## SM4 Surface Pad Assembly Model Code

**SM4** Surface Pad Temperature Sensor Assembly

**T1** Connection Head
- 2AL: Aluminum, 3/4" conduit, Bakelite terminal block
- 2ALT: Aluminum epoxy, 3/4" conduit, Bakelite terminal block
- 2SS: Stainless steel, 3/4" conduit, Bakelite terminal block
- X: Not required
- Other: Refer to page E-24 for details, styles and options

**T2** Connection Head Extension
- FX: Fixed hex instrument fitting 1/2" NPT
- AF: Fixed hex instrument fitting - flex armor over fiberglass
- AT: Fixed hex instrument fitting - flex armor over Teflon
- PT: Fixed hex fitting - Poly jacketed flex armor over Teflon

**T3** Connection Extension "A" length (inches)²
- 0.5": For FX style connection extension
- "inches": Specify AF, AT, PT length in inches

**T4** Sensor Type
- K: Type K Thermocouple
- J: Type J Thermocouple
- T: Type T Thermocouple
- E: Type E Thermocouple
- N: Type N Thermocouple
- R3LT: 3 Wire RTD - Low temperature (-50 to 260°C)
- R3HT: 3 Wire RTD - High temperature² (-50 to 482°C)
- R3ET: 3 Wire RTD - Extreme temperature* (-50 to 850°C)
- R3VT: 3 Wire RTD - Vibration construction* (-50 to 482°C)
- R3CT: 3 Wire RTD - Cryogenic temperature (-200 to 260°C)
- R4LT: 4 Wire RTD - Low temperature (-50 to 260°C)
- R4HT: 4 Wire RTD - High temperature² (-50 to 482°C)
- R4ET: 4 Wire RTD - Extreme temperature* (-50 to 850°C)
- R4VT: 4 Wire RTD - Vibration construction* (-50 to 482°C)
- R4CT: 4 Wire RTD - Cryogenic temperature (-200 to 260°C)

<table>
<thead>
<tr>
<th>Assembly Hazardous Location Approval</th>
<th>Connection Head Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I Division 2 Groups A,B,C,D</td>
<td>AL, CAL</td>
</tr>
<tr>
<td>Class II Groups E,F,G Class III;</td>
<td>ALT, SS</td>
</tr>
<tr>
<td>Enclosure Type 4</td>
<td>0AL, 4AL, 1CI, 2CI, 3CI, 0PY</td>
</tr>
<tr>
<td>General Purpose</td>
<td></td>
</tr>
</tbody>
</table>

### NOTES:
1. Part number example: SM4-X-AT-36-K-U-S-14-12-X or SM4-2ALT-FS-1.5-72-R3LT-A-S-14-10-X
2. Reference page E-21 for part outline and E-22 for part dimensions
3. Temperature values given are for maximum continuous rating for specific component of the configuration
4. Class A tolerance definitions will only be applicable for temperatures under 300°C, Class B tolerance will apply to over 300°C
5. Bold text indicates most common part selections
SM4 Surface Pad Assembly Outline

Connection Head

Connection Extension

Sensor Probe

2AL

2ALT

2SS

FX

AF - AT

PT

Flat

Curve

Refer to page E-24 for further connection head styles, options, and details.
NOTE:
1. Assemblies are supplied with 6" to 8" of lead wire

Refer to page E-24 for connection head dimensions

AF, AT, PT

1.00" (0.5" thread engagement)

Supplied with TE lead wire

A = 0.5"

L

OD

FX

Surface pad
1" x 1" x 0.125" thick
Curved to model code

AF, AT, PT

1.00" (0.5" thread engagement)
### SM4 Connection Heads

#### Model, Outline, and Dimensions

<table>
<thead>
<tr>
<th>Outline &amp; Dimensions</th>
<th>Model</th>
<th>Connection (NPT)</th>
<th>Terminal Block Options</th>
<th>Material</th>
<th>Connection Head Electrical Approval¹</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Instrument</td>
<td>Conduit</td>
<td></td>
<td></td>
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<tr>
<td>1ALT</td>
<td>1/2&quot;</td>
<td>1/2&quot;²</td>
<td>Bakelite - standard</td>
<td>Cast aluminum</td>
<td>Class I Groups B,C,D</td>
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<tr>
<td></td>
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<td>Screw terminals to suit sensor configuration</td>
<td>epoxy coated</td>
<td>Class II Groups E,F,G</td>
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<td></td>
<td>Buna O-ring</td>
<td>Class III Enclosure Type 4X</td>
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<tr>
<td>2ALT</td>
<td>1/2&quot;</td>
<td>3/4&quot;</td>
<td>Ceramic - optional</td>
<td>Cast aluminum</td>
<td>Class I Groups B,C,D</td>
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<td>Screw terminals to suit sensor configuration</td>
<td>Buna O-ring</td>
<td>Class II Groups E,F,G</td>
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<td>Class III Enclosure Type 4</td>
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<td>3ALT</td>
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<td>3/4&quot;</td>
<td>Clamp technology - optional</td>
<td>Iron alloy</td>
<td>Class I Groups A,B,C,D</td>
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<td>DIN mounted clamp</td>
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<td>Class II Groups E,F,G</td>
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<td>technology terminals to suit sensor configuration</td>
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<td>Class III; Enclosure</td>
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<td>Add: “C” to connection head model number</td>
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<td>Example: 2ALTC</td>
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<tr>
<td>1SS</td>
<td>1/2&quot;</td>
<td>1/2&quot;²</td>
<td>Ceramic - oval terminal block</td>
<td>Iron alloy</td>
<td>Class I Groups A,B,C,D</td>
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<tr>
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<td>Screw terminals to suit sensor configuration</td>
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<td>Class II Groups E,F,G</td>
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<td></td>
<td></td>
<td></td>
<td>Class III; General purpose</td>
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<td>3/4&quot;</td>
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<td>Polypropylene</td>
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<td>3/4&quot;</td>
<td>Terminal block integral to connection head</td>
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<tr>
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<td></td>
<td>Screw terminals to suit sensor configuration</td>
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</tbody>
</table>

#### NOTES:
1. Connection head approval rating is that of the enclosure ONLY and not the SM4 sensor assembly
2. May be supplied with an approved reducer bushing

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