



Humidity and Temperature
Wall Mount Transducers
SCT Series



Humidity and Temperature Wall Mount Transducers, SCT Series

Honeywell Humidity and Temperature Wall Mount Transducers, SCT Series, are an ideal environmental solution for indoor applications such as building automation and HVAC systems in residential and office buildings. The SCT Series utilizes Honeywell HumidIcon™ humidity/temperature sensors to accurately and reliably sense humidity and temperature in the area to enhance user comfort.

The SCT Series offers a variety of options and features. The transducers can be equipped with or without a legible LCD display that shows the ambient temperature along with the relative humidity or dew point. The stylish cover trim is available in either silver or gold.

Standard output of humidity and temperature is either 4 mA to 20 mA or 0 V to 10 V. The temperature output signal may also be configured with an NTC 10 kOhm, 20 kOhm or PT1000 sensor.

Features

- Enhanced accuracy:
 - ± 2 %RH or ± 4 %RH (10 %RH to 90 %RH at 25 °C),
 ± 5 %RH (10 %RH to 90 %RH at 5 °C to 50 °C)
 - Enables the customer to potentially reduce/eliminate transmitter recalibration cost and supports and optimizes system accuracy and uptime
- Long-term stability:
 - Humidity: ± 0.05 %RH typ. and ± 1.2 %RH max. drift over five years
 - True temperature-compensated humidity element enables customers to potentially reduce/eliminate the transmitter recalibration cost with enhanced stability over next best alternatives
- Enhanced reliability: The humidity sensor element's multilayer construction provides resistance to most application hazards such as dust, dirt, condensation, oils and common environmental chemicals, enhancing reliability
- Standard humidity output: 4 mA to 20 mA or 0 V to 10 V
- Cost-effective
- Choice of cover trim color (silver or gold)
- Full 0 %RH to 100 %RH measurement range
- Available with or without LCD display

Potential Applications

INDUSTRIAL

Climate monitoring and control for:

- Residential and office buildings
- Production and manufacturing plants
- Storerooms
- Equipment cabinets
- Testing environments

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Table 1. Humidity and Temperature Performance

Characteristic	Condition	Parameter
Humidity measurement range	-	0 % RH to 100 %RH non-condensation
Humidity accuracy	25 °C [77 °F], 10 %RH to 90 %RH 5 °C to 50 °C [41 °F to 122 °F], 10 %RH to 90 %RH	±2 %RH or ±4 %RH ² ±5 %RH
Temperature measurement range ¹	-	-5 °C to 55 °C [13 °F to 131 °F] or 0 °C to 70 °C [32 °F to 158 °F] or -25 °C to 60 °C [-13 °F to 140 °F]
Long term drift	-	±0.05 %RH typ. and ±1.2 %RH max. at 50 %RH for 5 years stability
Temperature accuracy: units with transducer	25 °C [77 °F] 10 °C to 30 °C [50 °F to 86 °F] -25 °C to 10 °C [-13 °F to 50 °F]; 30 °C to 70 °C [86 °F to 158 °F]	±0.3 °C ±0.5 °C ±1 °C
units with NTC 10 kOhm sensor	25 °C	±0.2 °C, Beta 3892
units with NTC 20 kOhm sensor	25 °C	±0.2 °C, Beta 3892
units with Pt 1000 Class A sensor	25 °C	±0.3 °C, DIN IEC751 Class A, 385 Alpha

¹Refer to Figure 3 to set temperature measurement range.

²Refer to Figure 1 to select humidity accuracy.

Table 2. Electrical Specifications

Characteristic	Parameter
Power supply: units with 4 mA to 20 mA output units with 0 V to 10 V output	24 Vdc ±10%, 50 mA max. 18 Vdc to 40 Vdc, 15 mA max. or 24 Vac ±15%, 50/60 Hz, 50 mA max.
Analog output signal load resistance: units with 4 mA to mA output units with 0 V to 10 V output	500 Ohm max. 10 kOhm min.

