Overview

The Honeywell STT170 series of programmable temperature transmitters provide cost-effective solutions for temperature monitoring applications. Compared to direct-wired temperature sensor monitoring points, the STT170 series of transmitters delivers increased accuracy, safety and reliability while also reducing wiring costs. These transmitters automatically linearize the temperature output signal bounded by the upper range value and lower range value established by the user. In addition, the user can program high or low limit alarms to activate in the case of sensor failure.

STT171 Features
- Analog 4-20 mA output.
- RTD or Ohm input.
- DIN form B head mount.
- NAMUR NE43 sensor error response.
- Configurable using STT17C configuration tool and PC.

STT173 Features
- Analog 4-20 mA output
- RTD, T/C, Ohm or mV input
- DIN form B head mount
- NAMUR NE43 sensor error response
- Configurable using STT17C configuration tool and PC
- Galvanic isolation

STT17H Features
- HART™/4-20 mA output
- RTD, T/C, Ohm or mV input
- Single or dual (difference or average) sensor input
- DIN form B head mount
- HART Multidrop capable
- NAMUR NE43 sensor error response
Dimensions (all models)

Wiring

STT171

Input:

RTD, 2-wire
RTD, 3-wire
Resistance, 2-wire
Resistance, 3-wire

Output:

2-wire installation

STT173

Input:

RTD, 2-wire
RTD, 3-wire
RTD, 4-wire
TC, internal CJC

TC, external CJC
mV
Resistance, 2-wire
Resistance, 3-wire

Output:

2-wire installation
STT17H

Input:
- RTD, 2-wire
- RTD, 3-wire
- RTD, 4-wire
- TC, internal CJC
- TC, external CJC
- mV, Resistance, 2-wire
- Resistance, 3-wire
- Resistance, 4-wire
- mV difference of average

Output:
- 2-wire installation

mA
**STT17C Configuration tool**

The STT17C configures the STT171, STT173 and STT17H. The intuitive graphical user interface of the STT17C virtually eliminates the need for operator training after installation on a PC. The STT17C includes all software and transmitter interface hardware necessary to configure the STT171, STT173 and STT17H in non-hazardous work environments.

**WARNING:** The STT17C is not approved for use in Hazardous work environments.

System Requirements:

Windows® 98SE, ME, 2000 and XP with the following recommendations:

- Memory: 16 MB
- Display resolution: 800 x 600
- Hard disk space: 12 MB
STT171-BS Specifications

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Basic Accuracy*</th>
<th>Rated Range</th>
<th>Standards</th>
<th>Minimum Span**</th>
<th>Temperature Effects per 1.0°C (1.8°F) Change in Ambient Temperature***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ni100</td>
<td>0.3°C (0.54°F)</td>
<td>± 0.1</td>
<td>-200 to 850</td>
<td>IEC60751</td>
<td>Fixed</td>
</tr>
<tr>
<td>Ni100</td>
<td>-328 to 1562</td>
<td></td>
<td>DIN 43760</td>
<td>30°C</td>
<td>0.01°C (0.018°F)</td>
</tr>
</tbody>
</table>

*whichever is greater; Total Reference Accuracy = Basic Accuracy
**or 50% of upper range value, whichever is greater
*** reference temperature 24°C

OPERATING CONDITIONS
Ambient temperature, rated..............-40 to 85°C (-40 to 185°F)
Humidity................................0 to 95% RH (non-cond.)
Vibration................................Max 4g over 25 to 100Hz

ELECTRICAL INPUT SPECIFICATIONS
Supply voltage............................8 to 30 VDC
Power supply voltage effect...........≤ 0.005% of span per VDC
Warm-up time............................5 min
Response time (programmable).........0.33 to 60 sec

CURRENT OUTPUT SPECIFICATIONS
Signal output range.....................4 to 20 mA
Update time..............................135 msec
Load resistance..........................≤ (V supply - 8) / 0.023 A
0 to 870 ohm

ALARM LEVELS
Programmable............................3.5 to 4 mA downscale
20 to 23 mA upscale
Namur NE43 Upscale.....................23 mA
Namur NE43 Downscale...............3.5 mA

