: 530-535</p> <p>6.0" (152,4 mm)</p>
J		<p>Piston or diaphragm sensor with 1/4" NPT (F) pressure connection</p> <p>Models: 612-616, 701-705, 15622</p>
K		<p>Diaphragm sensor with 1-1/2" Sanitary fitting pressure connection</p> <p>Models: 565-567</p>
L		<p>Bellows sensor with 1/4" NPT (F) pressure connection</p> <p>Models: 270-376 (H121/H122)</p>

# Sensors

## Differential pressure sensors

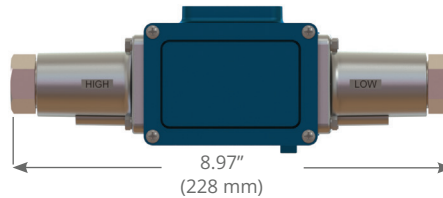
**DA**



Welded bellows sensor with 1/4" NPT (F) pressure connection

Models: 367

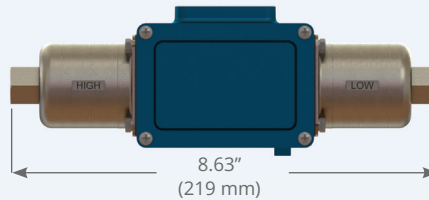
**DB**



Diaphragm sensor with 1/4" NPT (F) pressure connection

Models: 36-39

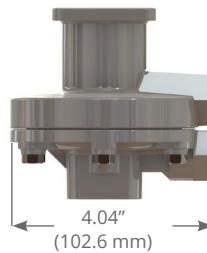
**DC**



Welded bellows sensor with 1/4" NPT (F) pressure connection

Models: 147-157

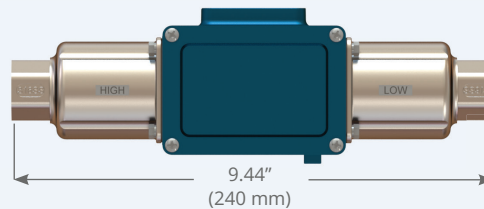
**DD**



Diaphragm sensor with 1/4" NPT (F) pressure connection

Models: 455-457, 559

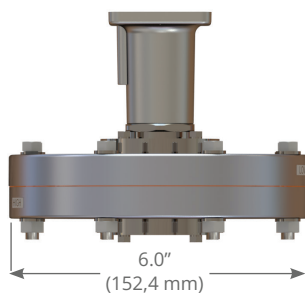
**DE**



Welded bellows sensor with 1/2" NPT (F) pressure connection

Models: S147B-S157B

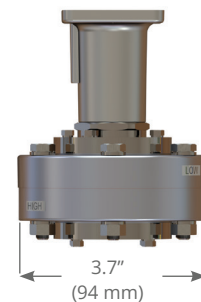
**DF**



Diaphragm sensor with 1/8" NPT (F) pressure connection

Models: 540-543

**DG**



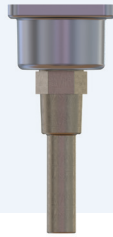
Diaphragm sensor with 1/8" NPT (F) pressure connection

