

## 6655 Series

### On-Surface Temperature Sensors



#### DESCRIPTION

The 6655 Series On-Surface Temperature Sensors are lower-cost, thermistor-based temperature sensors that use Honeywell's compact, low-profile, 12,70 mm [0.5 in] thermostat package.

This series is designed to offer temperature measurements with enhanced response and accuracy on most flat surfaces and pipes in non-condensing applications.

Unlike thermostats, which are generally limited to one fixed temperature, these thermistor-based NTC (Negative Temperature Coefficient) devices allow the customer greater flexibility in temperature monitoring and controlling.

Tight interchangeability eliminates or reduces customer need for calibration. Enhanced accuracy and response time are designed to meet your needs. A wide operating temperature range of -20 °C to 110 °C [-4 °F to 230 °F] allows application flexibility.

The 6655 Series products have gained widespread acceptance standard due to their robust design and ease of installation. A variety of mounting brackets provides mounting flexibility.

#### FEATURES

- Air/surface temperature sensing
- NTC thermistor output
- Low cost
- Low, compact profile
- Tight interchangeability
- Enhanced accuracy
- Enhanced response time
- Wide operating temperature range
- Variety of mounting brackets
- Widely used sensor package footprint
- Enhanced stability/low drift

#### POTENTIAL APPLICATIONS

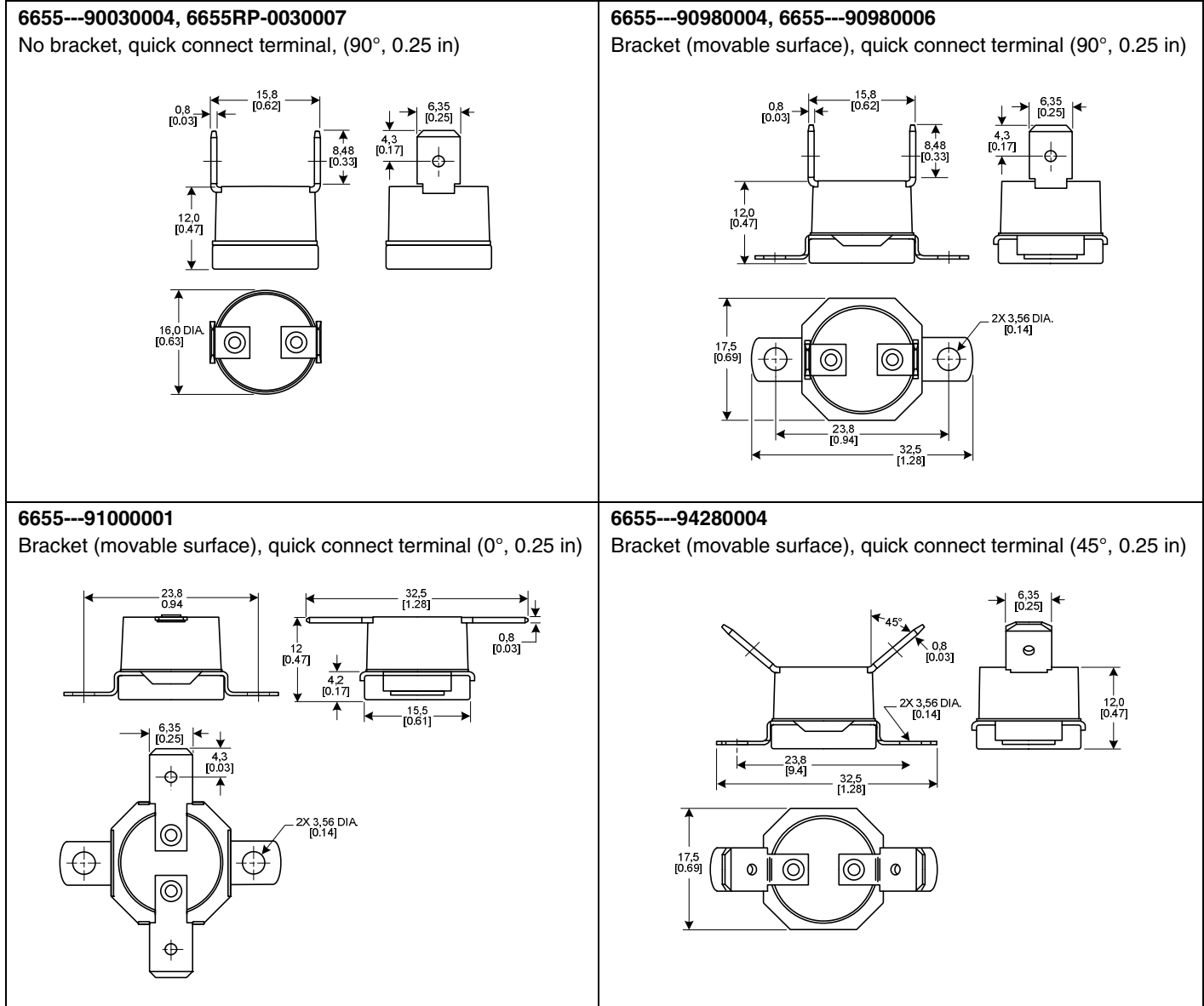
- Water heaters and boilers
- Industrial ovens and ranges
- Copier diffuser rollers
- HVAC compressor or duct temperature sensing