APPROVALS
Observed Authority requirements: Standard:
EMC 2004/108/EC
Enmission and immunity ..............EN 61326
ATEX 94/9/EC..........................EN 50014, EN 50020,
EN 50281 1-1 and EN 50284
FM, ASCN................................3600, 3611, 3610
CSA, CAN / CSA .......................C22.2 No. 157, E60079-11,
UL 913
Ex / I.S. approval:
KEMA 06 ATEX 0042 X ..................Ex ia IIC T4. T6

Ex / I.S. data:
Uo (max)..................................30 VDC
Ii (max)..................................120 mADC
Pi (max)..................................0.84 W
Li (max)..................................10 μH
Ci (max)..................................1.0 nF

Uo (max)..................................27 VDC
Io (max)..................................7 mADC
Po (max)..................................45 m W
Lo (max)..................................35 mH
Co (max)..................................90 nF
## STT173-BS Specifications

| Sensor Type | Basic Accuracy** | Rated Range | Standards | Temperature Effects per 1 °C (1.8°F) | Change in Ambient Temperature
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RH00</td>
<td>±0.2°C (±0.3°F)</td>
<td>±0.4°C to 40°C</td>
<td>IEC60751</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>NH00</td>
<td>±0.2°C (±0.3°F)</td>
<td>-40°C to 40°C</td>
<td>DIN 4776</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>B</td>
<td>±0.2°C (±0.3°F)</td>
<td>-50°C to 50°C</td>
<td>IEC60751</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>E</td>
<td>±0.1°C (±0.2°F)</td>
<td>-10°C to 30°C</td>
<td>DIN 4776</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>J</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>IEC60751</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>K</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>DIN 4776</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>L</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>IEC60751</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>N</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>DIN 4776</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>R</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>IEC60751</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>B</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>DIN 4776</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>T</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>IEC60751</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>U</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>DIN 4776</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>W3</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>ASHRAE 90-90</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>W2</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>ASHRAE 90-90</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
<tr>
<td>W1</td>
<td>±0.1°C (±0.2°F)</td>
<td>0°C to 90°C</td>
<td>ASHRAE 90-90</td>
<td>2°C (4°F)</td>
<td>±0.01°F per 1°C (±0.17°F)</td>
</tr>
</tbody>
</table>

**Wherever is greater. Total Reference Accuracy = Basic Accuracy + Cu Accuracy + (±Cu accuracy)**

### Operating Conditions
- Ambient temperature range: -40°C to 80°C (4°F to 180°F)
- Humidity: 95% RH (non-cond.)
- Vibration: Max. 40/hr over 25 to 100 Hz
- Cold junction accuracy: ±1°C

### Electrical Input Specifications
- Supply voltage: 7.2 to 30 VDC
- Power supply voltage effect: ±0.05% of span per VDC
- Warm-up time: 5 min
- Repeatability (maximum): ±1% of span
- Galvanic isolation: 1500 VAC

### Current Output Specifications
- Signal output range: 4 to 20 mA
- Update time: 400 msec
- Load resistance (R): 25 Ω for 7.2 V supply
- Load current (I): 0 to 20 mA

### Alarm Levels
- Programmable: 0 to 4 mA downscale
- NAMUR NE 43 UpScale: 20 to 23 mA upscale
- NAMUR NE 43 Downscale: 2 mA

### Approvals
- Observed Authority requirements: BMI, CEC
- Standard: EN61326
- EEMIT and Immunity: EN50014, EN50020
- FM, ASCN: 3800, 3611, 861
- CSA, CAN/CSA: C22.2 No. 157, 08079-11, UL 913
- CE: EN 61584-2
- FM, applicable in: 1B, 1D, DIV 1, EXP A-D, S-T, T6
- CSA, applicable in: 1B, 1D, DIV 1, EXP A-D, S-T, T6
- CSA, applicable in: 1B, 1D, DIV 1, EXP A-D, S-T, T6
- Exia IIC, ATEX IECEx
- EnT, Installation Drawing No.: 50168328
- CSA, applicable in: 1B, 1D, DIV 1, EXP A-D, S-T, T6
- Exia IIC, ATEX IECEx
- EnT, Installation Drawing No.: 50168328

### Ex/Lst Data
- Uo (max): 30 VDC
- Io (max): 25 mA
- Pd (max): 0.06 W
- Uo (min): 10 VDC
- Io (min): ±1 mA
- Lo (max): 60 VDC
- Lo (max): ±32 mA
- Co (max): ±50 mA