Models: 544-548

# Sensors

## Temperature sensors

**TA**

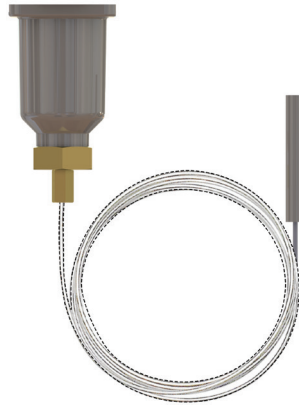


Immersion stem with 1/2" NPT (M) pressure connection

Models: 120-121, 13272\*, 13322\*

\* No NPT connection available on these models

**TB**



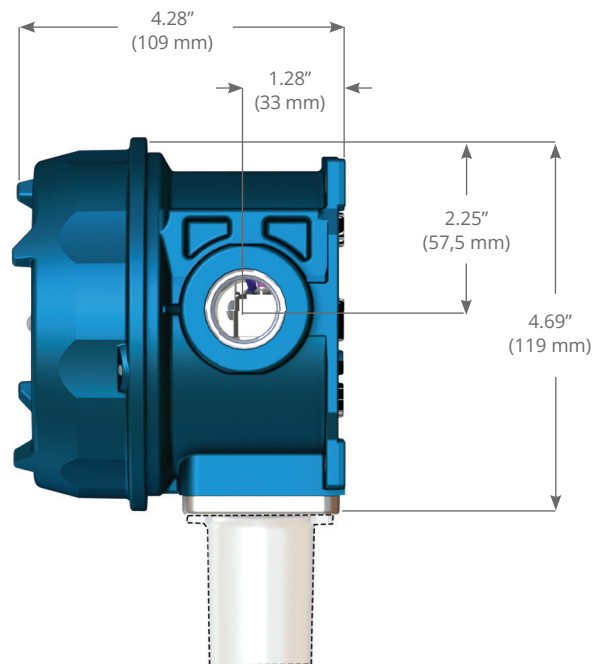
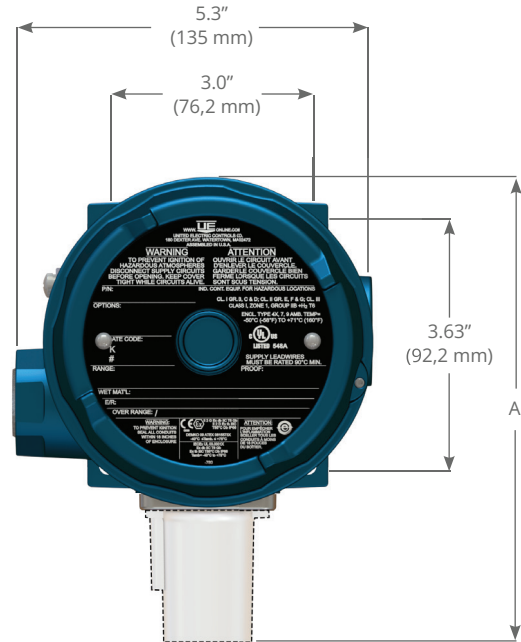
Bulb and capillary for remote installations

Models: 2BS-8BS, 13273, 13321

# Types J120, J120K, C120, F120

## Internal Set Point Adjustment

Dimension A			
Models	Inches	mm	NPT
<b>Pressure</b>			
126-164	7.25	184,2	1/4
S126B-S164B	7.63	193,3	1/2
171-174	8.72	221,5	1/2
183-186, 483-486	8.41	213,6	1/2
188-189, 488-489	7.47	189,7	1/2
190-194, 490-494	7.44	189,0	1/2
270-274	8.13	206,5	1/4
356-361, 376	8.09	205,5	1/4
450, 452	8.81	223,8	1/4
451, 453, 454	8.06	204,7	1/4
520-525	9.25	235,0	1/2
530-535	8.84	224,5	1/2
550, 552	8.81	223,8	1/4
551, 553-555	8.34	211,8	1/4
565-567	7.53	191,3	1-1/2" Sanitary
612, 616	7.88	200,2	1/4
680	8.13	206,5	1/4
701-705, 15622	7.44	189,0	1/4
<b>Differential Pressure</b>			
36-39, 147-157, 367	7.59	192,8	1/4
S147B-S157B	7.59	192,8	1/2
455-457, 559	8.44	214,4	1/4
540-543	9.34	237,2	1/8
544-548	9.41	239,0	1/8
<b>Temperature</b>			
120-121	9.13	231,9	Immersion Stem
2BS-8BS	8.47	215,1	Bulb & Capillary

