

P-Series Temperature Switches

FEATURES

- Precision SPDT snap-acting micro switch
- Setpoint adjustable from 0-100% of range
- Single or dual adjustable set points
- Choice of temperature ranges (from -40 °F to 750 °F)
- Fixed or adjustable deadband
- Direct or remote reading thermal systems
- Wide selection of switch elements

TYPICAL USES

- Refineries
- Chemical and Petrochemical Plants
- Water and Sewage Treatment Plants
- Steel Mills
- Pumps, Compressors and Turbines
- Boilers and Burners
- Reverse Osmosis Systems



P-Series
Remote Mount

P-Series
Direct Mount



PERFORMANCE SPECIFICATIONS

Set Repeatability (Accuracy):	±1% span
Switch Type:	SPDT or 2 SPDT with independent setpoints
Setpoint and Deadband:	Single setpoint, fixed deadband Single setpoint, adjustable deadband Dual Independent setpoint, fixed deadband
Enclosure Ratings:	NEMA 7 & 9, IP66
Enclosure Material:	Epoxy coated aluminum
Process Connection:	Direct Mount: ½ NPT Male Remote Mount: ½ NPT Male bushing (OPT.)
Electrical Termination:	¾ NPT Female
Direct Mount:	Stem lengths from 2¾" to 12"
Remote Mount:	Capillary lengths from 5' to 25' (5 ft. increments)
Approvals:	UL, CSA, CE/UKCA



CLASS I DIV 1 GROUPS B, C, & D
CLASS II DIV 1 GROUPS E, F, & G

KEY BENEFITS

- Dual chamber design provides safe setpoint adjustment even with power connected
- Epoxy-coated aluminum enclosures provides added protection in harsh environments
- Easy-to-read scale for approximate setpoint indication (±5% accuracy)
- Hermetically sealed micro switches offer improved reliability and safety (UL Class I Div II approval)

WETTED MATERIAL

Direct Mount	Remote Mount
316 Stainless steel	Bulb capillary: 316 SS Spiral armor: 302 SS

Data Sheet

P-Series Temperature Switches

ORDERING CODE	Example:	PTA	N7	H	05	A7	030	XNH	150/260F	
Function/Enclosure										
PTA - Temperature control, single setpoint, adjustable deadband single setpoint, adjustable deadband N7-NEMA 7 & 9, IP66, Explosion Proof Class 1, Div 1 & 2		PTA								
PTD - Temperature control, two independently, adjustable setpoint, fixed deadband N7-NEMA 7 & 9, IP66, Explosion Proof Class 1, Div 1 & 2										
PTS - Temperature control, single setpoint, fixed deadband N7-NEMA 7 & 9, IP66, Explosion Proof Class 1, Div 1 & 2										
Enclosure										
N7 - NEMA 7 & 9, IP66, Explosion Proof Class 1, Div 1 & 2		N7								
Switch Elements For PTA Controls										
H - General purpose - 10A,125/250 Vac, 1/2A, 125 Vdc, 1/4A, 250 Vdc				H						
J - Hermetically sealed, general purpose - 11A, 125/250 Vac 5A, 30 Vdc										
Single/Dual Switch Elements For PTD & PTS Controls										
C/CC - Heavy duty ac - 22A, 125/250 Vac										
E/EE - Manual reset acutates on decreasing pressure 15A, 125/250 Vac 6A, 130 Vdc, (no hazardous approval)										
F/FF - Sealed environment proof - 15A, 125/250 Vac (estimated dc rating - 4A, 28 Vdc, not UL listed)										
G/GG - General purpose - 15A, 125/250/480 Vac, 1/2A, 125 Vdc, ¼A, 250 Vdc (not UL listed at 480 Vac)										
H/HH - General Purpose - 10A, 125/250 Vac 10A, Vdc										
J/JJ - Hermetically sealed switch, general purpose - 11A, 125/250 Vac 5A, 30 Vdc										
K/KK - Narrow Deadband - 15A, 125/250 Vac (estimated dc rating - 0.4A, 120 Vdc, not UL listed)										
M/MM - Low level gold contacts, 1A - 125 Vac										
P/PP - Hermetically sealed AC - 5A, 125/250 Vac (estimated dc rating - 2.5A, 28 Vdc, not UL listed)										
S/SS - Heavy Duty DC - 10A, 125 Vac or Vdc, ½ HP, 125 Vac or Vdc										
U/UU - Manual Reset, Actuates on Increasing Pressure - 15A, 125/250 Vac, 6A, 130 Vdc (no hazardous approval)										
Y/YY - High Temperature 300 °F Ambient - 15A, 125/250 Vac										
W/WW - Ammonia Service - 5A, 125/250 Vac, 6A, 30 Vdc										
Capillary Line Length										
Direct Mount										
00 - Direct Mount										
Remote Mount - Capillary with Armor (Consult factory for custom or longer lengths)										
05 - 5'					05					
10 - 10'										
15 - 15'										
20 - 20'										
25 - 25'										
Thermal System Selection										
Direct Mount										
No entry required for direct mount										
Remote Mount										
A7 - Stainless steel Armor (STD.)						A7				
Remote Mount Bulb Length Selection										
Direct Mount										
	S Dim.	U Dim.								
027	2¾"									
040	4"	2½"								
060	6"	4½"								
090	9"	7½"								
120	12"	10½"								
Remote Mount										
030	3"	2½"						030		
Options (see Table 1 on page 3) (If choosing an option(s) must include an "X")									X__	
NH - Tagging Stainless steel									NH	
Temperature Ranges (see temperature range table on page 3)										
150/260 °F									150/260F	