# 6655 Series

**Table 1. General Specifications**

| Parameter                             | Characteristic                     |
|---------------------------------------|------------------------------------|
| Temperature sensing type              | air/surface                        |
| Thermistor type                       | NTC                                |
| Nominal resistance at 25 °C [77 °F]   | 10,000 Ohm, 12,000 Ohm             |
| Operating temperature range           | -20 °C to 110 °C [-4 °F to 230 °F] |
| Tolerance                             | ±2.5%, ±7.6%, ±10.0%               |
| BETA (25/85)                          | 3694, 3976                         |
| R-T curve                             | 12, 16                             |
| Time constant on metal surface        | 1.5 s                              |
| Dissipation constant on metal surface | 6.5 m/W°C                          |
| Housing material                      | phenolic                           |
| Mounting method/mechanical interface  | (see Figure 1)                     |
| Electrical interface/connector type   | (see Figure 1)                     |

**Figure 1. Mounting Dimensions (For reference only: mm/[in]).**

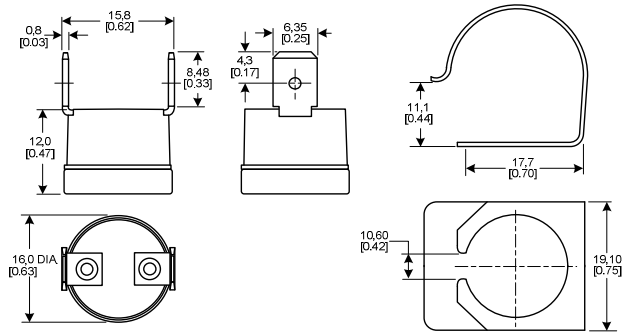


# On-Surface Temperature Sensors

Figure 1. Mounting Dimensions (For reference only: mm/[in.]) (Continued)

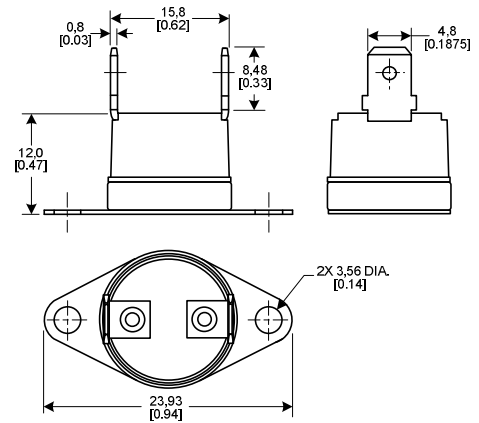
**6655---97100901**

Bracket (pipe clip), quick connect terminals, 90°, 0.25 in)  
(Shipped separately for customer assembly.)



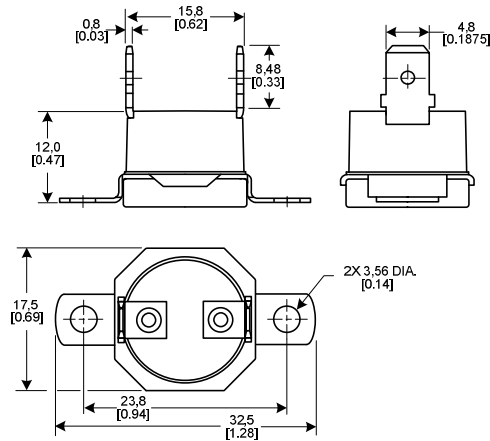
**6655---99580003**

Bracket (fixed surface), quick connect terminal (90°, 0.1875 in)



**6655---99600003, 6655---79600002**

Bracket (movable surface), quick connect terminal (90°, 0.1875 in)



## Order Guide

| Catalog Listing      | Description  |
|----------------------|--|
| 6655---<br>90030004  | 6655 Series on-surface temperature sensor, NTC, 12,000 Ohm, $\pm 7.6\%$ tolerance, 3694 BETA, 12 R-T curve, phenolic, no bracket, quick connect terminal (90°, 0.25 in)                        |
| 6655---<br>90980004  | 6655 Series on-surface temperature sensor, NTC, 12,000 Ohm, $\pm 7.6\%$ tolerance, 3694 BETA, 12 R-T curve, phenolic, bracket (movable surface), quick connect terminal (90°, 0.25 in)         |
| 6655---<br>90980006  | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 10.0\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, bracket (movable surface), quick connect terminal (90°, 0.25 in)        |
| 6655---<br>91000001  | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 10.0\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, bracket (movable surface), quick connect terminal (0°, 0.25 in)         |
| 6655---<br>94280004  | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 10.0\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, bracket (movable surface), quick connect terminal (45°, 0.25 in)        |
| 6655---<br>97100901  | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 10.0\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, bracket (20.6 mm dia. pipe clip), quick connect terminal (90°, 0.25 in) |
| 6655---<br>99580003  | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 10.0\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, bracket (fixed surface), quick connect terminal (90°, 0.1875 in)        |
| 6655---<br>99600003  | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 10.0\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, bracket (movable surface), quick connect terminal (90°, 0.1875 in)      |
| 6655RP--<br>90030007 | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 10.0\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, no bracket, quick connect terminal (90°, 0.25 in)                       |
| 6655---<br>79600002  | 6655 Series on-surface temperature sensor, NTC, 10,000 Ohm, $\pm 2.5\%$ tolerance, 3976 BETA, 16 R-T curve, phenolic, bracket (movable surface), quick connect terminal (90°, 0.1875 in)       |

### **WARNING**

#### **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

#### **WARRANTY/REMEDY**

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

### **WARNING**

#### **MISUSE OF DOCUMENTATION**

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

#### **SALES AND SERVICE**

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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