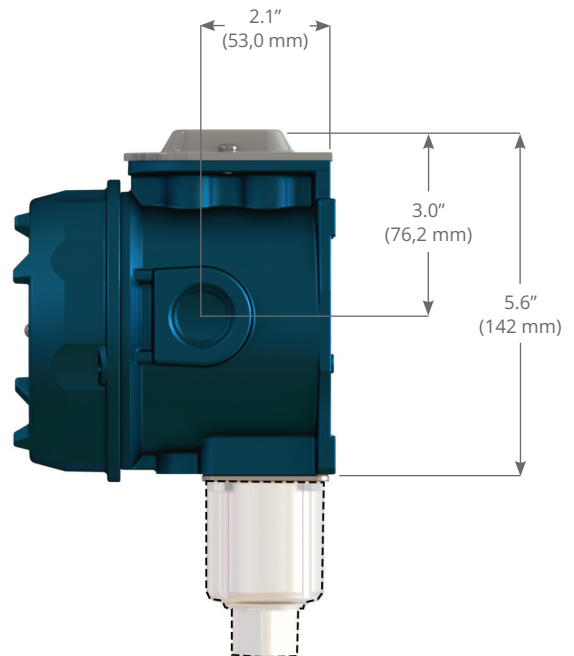
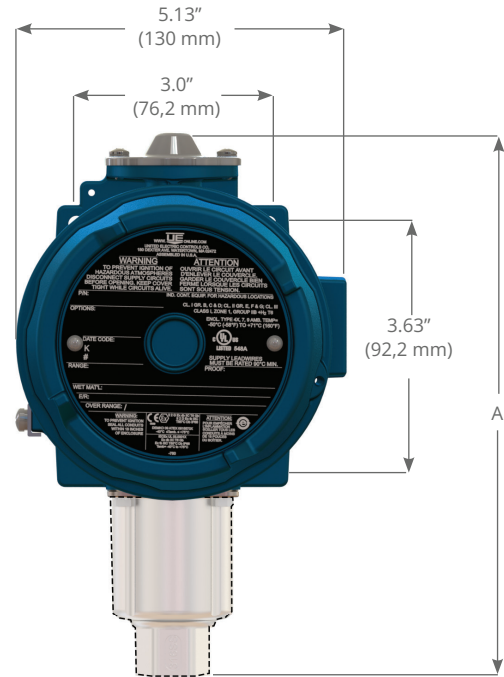


All dimensions stated in inches (millimeters)  
 Dimensional drawings for all models may be found at [www.ueonline.com](http://www.ueonline.com)

# Types B121, B122, E121, E122, H121, H122, H121K, H122K




External Set Point Adjustment

Dimension A			
Models	Inches	mm	NPT
<b>Pressure</b>			
126-164	8.09	205,5	1/4
S126B-S164B	8.50	215,9	1/2
270-274	7.88	200,2	1/4
358-376	7.81	198,4	1/4
450, 452	9.69	246,1	1/4
453, 454	8.94	227,1	1/4
550, 552	9.75	247,7	1/4
553-555	9.31	236,5	1/4
612, 614	8.75	222,3	1/4
701-705	8.31	211,1	1/4
<b>Differential Pressure</b>			
147-157	8.44	214,4	1/4
S147B-S157B	8.44	214,4	1/2
456-457, 559	9.31	236,5	1/4
<b>Temperature</b>			
120,121	10.00	254,0	Immersion Stem
2BS-8BS	9.31	236,5	Bulb & capillary
13272, 13322	10.00	254,0	Immersion Stem (Heat tracing)
13273, 13321	9.31	236,5	Bulb & capillary (Heat tracing)