*Reference temperature 24°C*
### STT17H-BS Specifications

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Basic Accuracya</th>
<th>Rated Range</th>
<th>Standards</th>
<th>Minimum Span**</th>
<th>Temperature Effects per 1.0°C (1.8°F) Change in Ambient Temperature***</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT10000</td>
<td>± 0.2°C (±0.35°F)</td>
<td>-200 to +250</td>
<td>IEC 60751</td>
<td>0°C (32°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>PT100</td>
<td>± 0.2°C (±0.35°F)</td>
<td>-200 to +250</td>
<td>IEC 60751</td>
<td>0°C (32°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>NTC100</td>
<td>± 0.3°C (±0.5°F)</td>
<td>-60 to +60</td>
<td>DIN 43700</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>B</td>
<td>± 1°C (±1.8°F)</td>
<td>-400 to +1200</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>E</td>
<td>± 0.5°C (±0.9°F)</td>
<td>-100 to +100</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>J</td>
<td>± 0.5°C (±0.9°F)</td>
<td>-100 to +100</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>K</td>
<td>± 0.5°C (±0.9°F)</td>
<td>-100 to +100</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>L</td>
<td>± 0.5°C (±0.9°F)</td>
<td>-100 to +100</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>N</td>
<td>± 0.5°C (±0.9°F)</td>
<td>-100 to +100</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>R</td>
<td>± 1°C (±1.8°F)</td>
<td>-200 to +250</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>S</td>
<td>± 1°C (±1.8°F)</td>
<td>-200 to +250</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>T</td>
<td>± 0.5°C (±0.9°F)</td>
<td>-200 to +250</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>U</td>
<td>± 0.5°C (±0.9°F)</td>
<td>-200 to +250</td>
<td>IEC 60751</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>W3</td>
<td>± 1°C (±1.8°F)</td>
<td>0 to 2300</td>
<td>ASTM E985-90</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>W6</td>
<td>± 1°C (±1.8°F)</td>
<td>0 to 2300</td>
<td>ASTM E985-90</td>
<td>10°C (50°F)</td>
<td>±0.01°C (±0.018°F)</td>
</tr>
<tr>
<td>Q</td>
<td>0.1 Ω</td>
<td>0 to 7000</td>
<td></td>
<td>25 Ω</td>
<td>±0.2°C (±0.35°F)</td>
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<tr>
<td>R/2</td>
<td>1.0 Ω</td>
<td>0 to 7000</td>
<td></td>
<td>5 Ω</td>
<td>±0.1°C (±0.18°F)</td>
</tr>
</tbody>
</table>

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**Notes:**
- **a** For 50% of upper range value, whichever is greater.
- **b** reference temperature 25°C.

### OPERATING CONDITIONS
- Ambient temperature: 40 to 95°C (40 to 195°F)
- Humidity: 0 to 95% RH (non-cond)
- Vibration: 1.5 g, 25 to 100 Hz
- Cold junction accuracy: ±1.0°C

### ELECTRICAL INPUT SPECIFICATIONS
- Supply voltage: 8 to 30 VDC
- Power supply voltage effect: ±0.005% of span per VDC
- Warm-up time: 0.1 sec
- Response time (max/min): 1 to 90 sec
- Galvanic isolation: 1500 VAC

### CURRENT OUTPUT SPECIFICATIONS
- Output current: 4 to 20 mA
- Output impedance: 250 Ω
- Load resistance (max): 0 to 870 Ω

### ALARM LEVELS
- Programmable: 3.5 to 4 mA downside
- NAMUR NE43 Up scale: 20 to 23 mA upside
- NAMUR NE43 Down scale: 3.5 mA

### APPROVALS
- **Standard:**
  - EMV 2004/10/EC
  - Atex 94/9EC
  - FM, ASCHI
  - CSA CAN/CSA
  - UL 501
  - EN 60065

- **Ex I/E.U. approvals:**
  - ATEX 94/9EC
  - FM, CAV, Div I, Group D, T4...T6
  - CSA, Div I, Group D, T4...T6

- **Ex I/C. NEX 99 I**
  - CSA, Div I, Group D, T4...T6

### Ex I/E.U. data:
- L₀ (max): 30 VDC
- P (max): 0.64 W
- L (max): 10 μH
- C (max): 1.0 nF
- U₀ (max): 25.6 VDC
- I₀ (max): 28 mA DC
- P₀ (max): 57 mW
- L₀ (max): 80 mA DC
- C₀ (max): 3.5 nF
# STT17H-BN Specification

