



Pressure Transducers and Temperature Sensors

INSTALLATION AND SERVICING INSTRUCTIONS
SD-477 / 62023



Pressure Transducers and Temperature Sensors are used in conjunction with Sporlan's S3C, Kelvin II, and PSK families of controls or other controllers to control Electric Expansion Valves, Electric Discharge Bypass Valves, Electric Evaporator Pressure Regulating Valves, relays and more.

PRESSURE TRANSDUCERS



PRESSURE TRANSDUCER VOLTAGE						
Pressure psig	DC VOLTAGE (white & green leads)					
	993291 0-150 psia	992572 0-150 psig	992574 0-300 psig	992576 0-500 psig	992579 0-652 psig	
0	0.9	0.5	0.5	0.5	0.5	
25	1.6	1.2	0.8	0.7	0.7	
50	2.2	1.8	1.2	0.9	0.8	
75	2.9	2.5	1.5	1.1	1.0	
100	3.6	3.2	1.8	1.3	1.1	
125	4.3	3.8	2.2	1.5	1.3	
150	—	4.5	2.5	1.7	1.4	
175	—	—	2.8	1.9	1.6	
200	—	—	3.2	2.1	1.7	
225	—	—	3.5	2.3	1.9	
250	—	—	3.8	2.5	2.0	
275	—	—	4.2	2.7	2.2	
300	—	—	4.5	2.9	2.3	
325	—	—	—	3.1	2.5	
350	—	—	—	3.3	2.6	
375	—	—	—	3.5	2.8	
400	—	—	—	3.7	3.0	
425	—	—	—	3.9	3.1	
450	—	—	—	4.1	3.3	
475	—	—	—	4.3	3.4	
500	—	—	—	4.5	3.6	
525	—	—	—	—	3.7	
550	—	—	—	—	3.9	
575	—	—	—	—	4.0	
600	—	—	—	—	4.2	
625	—	—	—	—	4.3	
650	—	—	—	—	4.5	

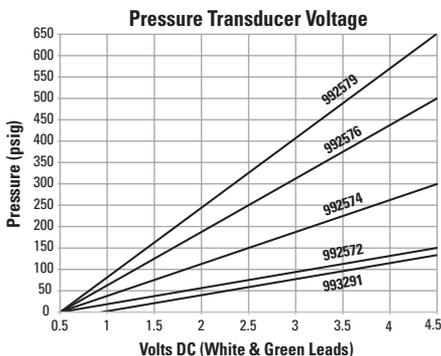
PRESSURE TRANSDUCER			
Pressure Range	Material	Item No.	Description
0 - 150 psia	Stainless Steel	993291	PSPT0150AVSP-SD
0 - 150 psis		992572	PSPT0150SVSP-SD
0 - 300 psis		992574	PSPT0300SVSP-SD
0 - 500 psis		992576	PSPT0500SVSP-SD
0 - 652 psis		992579	PSPT0652SVSP-SD

PRESSURE TRANSDUCER CABLES		
Cable Length ¹	Item No.	Description
2 m	953192	PSPT000000CP20
5 m	953100	PSPT000000CP50

Controller Terminal	Old Pigtail Leads	New Hermetic Cable ²
1+ or 2+	Red	Black
1- or 2-	Black	Green
1S or 2S	Green	White

¹ If the application requires a longer cable, Sporlan recommends extending leads with a maximum of 400 ft (18 awg) wire using Scotchlok™ MR connectors. The signal accuracy should be verified with any extension and an offset be added to the control when necessary.

² The cable color code differs from the previous model cable, but can still be used in its place.



TEMPERATURE SENSORS

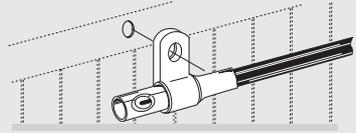
Resistance Rating at 25°C	Sensor Type	Cable Length ¹	Item No.	Illustration
2K	Air	10' (3.0 m)	952669	
	Well	12' (3.7 m)	952795	 Single Shielded Black Cable
	Surface	12' (3.7 m)	952662	 Single Shielded Black Cable
3K	Surface	20' (6.1 m)	230545	
98.6K	Surface (High Temp)	15' (4.6 m)	952565	
10K	Surface (Recommended)	20' (6.1 m)	230072 (Orange)	
			230076 (Blue)	
			230078 (Red)	
	Air (Recommended)	20' (6.1 m)	230073 (Green)	
			230075 (Yellow)	
	NTC Temperature Probes for PSK		5' (1.5 m)	952899
PSTPN615F200		10' (3.0 m)	952898	

¹ If the application requires a longer cable, Sporlan recommends a maximum extension of 400 ft (18 awg) wire using Scotchllok™ UR connectors. The signal accuracy should be verified with any extension and an offset be added to the control when necessary.

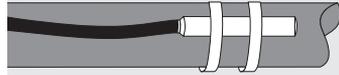
**TEMPERATURE SENSOR
TEMPERATURE VS. RESISTANCE**

TEMPERATURE		Resistance (kohms)			
		Resistance Rating			
°F	°C	2K	3K	10K	98.6K
-40	-40	32.3	100	NA	NA
-20	-29.9	18.5	49.5	168.6	NA
0	-17.8	11.1	25.6	86.5	NA
20	-6.7	6.7	13.9	46.7	NA
32	0	5.1	9.8	32.9	327.5
40	4.4	4.3	7.8	26.3	261.1
60	15.6	2.8	4.6	15.4	152.1
80	26.7	1.9	2.8	9.3	91.6
100	37.8	1.3	1.7	5.8	56.9
120	48.9	0.91	1.1	3.7	36.4
140	60	0.66	0.75	2.5	23.8
160	71.1	0.48	0.51	1.7	16
212	100	NA	NA	0.7	6.3
300	148.9	NA	NA	NA	1.7

AIR SENSOR

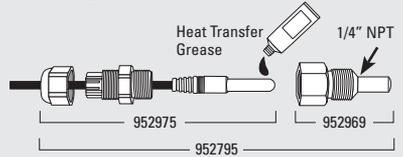


SURFACE SENSOR



WELL SENSOR

(Used on line $\geq 7/8$ " dia.)



10K BULLET TEMPERATURE SENSOR SPECIFICATIONS
 SPORLAN PART # 230073 / MICRO THERMO PART # 023-0073

HOUSING	300 Series Stainless Steel
LEADWIRES	22AWG (7) Stranded, Ribbon Cable Tinned Copper, PVC Insulated, Green (20 ft.)
OPERATING RANGE	-30°C to 105°C (-22°F to 221°F)
MAXIMUM READING RANGE	-50°C to 150°C (-58°F to 302°F)
RESISTANCE	10,000 Ω Type 2 \pm 0.2°C (\pm 0.4°F) at 25°C (77°C)

Sensor tolerance is \pm 0.2°C (\pm 0.4°F) in the range of 0°C to 70°C (32°F to 158°F).

NOTE: Damage to the device may occur if temperature goes beyond operating range.

⚠ WARNING – USER RESPONSIBILITY

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