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

# Standard Certifications

	Region	Agency	Classification
	North America	UL	Class I, Groups B, C & D; Class II, Groups E, F & G; Class III Class I, Zone I, Group IIB + H2 T6 Enclosure Type 4X, IP66 Canadian Registration Number (CRN) for Canadian provinces can be found at <a href="http://www.ueonline.com">www.ueonline.com</a>
	Europe	ATEX	II 2 G Ex db IIC T6 Gb II 2 D Ex tb IIIC T85 °C Db, IP66 $-40\text{ °C} \leq T_{\text{amb}} \leq +75\text{ °C}$ II 1 G Ex ia IIC T6 Ga (Optional - <b>code M405</b> ) $-50\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$ Compliant to Pressure Equipment Directive (PED) (2014/68/EU) Compliant to Low Voltage Directive (LVD) (2014/35/EU)
	International	IECEx	Ex db IIC T6 Gb Ex tb IIIC T85 °C Db, IP66 $-40\text{ °C} \leq T_{\text{amb}} \leq +75\text{ °C}$ Ex ia IIC T6 Ga (Optional - <b>code M405</b> ) $-50\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$ UEC compliant to IEC 61058-1, IEC 61010-1

# Optional Certifications

	Country	Option	Classification
	China	M408	Ex db IIC T6 Gb Ex tb IIIC T85 °C Db IP66 $-40\text{ °C} \leq T_{\text{amb}} \leq +75\text{ °C}$ Ex ia IIC T6 Ga $-50\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$
	Brazil	M391	Ex db IIC T6 Gb Ex tb IIIC T85 °C Db IP66 $-40\text{ °C} \leq T_{\text{amb}} \leq +75\text{ °C}$ Ex ia IIC T6 Ga $-50\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$
	Korea	M395	Ex d IIC T6 Ex td IIIC T85C $-40\text{ °C} \leq T_{\text{amb}} \leq +75\text{ °C}$
	India	Standard M405	Ex d IIC T6 Gb Ex ia IIC T6 Ga
	United Kingdom	M462	Ex db IIC T6 Gb Ex tb IIIC T85 °C Db IP66 $-40\text{ °C} \leq T_{\text{amb}} \leq +75\text{ °C}$ Ex ia IIC T6 Ga $-50\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$
	Ukraine	M404	Ex db IIC T6 Gb $-40\text{ °C} \leq T_{\text{amb}} \leq +71\text{ °C}$
	Taiwan		ITRI available through Taiwan channel partner. Consult United Electric.

## LIMITED WARRANTY

Seller warrants that the product hereby purchased is, upon delivery, free from defects in material and workmanship and that any such product which is found to be defective in such workmanship or material will be repaired or replaced by Seller (Ex-works, Factory, Watertown, Massachusetts. INCOTERMS); provided, however, that this warranty applies only to equipment found to be so defective within a period of 24 months from the date of manufacture by the Seller. Seller shall not be obligated under this warranty for alleged defects which examination discloses are due to tampering, misuse, neglect, improper storage, and in any case where products are disassembled by anyone other than authorized Seller's representatives. EXCEPT FOR THE LIMITED WARRANTY OF REPAIR AND REPLACEMENT STATED ABOVE, SELLER DISCLAIMS ALL WARRANTIES WHATSOEVER WITH RESPECT TO THE PRODUCT, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

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SELLER'S LIABILITY TO BUYER FOR ANY LOSS OR CLAIM, INCLUDING LIABILITY INCURRED IN CONNECTION WITH (I) BREACH OF ANY WARRANTY WHATSOEVER, EXPRESSED OR IMPLIED, (II) A BREACH OF CONTRACT, (III) A NEGLIGENT ACT OR ACTS (OR NEGLIGENT FAILURE TO ACT) COMMITTED BY SELLER, OR (IV) AN ACT FOR WHICH STRICT LIABILITY WILL BE INPUTTED TO SELLER, IS LIMITED TO THE "LIMITED WARRANTY" OF REPAIR AND/OR REPLACEMENT AS SO STATED IN OUR WARRANTY OF PRODUCT. IN NO EVENT SHALL THE SELLER BE LIABLE FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR OTHER DAMAGES OF A LIKE GENERAL NATURE, INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS OR PRODUCTION, OR LOSS OR EXPENSES OF ANY NATURE INCURRED BY THE BUYER OR ANY THIRD PARTY.

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