TRUERH™ Series HT-670x Humidity Transmitters

TRUERH™ HT-670x Series Humidity Transmitters come in both wall or duct mount packages to meet a variety of sensing application needs. These attractively styled controllers offer ease of installation and application flexibility.

The transmitter generates a jumper-selectable output signal in either the 4 to 20 mA or 0 to 10 V range, corresponding to 0 to 100% Relative Humidity (RH).

TRUERH transmitters can measure Relative Humidity (RH) within either ±2% or ±3% accuracy. The 2% models include a National Institute of Standards and Technology (NIST) certificate of conformance. The patented All-Polymer™ humidity sensor construction improves resistance to chemical corrosion.

Figure 1: HT-670x Series Humidity Transmitter

Figure 2: HT-670x-0N00P Duct Probe Humidity Transmitter

Features and Benefits	
❑ **TRUERH Technology**	Features patented improvements in circuitry and calibration techniques
❑ **All-Polymer Humidity Sensor**	Provides accurate and reliable humidity sensing with the patented sensing element
❑ **NIST Traceable Calibration**	Meets NIST standards for calibration testing, verifying, and auditing for the 2% model
❑ **Jumper-Selectable Output: 0 to 10 VDC or 4 to 20 mA**	Maximizes application flexibility
❑ **All-Plastic Material for Duct Probe**	Improves thermal performance and complies with Underwriters Laboratories® Inc. (UL) flammability ratings for plenum use

Product Overview

IMPORTANT: The HT-670x Series Humidity Transmitters are intended to provide input to equipment under normal operating conditions. Where failure or malfunction of an HT-670x Series transmitter could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limit or safety controls) or systems (alarm or supervisory) intended to warn of, or protect against, failure or malfunction of the HT-670x Series transmitter must be incorporated into and maintained as part of the control system.

The HT-670x Series wall mount and duct probe humidity transmitters use a patented All-Polymer sensor capable of sensing the entire range of 0 to 100% RH. Both transmitters feature a quick-mount, two-screw design that saves time and simplifies installation.

A combination wallbox and surface mounting base connects to the unit for easy mounting directly to either drywall (spring clips provided) or a standard U.S. wallbox. All wiring connections for the humidity transmitters terminate on terminal blocks.

The Johnson Controls TRUERH duct package offers an all plastic enclosure, which reduces thermal biasing. This results in improved accuracy.

Dimensions

Refer to Figure 3 or Figure 4 for humidity transmitter dimensions.

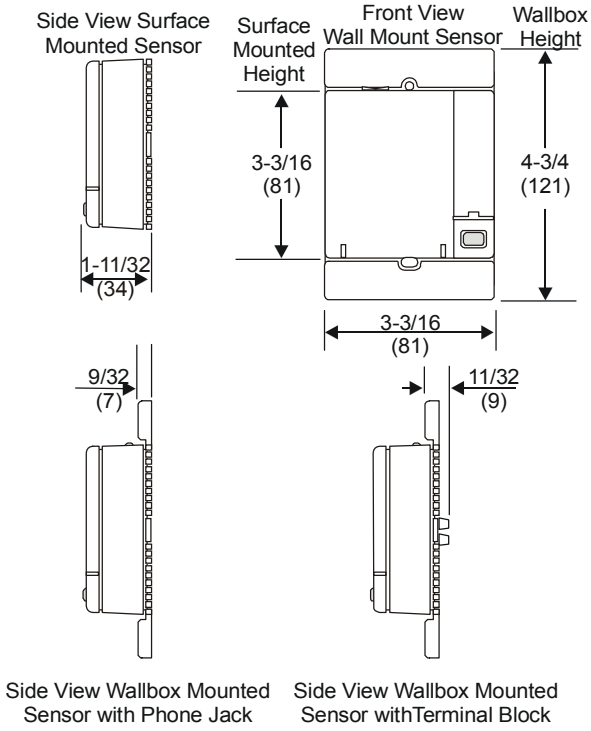

Figure 3: Wall Mount Humidity Transmitter Dimensions, in. (mm)

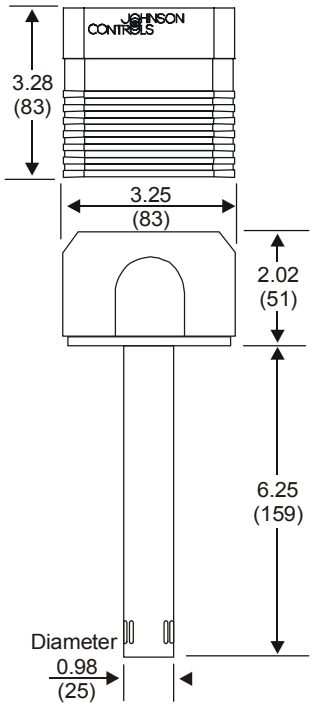

Figure 4: Duct Probe Humidity Transmitter Dimensions, in. (mm)

Repair and Replacement

The wall mount and duct probe humidity transmitters are not field repairable. To order a replacement, refer to the *Ordering Information* section.