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Basic Accuracy*</th>
<th>Rated Range</th>
<th>Standards</th>
<th>Minimum Span**</th>
<th>Temperature Effects per 1.0°C (1.8°F) Change in Ambient Temperature***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fixed</td>
<td>% of Span</td>
<td>°C</td>
<td>Fixed</td>
<td>% of Span</td>
</tr>
<tr>
<td>Pt100</td>
<td>0.2°C (0.36°F)</td>
<td>± 0.1</td>
<td>-200 to +850</td>
<td>-328 to +1562</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>Pt1000</td>
<td>0.2°C (0.36°F)</td>
<td>± 0.1</td>
<td>-200 to +850</td>
<td>-328 to +1562</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>Nt100</td>
<td>0.3°C (0.5°F)</td>
<td>± 0.1</td>
<td>-60 to +250</td>
<td>-76 to +482</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>B</td>
<td>1°C (1.8°F)</td>
<td>± 0.1</td>
<td>+400 to +1820</td>
<td>+752 to +3309</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>E</td>
<td>0.5°C (0.9°F)</td>
<td>± 0.1</td>
<td>-100 to +1000</td>
<td>-148 to +1832</td>
<td>0.01°C (0.018°F)</td>
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<tr>
<td>J</td>
<td>0.5°C (0.9°F)</td>
<td>± 0.1</td>
<td>-100 to +1200</td>
<td>-148 to +2192</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>K</td>
<td>0.5°C (0.9°F)</td>
<td>± 0.1</td>
<td>-180 to +1372</td>
<td>-192 to +2502</td>
<td>0.01°C (0.018°F)</td>
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<td>0.5°C (0.9°F)</td>
<td>± 0.1</td>
<td>-100 to +900</td>
<td>-148 to +1652</td>
<td>0.01°C (0.018°F)</td>
</tr>
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<td>± 0.1</td>
<td>-180 to +1300</td>
<td>-292 to +2372</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>R</td>
<td>1°C (1.8°F)</td>
<td>± 0.1</td>
<td>-50 to +1760</td>
<td>-58 to +3200</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>S</td>
<td>1°C (1.8°F)</td>
<td>± 0.1</td>
<td>-50 to +1760</td>
<td>-58 to +3200</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>T</td>
<td>0.5°C (0.9°F)</td>
<td>± 0.1</td>
<td>-200 to +400</td>
<td>-328 to +752</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>U</td>
<td>0.5°C (0.9°F)</td>
<td>± 0.1</td>
<td>-200 to +600</td>
<td>-328 to +1112</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>W3</td>
<td>1°C (1.8°F)</td>
<td>± 0.1</td>
<td>0 to +2300</td>
<td>+32 to +4172</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>W5</td>
<td>1°C (1.8°F)</td>
<td>± 0.1</td>
<td>0 to +2300</td>
<td>+32 to +4172</td>
<td>0.01°C (0.018°F)</td>
</tr>
<tr>
<td>v</td>
<td>0.1 v</td>
<td>± 0.1</td>
<td>0 to 7000 v</td>
<td></td>
<td>5 v</td>
</tr>
<tr>
<td>mV</td>
<td>10 µV</td>
<td>± 0.1</td>
<td>-800 to 800 mV</td>
<td></td>
<td>5 mV</td>
</tr>
</tbody>
</table>

*whichever is greater; Total Reference Accuracy = Basic Accuracy + CJ Accuracy (T/C only)

**for 50% of upper range value, whichever is greater

*** reference temperature 24°C

## OPERATING CONDITIONS

Ambient temperature, rated...................... -40 to 85°C (-40 to 185°F)
Humidity............................................. 0 to 95% RH (non-cond.)
Vibration..........................................Max 4g over 25 to 100Hz
Cold junction accuracy........................ ±1.0°C

## ELECTRICAL INPUT SPECIFICATIONS

Supply Voltage.................................. 8 to 35 VDC
Power supply voltage effect........................ ≤ 0.005% of span per VDC
Warm-up time.................................. 30 sec
Response time (programmable)...................... 1 to 60 sec
Galvanic isolation................................ 1500 VAC

## CURRENT OUTPUT SPECIFICATIONS

Signal output range......................... 4 to 20 mA
Update time.................................. 440 msec
Load resistance (v).......................... 5(V supply - 6) / 0.023 A
0 to 1174 v

