

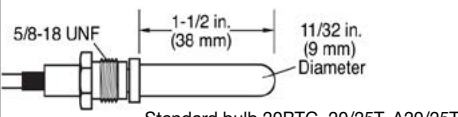
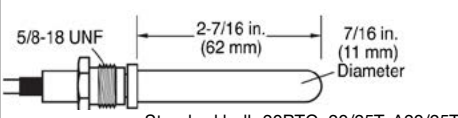
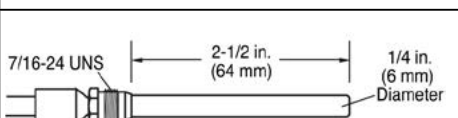
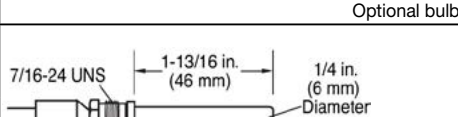
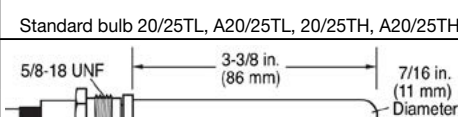
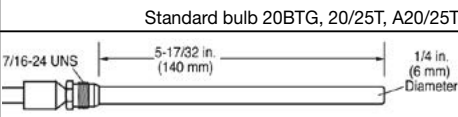
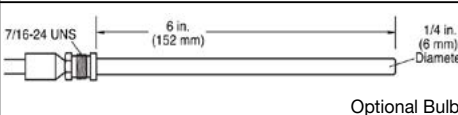
Sensing Bulb/Scale/Capillary Length Combinations

for 20, 25, A20 and A25 Series Temperature Swichgage® and MurphyGage® Instruments

APPLICATION NOTE: Murphy vapor pressure actuated temperature Swichgage and MurphyGage instruments indicate the temperature as measured at the sensing bulb. If the sensing bulb is not fully immersed in the medium being measured, an inaccurate reading will occur. This is particularly important when applying bulb types C, F and H since the attaching nut can be positioned at various depths along the length of the sensing bulb. For best results, be sure that the sensing bulb is fully immersed. For further important details see appropriate installation sheet for Murphy temperature devices or contact a representative.

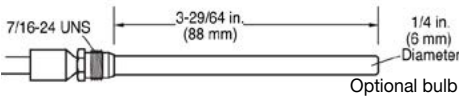
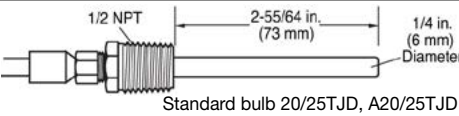
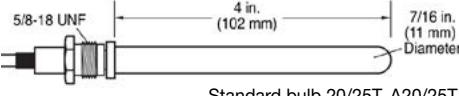
NOTES:

- Bulb Type A, B, E & K are provided as standard on T & TE series based on scale and capillary length.
- Bulb Type D is provided as standard on TL & TH series based on scale and capillary length.
- Any bulb used where it is not standard, based on model, scale and capillary length, must not be specified in the model number. Any bulb used where it is not standard must be specified in the model number.