Ordering Information

Contact the nearest Johnson Controls representative to order a humidity transmitter, and specify the desired product code number from Table 1. Refer to

Table 2 for accessories and replacement parts available for the wall mount humidity transmitter. (No accessories exist for the duct probe model.)

Table 1: Humidity Transmitters

Product Code Number	Description	RH Accuracy	
		±2%	±3%
HT-6702-0N00W	Wall Mount Humidity Transmitter	X	
HT-6702-0N00P	Duct Probe Humidity Transmitter	X	
HT-6703-0N00W	Wall Mount Humidity Transmitter		X
HT-6703-0N00P	Duct Probe Humidity Transmitter		X

Table 2: Accessories and Replacement Parts for Wall Mount Humidity Transmitters

Product Code Number	Description
ACC-DWCLIP-0	Drywall Spring-Clip Mounting Kit (10 per bag)
ACC-INSL-0*	Foam Pad Kit for Wallbox Mounting (10 per package)
ACC-INSL-1*	Foam Pad Kit for Surface Mounting (10 per package)
GRD10A-608	Plastic Guard with Baseplate and Mounting Ring
T-4000-119	Allen-Head Adjustment Tool (30 per bag)
TE-67MB-600	Mounting Base Kit
TE-67D0-601**	Door Replacement Kit with Johnson Controls Logo
TE-67D0-602**	Door Replacement Kit without Logo

* These foam pads help prevent drafts from entering the unit through the wall, and make installation easier when mounting on an uneven surface.

** Contains 10 original style and 10 new style doors.

Technical Specifications

Product	TRUERH Series HT-670x Humidity Transmitters	
Power Requirements	If 0 to 10 VDC output jumper position is used:	20 to 30 VAC, 50/60 Hz at 15 mA or 14 to 30 VDC at 6 mA, Class 2
	If 4 to 20 mA output jumper position is used:	16 to 30 VDC at 20 mA, Class 2
Output Range (Jumper Selectable)	0 to 10 VDC (ohm minimum load impedance) or 4 to 20 mA DC (2-wire current loop) Maximum load impedance = 50 x (supply voltage: 15.5)	
Humidity Transmitter Accuracy	HT-6702:	±2% RH for 20 to 80% RH at 77°F (25°C) ±4% RH for 10 to 20% and 80 to 90% RH at 77°F (25°C)
	HT-6703:	±3% RH for 20 to 80% RH at 77°F (25°C) ±5% RH for 10 to 20% and 80 to 90% RH at 77°F (25°C)
Humidity Element	All-Polymer sensing element	
Temperature Coefficient	-0.1 to 0.05% RH/°C at 5°C (41°F) to -0.07 to -0.21% RH/°C at 65°C (149°F)	
Electrical Connections	3-position screw terminal block	
Ambient Operating Conditions	32 to 122°F (0 to 50°C) 0 to 100% RH, noncondensing; 85°F (29°C) maximum dew point	
Survival Operating Conditions	-20 to 140°F (-29 to 60°C) 0 to 100% RH, noncondensing; 85°F (29°C) maximum dew point	
Ambient Storage Conditions	-40 to 176°F (-40 to 80°C) 0 to 100% RH, noncondensing; 85°F (29°C) maximum dew point	
Materials	Wall Mount:	White PC/ABS plastic enclosure and mounting base for surface or standard U.S. wallbox mounting, including hardware
	Duct Probe:	Light gray plastic cover with dark gray housing and probe
Dimensions	Wall Mount (H x W x D):	3.20 x 3.20 x 1.34 in. (81 x 81 x 34 mm)
	Duct Probe (H x W x D):	3.28 x 3.25 x 8.27 in. (83 x 83 x 210 mm)
	Probe (L x D):	6.25 x 0.98 in. (159 x 25 mm)
Shipping Weight	0.7 lb (0.3 kg)	
Agency Compliance	Duct Probe Material:	94-5V flammability rated per UL 94

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

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