Table 3. Environmental Specifications

Characteristic	Parameter
Operating temperature range: units with LCD display units without LCD display	-20 °C to 70 °C [-4 °F to 158 °F] -25 °C to 85 °C [-13 °F to 185 °F]
Storage temperature range: units with LCD display units without LCD display	-30 °C to 80 °C [-22 °F to 176 °F] -40 °C to 85 °C [-40 °F to 185 °F]
Electromagnetic compliance: immunity emission	EN61326-1 and EN61326-2-3 Industrial Electromagnetic Environment Class B equipment

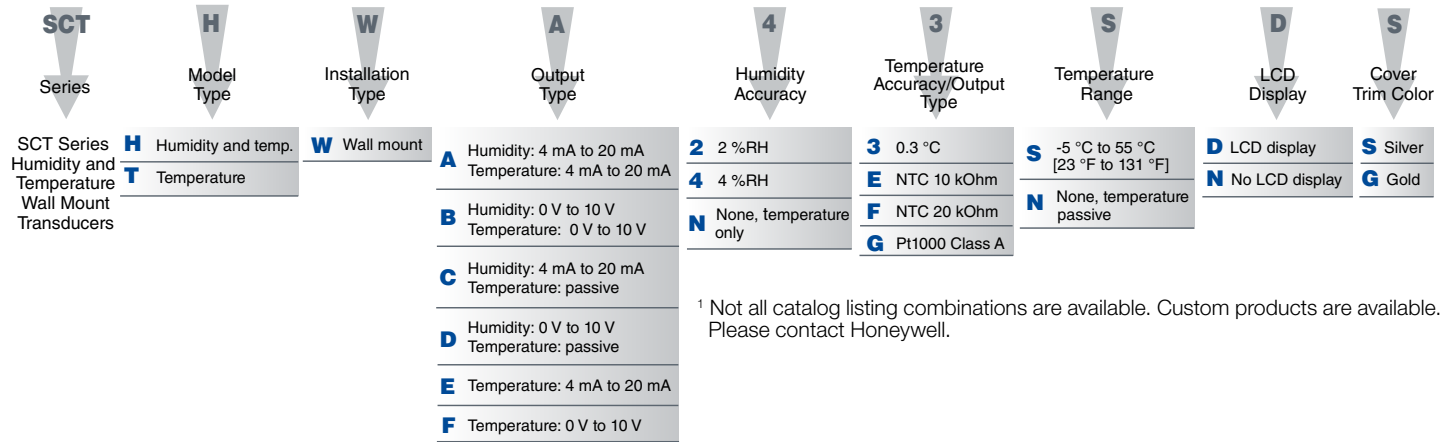
Table 4. Mechanical Specifications

Characteristic	Parameter
Sealing	IP30
Housing material	plastic (PC+ABS) UL 94 V-0 (Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances)
Terminal block	screw terminals, max. wire size is 1,5 mm ² or AWG16

Humidity and Temperature Wall Mount Transducers

Figure 1. Nomenclature Tree¹

For example, **SCTHWA43SDS** defines an SCT Series humidity and temperature transducer, wall mount, 4 mA to 20 mA output, 4 %RH humidity accuracy, 0.3 °C temperature accuracy/output type, -5 °C to 55 °C temperature range, LCD display, silver cover trim.



¹ Not all catalog listing combinations are available. Custom products are available. Please contact Honeywell.