P-Series Temperature Switches

TABLE 1 - OPTIONS

Code	Description	Notes
CH	Chained cover	
FP	Fungus proof	
FS	Factory adjusted setpoint	Setpoint must be given as increasing or decreasing
C8	CSA approved	
JL	¾ to ½ reducing bushing	Conduit reducing bushing
K3	Terminal blocks	
NH	Tagging Stainless steel	
PM	¾" sealed conduit connection with 16" lead wires	
BX	½ Male NPT bushing	Remote mount only - seals capillary to thermowell

STANDARD TEMPERATURE RANGE SELECTION

Nominal Range		Max. Temperature	Approximate Deadband Switch Element in °F								
°F	°C	°F	PTA	PTS				PTD			
			J,H	G	J,H	K,F	P	G,G	JJ,HH	KK,FF	PP
-40 to 60	-40 to 16	400	8-90	2-10	9-18	1-2	1-5	2-10	9-18	1-2	1-5
0 to 100	-20 to 40	400	30-90	2-15	10-30	1-3	1.5-7	2-15	10-30	1.5-3	1.5-7
75 to 205	20 to 95	400	34-120	2-17	10-34	1.5-3.5	1.5-8	2-17	10-34	1.5-3.5	1.5-8
150 to 260	65 to 125	400	25-100	2.5-12	9-25	1-2.5	1-7	2.5-12	9-25	1-2.5	1-7
235 to 375	110 to 190	500	35-130	2-18	10-35	1-4.5	1.5-8	2-18	10-35	1-3.5	1.5-8
350 to 525	175 to 275	700	40-165	3-25	15-40	2-3.5	2.5-11	3-25	15-40	2-4.5	2.5-11
500 to 750	260 to 400	900	50-200	20-36	36-60	5-10	6-21	20-36	36-60	5-10	6-21

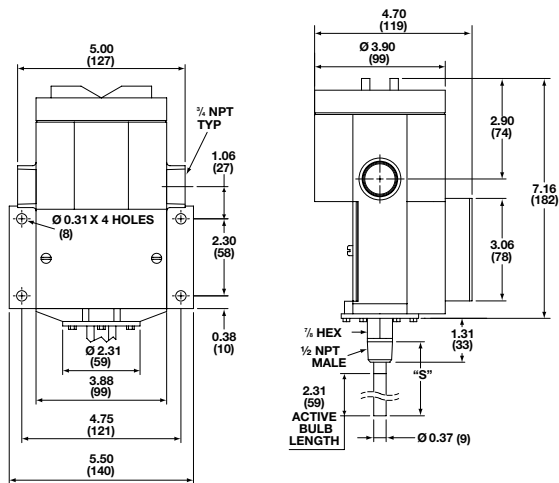
Data Sheet

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DIMENSIONS in [] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings

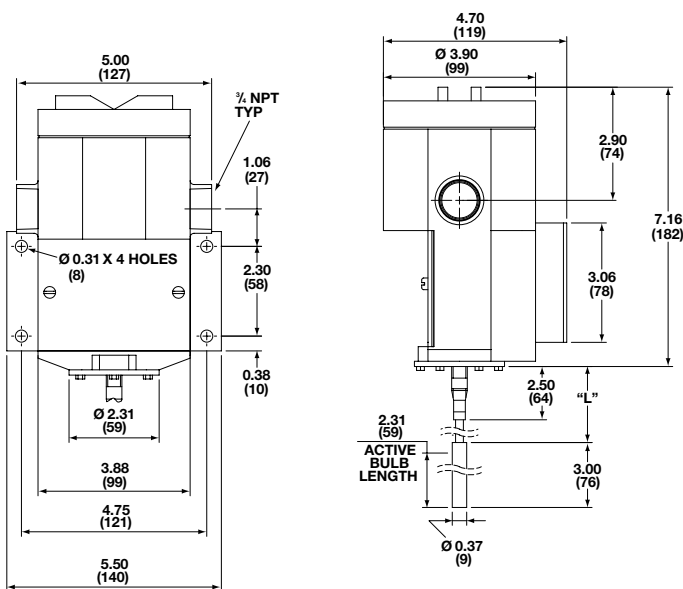
DIRECT MOUNT



"S" Dimensions

2 3/4"	[70]
4"	[102]
6"	[152]
9"	[229]
12"	[305]

REMOTE MOUNT



"G" Dimensions

3"	[76]
6"	[152]
7 1/2"	[191]
10 1/2"	[267]
13 1/2"	[343]