## ALARM LEVELS

Programmable.................................. 3.5 to 4 mA downslope
20 to 23 mA upslope
NAMUR NE43 Upscale.......................... 23 mA
NAMUR NE43 Downscale......................... 3.5 mA

## APPROVALS

* Observed Authority requirements: Standard:
  * EMC 2004/108/EC
  * EEx ia IIC T4
  * EN 61326
  * Ex 94/9/EC

** Ex / I.S. approval:
  * KEMA 06 ATEX 0043 X..................... II 3 GD, T80°C...T105°C
  * EEex ia [L] IIC T4, T6

Applicable in zone................................... 2
Max. amb. Temperature for T4...................... 85°C
Max. amb. Temperature for T6......................... 60°C

Vmax........................................................... V
STT171 Custom Configuration Data Sheet

Customer P.O. Number

Line Item

Model Number

Tag Number (max 15 char)

Honeywell Sales Order Number

Sensor Type:

- □ Pt100
- □ Ni100
- □ Ohms

Output Values:

<table>
<thead>
<tr>
<th>4 mA Value:</th>
<th>20 mA Value:</th>
<th>Response time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ _________°C</td>
<td>□ _________°C</td>
<td>(0.33 – 60 sec)</td>
</tr>
<tr>
<td>□ _________°F</td>
<td>□ _________°F</td>
<td></td>
</tr>
<tr>
<td>□ _________ Ohms</td>
<td>□ _________ Ohms</td>
<td></td>
</tr>
</tbody>
</table>

Output Limits:

- □ Span (4 to 20 mA)
- □ Max (3.5 to 23 mA)
- □ Specify Low ______ mA, High ______ mA
- □ NAMUR NE 43 (3.8 to 20.5 mA)

Sensor Error Action:

- □ Off
- □ Specify ______ mA
- □ NAMUR NE 43 upscale (23 mA)
- □ NAMUR NE 43 downscale (3.5 mA)
**STT173 Custom Configuration Data Sheet**

Customer P.O. Number  

Line Item  

Model Number  

Tag Number (max 15 char)  

Honeywell Sales Order Number  

Sensor Type:

- □ Pt100  
- □ Ni100  
- □ Type B T/C  
- □ Type E T/C
- □ Type J T/C  
- □ Type T/C  
- □ Type W3 T/C  
- □ Type W5 T/C  
- □ Cold Junction Compensation:
  - □ Internal  
  - □ External / Pt100  
  - □ External / Ni100

Wiring:

- □ 2-wire  
- □ 3-wire  
- □ 4-wire  
- □ Type K T/C  
- □ Type L T/C  
- □ Type N T/C  
- □ Type R T/C  
- □ Type S T/C  
- □ Ohms  
- □ mV  
- □ Type T T/C  
- □ Type U T/C  
- □ Type W3 T/C  
- □ Type W5 T/C

Output Values:

- □ 4 mA Value:  
- □ 20 mA Value:  

  - □ __________ °C  
  - □ __________ °F  
  - □ __________ mV  
  - □ __________ Ohms

  - □ __________ °C  
  - □ __________ °F  
  - □ __________ mV  
  - □ __________ Ohms

Response time:  

- □ _________ (1 – 60 sec)

Output Limits:

- □ Span (4 to 20 mA)  
- □ Max (3.5 to 23 mA)  
- □ Specify Low _____ mA, High _____ mA  
- □ NAMUR NE 43 (3.8 to 20.5 mA)

Sensor Error Action:

- □ Off  
- □ Specify _____ mA  
- □ NAMUR NE 43 upscale (23 mA)  
- □ NAMUR NE 43 downscale (3.5 mA)
STT17H Custom Configuration Data Sheet

Customer P.O. Number

Line Item

Model Number

Tag Number (max 15 char)

Honeywell Sales Order Number

Sensor Input:
- Single Sensor
- Duplex Sensor (Average)
- Duplex Sensor (Differential)

Sensor Type:
- Pt100
- Ni100
- Type B T/C
- Type E T/C
- Type J T/C
- Type K T/C
- Type L T/C
- Type N T/C
- Type R T/C
- Type S T/C
- Type T T/C
- Type U T/C
- Type W3 T/C
- Type W5 T/C