Table 5. Order Guide for 4% Humidity Accuracy

Catalog Listing	Description
SCTHWA43SDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, 0.3 °C, -5 °C to 55 °C, LCD display, silver
SCTHWA43SNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, 0.3 °C, -5 °C to 55 °C, no LCD display, silver
SCTHWB43SDS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, 0.3 °C, -5 °C to 55 °C, LCD display, silver
SCTHWB43SNS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, 0.3 °C, -5 °C to 55 °C, no LCD display, silver
SCTHWC4GNDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, Pt1000 Class A, LCD display, silver
SCTHWC4GNNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, Pt1000 Class A, no LCD display, silver
SCTHWC4FNNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, NTC 20 kOhm, no LCD display, silver
SCTHWC4FNDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, NTC 20 kOhm, LCD display, silver
SCTHWC4ENDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, NTC 10 kOhm, LCD display, silver
SCTHWC4ENNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 4 %RH, NTC 10 kOhm, no LCD display, silver
SCTHWD4GNDS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, Pt1000 Class A, LCD display, silver
SCTHWD4GNNS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, Pt1000 Class A, no LCD display, silver
SCTHWD4FNDS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, NTC 20 kOhm, LCD display, silver
SCTHWD4FNNS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, NTC 20 kOhm, no LCD display, silver
SCTHWD4ENDS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, NTC 10 kOhm, LCD display, silver
SCTHWD4ENNS	Humidity and temperature, wall mount, 0 V to 10 V, 4 %RH, NTC 10 kOhm, no LCD display, silver

Table 6. Order Guide for 2 %RH Humidity Accuracy

Catalog Listing	Description
SCTHWA23SDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, 0.3 °C, -5 °C to 55 °C, LCD display, silver
SCTHWA23SNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, 0.3 °C, -5 °C to 55 °C, no LCD display, silver
SCTHWB23SDS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, 0.3 °C, -5 °C to 55 °C, LCD display, silver
SCTHWB23SNS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, 0.3 °C, -5 °C to 55 °C, no LCD display, silver
SCTHWC2GNDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, Pt1000 Class A, LCD display, silver
SCTHWC2GNNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, Pt1000 Class A, no LCD display, silver
SCTHWC2FNDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, NTC 20 kOhm, LCD display, silver
SCTHWC2FNNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, NTC 20 kOhm, no LCD display, silver
SCTHWC2ENDS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, NTC 10 kOhm, LCD display, silver
SCTHWC2ENNS	Humidity and temperature, wall mount, 4 mA to 20 mA, 2 %RH, NTC 10 kOhm, no LCD display, silver
SCTHWD2GNDS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, Pt1000 Class A, LCD display, silver
SCTHWD2GNNS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, Pt1000 Class A, no LCD display, silver
SCTHWD2FNDS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, NTC 20 kOhm, LCD display, silver
SCTHWD2FNNS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, NTC 20 kOhm, no LCD display, silver
SCTHWD2ENDS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, NTC 10 kOhm, LCD display, silver
SCTHWD2ENNS	Humidity and temperature, wall mount, 0 V to 10 V, 2 %RH, NTC 10 kOhm, no LCD display, silver

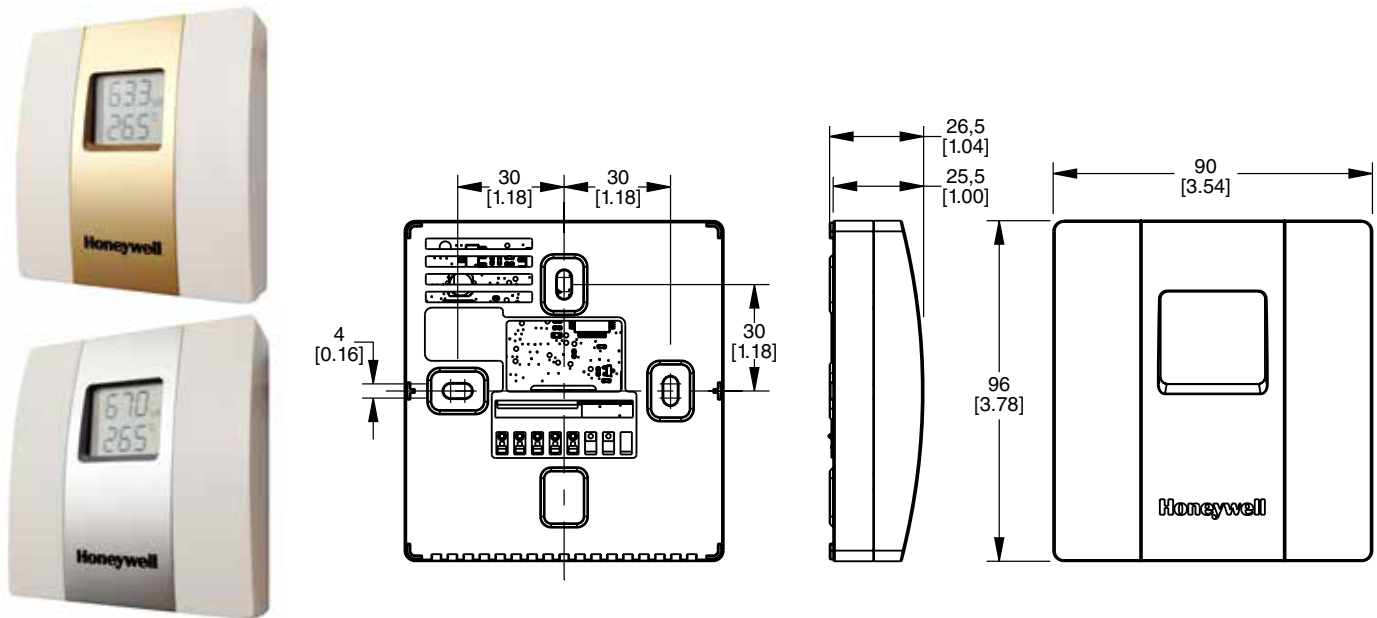
Table 7. Order Guide for No Humidity (Temperature Only) Accuracy