Bulb Type	Bulb Dimensions	Part Number	Adaptor Nut Group	Thermowell Group	Capillary Tube Length	Temperature Ranges	
						°F	°C
A	 <p>Standard bulb 20BTG, 20/25T, A20/25T</p>	10050166	1	I	2-30 feet (0.61-9.14 meters)	130-220, 130-250, 140-300, 160-320, 180-350, 300-440	54-104, 54-121, 60-149, 71-160, 82-177, 149-227
					2-7 feet (0.61-2.13 meters)	32-120, 32-160	0-49, 0-71
B	 <p>Standard bulb 20BTG, 20/25T, A20/25T</p>	10010061	2	II	31-80 feet (9.45-24.39 meters)	130-220, 130-250, 140-300, 160-320, 180-350, 300-440	54-104, 54-121, 60-149, 71-160, 82-177, 149-227
					8-23 feet (2.43-7.01 meters)	32-120, 32-160	0-49, 0-71
C	 <p>Optional bulb</p>	10010060	3	-	2-25 feet (0.61-1.21 meters)	130-220, 130-250, 140-300, 160-320, 180-350	54-104, 54-121, 60-149, 71-160, 82-177
					2-4 feet (0.61-1.21 meters)	300-440	149-227
D¹	 <p>Standard bulb 20/25TL, A20/25TL, 20/25TH, A20/25TH</p>	10000286	4	IV	2-16 feet (0.61-4.88 meters)	130-220, 130-250, 140-300, 160-320, 180-350	54-104, 54-121, 60-149, 71-160, 82-177
					2-4 feet (0.61-1.21 meters)	300-440	149-227
E	 <p>Standard bulb 20BTG, 20/25T, A20/25T</p>	10010084	2	III	24-35 feet (7.32-10.67 meters)	32-120, 32-160	0-49, 0-71
					81-110 feet (24.69-33.53 meters)	130-220, 130-250, 140-300, 160-320, 180-350, 300-440	54-104, 54-121, 60-149, 71-160, 82-177, 149-227
F	 <p>Optional bulb</p>	10000577	3	-	16-25 feet (4.88-7.62 meters)	130-220, 130-250, 140-300, 160-320	54-104, 54-121, 60-149, 71-160
G	 <p>Optional Bulb</p>	10002466	4	-	17-25 feet (5.18-7.62 meters)	130-220, 130-250, 140-300, 160-320	54-104, 54-121, 60-149, 71-160

1 Standard bulb for air-cooled engine models (example 20TH) and Ford worldwide engines (example 20TL)

Warranty — A limited warranty on materials and workmanship is given with this Murphy product.
A copy of the warranty may be viewed or printed by going to www.murphybynovationcontrols.com/support/warranty.htm

Bulb Type	Bulb Dimensions	Part Number	Adaptor Nut Group	Thermowell Group	Capillary Tube Length	Temperature Ranges	
						°F	°C
H		10002466	3	IV	2-25 feet (0.61-7.62 meters)	130-220, 130-250, 140-300, 160-320, 180-350	54-104, 54-121, 60-149, 71-160, 82-177
					2-4 feet (0.61-1.21 meters)	300-440	149-227
J		10051153	3 and part number 85030447	—	2-12 feet (0.61-3.66 meters)	130-250	54-121
K		10004886	2	—	36-50 feet (10.97-15.24 meters)	32-120 32-160	0-49 0-71

Part Number	Description	Notes
10050167	1/4-18 NPT	Optional Adapter Group 1
10050069	3/8-18 NPT	
10050284	3/8-19 BSPT	
10050131	1/2-14 NPT	
10050330	1/2-14 BSPT	
10050068	5/8-18 UNF	
10050105	3/4-14 NPT	
10050093	7/8-9 UNC	
10002442	14 mm x 1.5	
10002444	16 mm x 1.5	
10002443	18 mm x 1.5	
10002446	20 mm x 1.5	
10002445	22 mm x 1.5	
10002449	24 mm x 1.5	
10050103	3/8-18 NPT	Optional Adapter Group 2
10050107	1/2-14 NPT	
10050827	3/4-14 NPT	
10050695	7/8-9 UNF	
10002447	22 mm x 1.5	Optional Adapter Group 3
10010052	1/8-27 NPT	
10010051	10 mm x 1.5	Optional Adapter Group 4
10005235	10 mm x 1.0	
10050912	1/8-27 NPT	Optional Thermowells Group I
10002450	10 mm x 1.5	
10002451	12 mm x 1.5	
10010009	1/2-14 NPT, Carbon Steel, Nickel Plate	Optional Thermowells Group II
10050128	1/2-14 NPT, 304 Stainless Steel	
10050899	1/2-14 NPT, Carbon Steel, Nickel Plate	Optional Thermowells Group III
10000425	7/8-9 UNC, Carbon Steel, Nickel Plate	
10050169	1/2-14 NPT, 304 Stainless Steel	
10050900	1/2-14 NPT, Carbon Steel, Nickel Plate	
10050901	1/2-14 NPT, 304 Stainless Steel	

Consult factory for non-listed options and combinations.