Cold Junction Compensation:
- Internal
- External / Pt100
- External / Ni100

Wiring:
- 2-wire
- 3-wire
- 4-wire

Output Values:
- 4 mA Value:
  - Temperature
  - °C
  - °F
  - mV
  - Ohms
- 20 mA Value:
  - Temperature
  - °C
  - °F
  - mV
  - Ohms
- Response time:
  - (1 – 60 sec)

Output Limits:
- Span (4 to 20 mA)
- Max (3.5 to 23 mA)
- Specify Low ______ mA, High ______ mA
- NAMUR NE 43 (3.8 to 20.5 mA)

Sensor Error Action:
- Off
- Specify ______ mA
- NAMUR NE 43 upscale (23 mA)
- NAMUR NE 43 downside (3.5 mA)
Model Selection Guide (34-44-16-07)

Model Selection Guides are subject to change and are inserted into the specifications as guidance only.

Honeywell
STT 3000 Temperature Transmitter
Series STT170
Model Selection Guide
34-44-16-07  Issue 35

Instructions
- Choose Availability column based on Key Number.
- A dot (•) denotes unrestricted availability.
- Select the desired Key Number based on the desired communications protocol.
- Select options and approvals from Tables.

Key Numbers

<table>
<thead>
<tr>
<th>Key Number (STT17?)</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI, Options</th>
</tr>
</thead>
</table>

List Price equals the sum of all prices for all selections made.

Table I - Safety Approvals

<table>
<thead>
<tr>
<th>Approval Body</th>
<th>Approval Type</th>
<th>Location or Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td>00</td>
</tr>
<tr>
<td></td>
<td>Intrinsically Safe</td>
<td>Class I, Div. 1, Groups A, B, C, D, T4</td>
</tr>
<tr>
<td></td>
<td>Non-incendive</td>
<td>Class I, Zone 0/1; AEx ia IIC, T4</td>
</tr>
<tr>
<td></td>
<td>Intrinsically Safe</td>
<td>Class I, Div. 2, Groups A, B, C, D, T4</td>
</tr>
<tr>
<td></td>
<td>Non-incendive</td>
<td>Class I, Div. 2, Groups A, B, C, D, T4</td>
</tr>
<tr>
<td></td>
<td>Intrinsically Safe</td>
<td>Zone 0/1; Ex II 1 GD, EEx ia IIC, T4; T6</td>
</tr>
<tr>
<td></td>
<td>Non-incendive</td>
<td>Zone 2; Ex II 2 (1) GD, T4, T6</td>
</tr>
<tr>
<td></td>
<td>Intrinsically Safe</td>
<td>Ex II 3 G, EEx na [L] T4; T6</td>
</tr>
</tbody>
</table>

When installed in Field Mount Enclosure Table IV, E or T

<table>
<thead>
<tr>
<th>FM Approval</th>
<th>Intrinsically Safe</th>
<th>Class I, Div. 1, Groups A, B, C, D, T4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-incendive</td>
<td>Class I, Div. 2, Groups A, B, C, D, T4</td>
<td></td>
</tr>
<tr>
<td>CSA</td>
<td>Intrinsically Safe</td>
<td>Class I, Div. 2, Groups A, B, C, D, T4</td>
</tr>
<tr>
<td>Non-incendive</td>
<td>Class I, Div. 2, Groups A, B, C, D, T4</td>
<td></td>
</tr>
<tr>
<td>ATEX</td>
<td>Intrinsically Safe</td>
<td>Zone 0/1; Ex II 1 GD, EEx ia IIC, T4; T6</td>
</tr>
<tr>
<td></td>
<td>Non-incendive</td>
<td>Zone 2; Ex II 2 (1) GD, T4, T6</td>
</tr>
</tbody>
</table>

* Ex II GD or II 2 (1) GD allows installation in potentially explosive atmospheres caused by the presence of combustible dusts only when mounted in a metal enclosure of form B according to DIN 43729 (Head-Mount enclosure) that provides a degree of protection of at least IP 6X in accordance with EN 60059, that is suitable for the application and is correctly installed.