Catalog Listing	Description
SCTTWEN3SDS	Temperature, 4 mA to 20 mA, 0.3 °C, -5 °C to 55 °C, LCD display, silver
SCTTWEN3SNS	Temperature, 4 mA to 20 mA, 0.3 °C, -5 °C to 55 °C, no LCD display, silver
SCTTWFN3SDS	Temperature, 0 V to 10 V, 0.3 °C, -5 °C to 55 °C, LCD display, silver
SCTTWFN3SNS	Temperature, 0 V to 10 V, 0.3 °C, -5 °C to 55 °C, no LCD display, silver

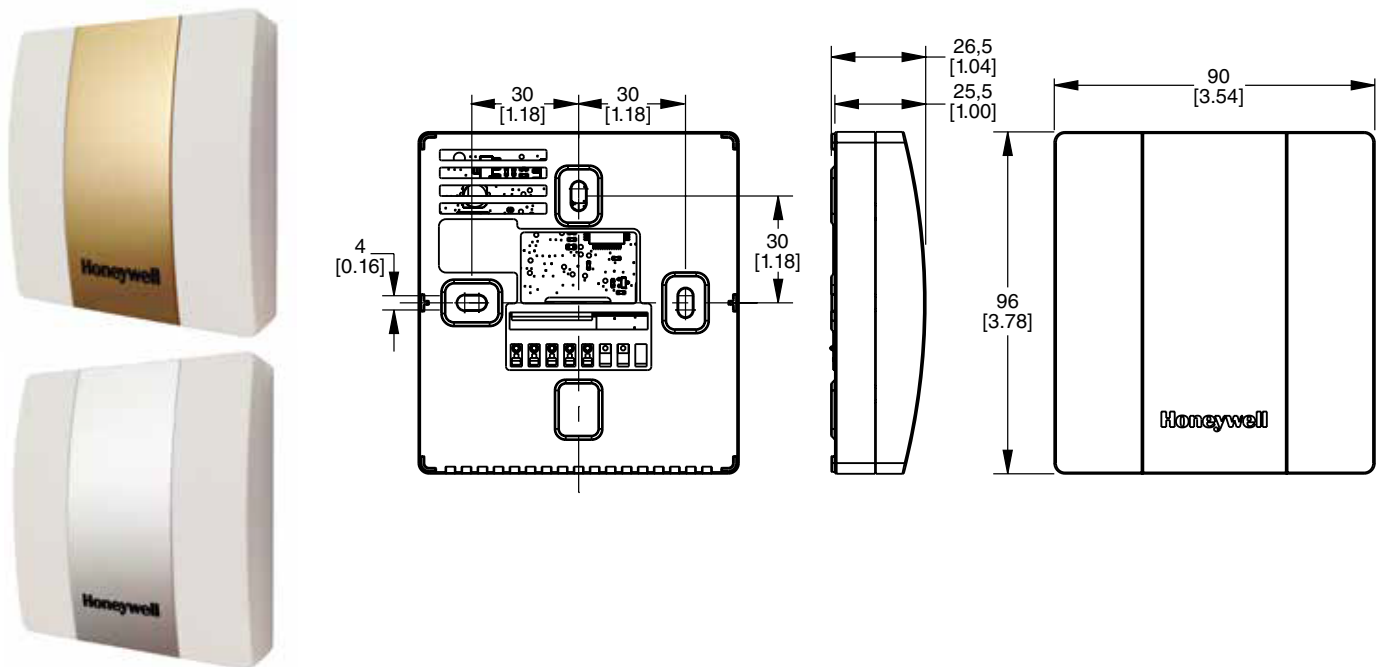
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Figure 2. Mounting Dimensions (For reference only: mm/in)

With LCD Display

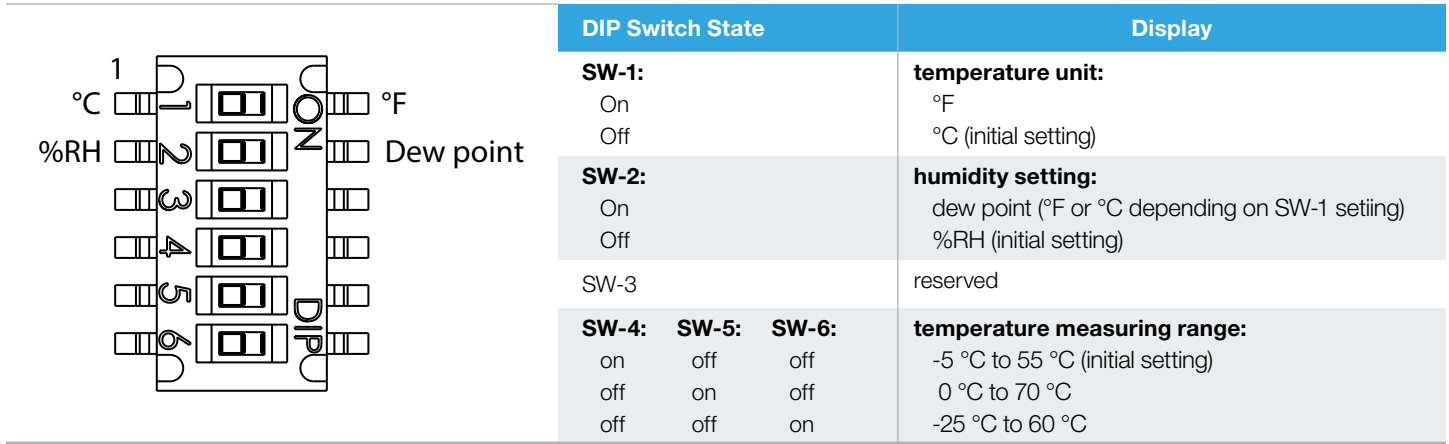


Without LCD Display



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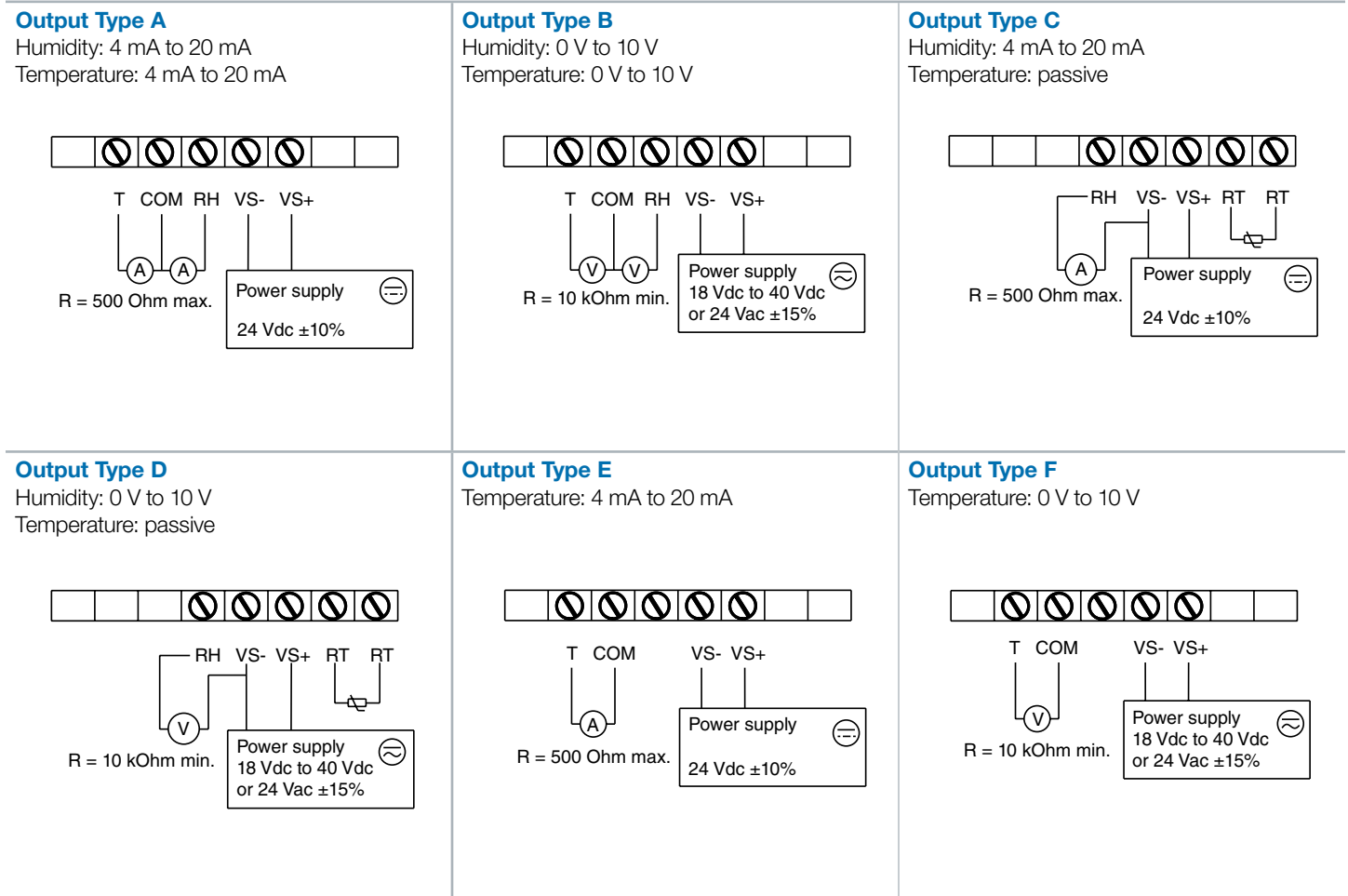
Figure 3. DIP Switch Settings^{1,2}



¹There is no SW-1 switch assembled if both LCD display and temperature transducer are not configured.

²New setting with SW switch will be active once the unit is powered up.

Figure 4. Wiring



ADDITIONAL INFORMATION

The following associated literature is available at sensing.honeywell.com:

- Application Note
- Installation Instructions

⚠ 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.

⚠ WARNING **MISUSE OF DOCUMENTATION**

- The information presented in this datasheet 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.

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 website, 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.

Find out more

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.

To learn more about Honeywell's sensing and control products, call **+1-815-235-6847** or **1-800-537-6945**, visit **sensing.honeywell.com**, or e-mail inquiries to **info.sc@honeywell.com**

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