TABLE II - No Option

<table>
<thead>
<tr>
<th>Configuration</th>
<th>0 _ _ _ _</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Transmitter Configuration with Printed Report **</td>
<td>T _ _ _ _</td>
</tr>
<tr>
<td>Custom Transmitter Calibration with Printed Report **</td>
<td>C _ _ _ _</td>
</tr>
<tr>
<td>No Option</td>
<td>_ 0 _ _ _</td>
</tr>
<tr>
<td>No Certificate of Conformance/Origin</td>
<td>_ _ _ _</td>
</tr>
<tr>
<td>Certificate of Conformance/Origin</td>
<td>_ _ _ _</td>
</tr>
<tr>
<td>Optional Certificates</td>
<td>_ _ _ _</td>
</tr>
</tbody>
</table>

TABLE III - Configuration & Certificates
TABLE IV - Transmitter Housing and Integral Meters

<table>
<thead>
<tr>
<th>Housing</th>
<th>No Housing Supplied</th>
<th>Aluminum with Beige Epoxy Coating</th>
<th>316 Stainless Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Housing</td>
<td></td>
<td>E_</td>
<td>d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T_</td>
<td>d</td>
</tr>
<tr>
<td>Cable/Conduit Entry</td>
<td>Not Applicable - No Housing Supplied</td>
<td>_ O_</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/2&quot; NPT Cable/Conduit Entry</td>
<td>_ N_</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M20 x 1.5 Cable/Conduit Entry</td>
<td>_ M_</td>
<td></td>
</tr>
<tr>
<td>Integral Meter</td>
<td>No Integral Meter Supplied</td>
<td>_ O_</td>
<td></td>
</tr>
</tbody>
</table>

TABLE V - Optional Equipment

<table>
<thead>
<tr>
<th>Mounting</th>
<th>No mounting bracket</th>
<th>Carbon steel pipe mounting bracket for 2&quot; pipe</th>
<th>Stainless Steel mounting bracket for 2&quot; pipe</th>
<th>Spring loading mounting set</th>
<th>DIN rail mounting clip (top hat or G rail)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O_</td>
<td>M_</td>
<td>e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td></td>
<td>S_</td>
<td>L_</td>
<td>f</td>
<td>f</td>
<td>f</td>
</tr>
<tr>
<td>M20 adaptors</td>
<td>No adaptors required</td>
<td>_ 0_</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>_ 1_</td>
<td>_ 3_</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/4&quot;NPT adaptors</td>
<td>1 adaptor for 3/4&quot;NPT wiring entry</td>
<td>_ 3_</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lightning Protection</td>
<td>No lightning protection supplied</td>
<td>_ O_</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>_ L_</td>
<td>_ S_</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE VI - Additional Features

| No Selection | 00 |   |   |   |
| Optional Extended Warranty | Additional Warranty - 1 year | W1 |   |   |
| Customer Tagging | 316 SS Wired-on Customer I.D. Tag (4 lines, 25 characters per line, customer specified information) | TG |   |   |
|          | 316 SS Wired-on Customer I.D. Tag (blank) | TB |   |   |
| Operator’s Manual | STT17 Version; English, French, German Language | M1 |   |   |
|          | STT173 Version; English, French, German Language | M3 |   |   |
|          | STT17H Version; English, French, German Language | MH |   |   |

REstrictions

<table>
<thead>
<tr>
<th>Restriction Letters</th>
<th>Available Only With Selection</th>
<th>Not Available With Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>VI</td>
<td>N_</td>
</tr>
<tr>
<td>d</td>
<td>IV</td>
<td>E_  or T_</td>
</tr>
<tr>
<td>e</td>
<td>IV</td>
<td>E_  or T_</td>
</tr>
<tr>
<td>f</td>
<td>IV</td>
<td>0_</td>
</tr>
</tbody>
</table>

ACCESSORIES

<table>
<thead>
<tr>
<th>DIN rail clip</th>
<th>Part Number</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50017850-001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**If Custom Configuration option "T" or the Custom Calibration option "C" is ordered, the configuration or calibration information required must be entered as a note on the order. Any of the following elements can be included, based on the selected model number: (STT171, STT173, STT17H) Tag Number, CJC, Sensor Type, Sensor Wiring, Temperature Units, URV/LLV, Output Range, Output Limits, Sensor Error Action, Response Time.**
Sales and Service
For application assistance, current specifications, pricing, or name of the nearest Authorized Distributor, contact one of the offices below.

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Toll Free Fax: 1300-36-04-70

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**AMERICA’S**
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Email: (Sales) FP-Sales-Apps@Honeywell.com or (TAC) hfs-tac-support@honeywell.com

For more information
To learn more about Temperature Transmitters,
visit www.process.honeywell.com
Or contact your Honeywell Account Manager

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