

Transmitter Series 740 / 741

- **High Temperature Models up to 150° C (300° F)**
- **EMC compatibility EN 50081-1 & EN 50082-2**
- **User-Selectable outputs, Volt and mA**
- **User-Selectable Temperature Ranges**
- **Interchangeable sensor element**

Series 740/741 transmitters continuously measure ambient or remote humidity and provide a linear output signal directly proportional to RH. The transmitter incorporates the latest technology for high accuracy and reliability, and is enclosed in a compact, rugged package. Duct mount models are available with various probe lengths.

Series 740 is a 3/4-wire transmitter that provides user-selectable output signals of 0-1 V, 0-5 V, or 0-10 V (standard).

Series 741 is a 2-wire current loop device and offers outputs of 4-20 mA (standard) or 0-20 mA.

Both series 740 and 741 are available with RH output only (HX prefix), or with separate RH and Temperature outputs (HT prefix). Several standard user-selectable temperature ranges are available with HT models, and specials are available upon request.

The sensing element is a high quality thin film polymer capacitive

sensor. This "T-type" sensor element can be replaced without the need to recalibrate.

Models are available for Wall Mount, Duct Mount, or Remote Mount applications, and mounting accessories are available.

Duct-Mount and Remote-Mount designs are available in High Temperature configurations to sense RH and temperature up to 150 °C (300 °F).



Typical Applications

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|---------------------|-------------------|-----------------|-----------------|
| ▶ Energy management | ▶ HVCA | ▶ Grain Storage | ▶ Fruit Storage |
| ▶ Bakery Products | ▶ Warehouses | ▶ Meat Storage | ▶ Museums |
| ▶ Climate control | ▶ Clean Rooms | ▶ Paper | |
| ▶ Greenhouses | ▶ Food Processing | ▶ Textiles | |

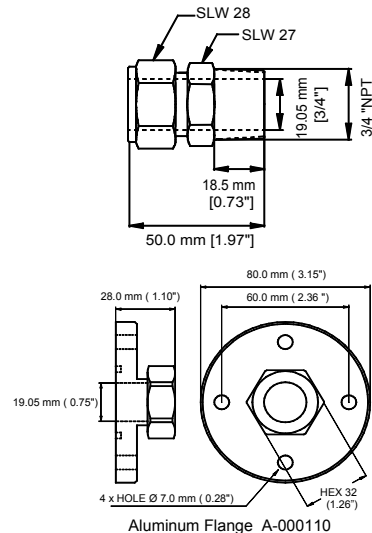
Relative Humidity & Temperature

Series 740		Series 741	
3/4-Wire Relative Humidity Transmitter (HT-740)		2-Wire Relative Humidity Transmitter (HT-741)	
Measuring range	0-100% RH	Measuring range	0-100% RH
Operating range	5-95% RH	Operating range	5-95% RH
Output	0 to 1V, 0 to 5V, 0 to 10Vdc (standard) w/ 2 mA max current draw, 0-20mA or 4-20 mA	Output	4 to 20 mA (standard) or 0 to 20mA
Accuracy @ 23°C	±2% RH (10 to 90 %RH)	Accuracy @ 23°C	±2% RH (10 to 90 %RH)
Stability	±1% RH, 1 year typical (depending on environmental conditions)	Stability	±1% RH, 1 year typical (depending on environmental conditions)
Temperature drift	±0.05% RH per °C typical	Temperature drift	±0.05% RH per °C typical
Response time	10 sec. typical (90% of the change) without filter, flow 6 ft/s	Response time	10 sec. typical (90% of the change) without filter, flow 6 ft/s
Power supply	14 to 35 Vdc for 0 to 10 V output, 8 to 35 Vdc for lower output	Power supply	8 to 35 Vdc
Supply influence	±0.01% RH per V typical	Supply influence	±0.01% RH per V typical
Operating temperature	Housing -20 to 60 °C Probe tip -40 to +150 °C	Operating temperature	Housing -20 to 60 °C Probe tip -40 to +150 °C
3/4-Wire Temperature Transmitter (XT-740)		2-Wire Temperature Transmitter (XT-741)	
Range	User-selectable	Range	User-selectable
Zero selection	Ten 50 °C steps between -50 and +100 °C	Zero selection	Ten 50 °C steps between -50 and +100 °C
Span selection	Ten 50 °C steps between +10 and +250 °C	Span selection	Ten 50 °C steps between +10 and +250 °C
Output	0 to 1V, 0 to 5V, 0 to 10 Vdc (standard) w/ 2 mA max current draw, 0-20mA or 4-20 mA	Output	4 to 20 mA (standard) or 0 to 20mA
Accuracy	±0.2 °C	Accuracy	±0.2 °C
Power supply	14 to 35 Vdc for 0 to 10 V output, 8 to 35 Vdc for lower output	Power supply	8 to 35 Vdc
Supply influence	±0.01 °C per V typical	Supply influence	±0.01 °C per V typical
Protection grade for electronics IP65, for sensor IP20, for sensor with dust filter IP50			
All series 740 and 741 Transmitters are standard equipped with a T-type humidity sensor. This high performance sensor element can be interchanged without recalibrating the transmitter. Response time of this sensor is 10 seconds typical (90 % of the change).			
All specifications are subject to change without prior notice			

Selection Guide for Humidity and Temperature Transmitters

<i>Wall-Mount, Ambient Sensing</i>	<i>3/4-wire transmitter (740)</i>	<i>2-wire transmitter (741)</i>
RH Transmitter	HX-740-T-00	HX-741-T-00
RH + Temperature Transmitter	HT-740-T-00	HT-741-T-00
<i>Duct-Mount</i>	<i>3/4-wire transmitter (740)</i>	<i>2-wire transmitter (741)</i>
RH Transmitter	HX-740-T-01	HX-741-T-01
RH + Temperature Transmitter	HT-740-T-01	HT-741-T-01
<i>High Temperature Duct-Mount</i>	<i>3/4-wire transmitter (740)</i>	<i>2-wire transmitter (741)</i>
RH Transmitter L = 300 mm (59.1")	HX-740-T-02	HX-741-T-02
RH + Temperature Transmitter L = 300 mm (59.1")	HT-740-T-02	HT-741-T-02
RH Transmitter L = 500 mm (19.7")	HX-740-T-03	HX-741-T-03
RH + Temperature Transmitter L = 500 mm (19.7")	HT-740-T-03	HT-741-T-03
RH Transmitter L = 900 mm (35.4")	HX-740-T-08	HX-741-T-08
RH + Temperature Transmitter L = 900 mm (35.4")	HT-740-T-08	HT-741-T-08
RH Transmitter L = 1500 mm (59.1")	HX-740-T-09	HX-741-T-09
RH + Temperature Transmitter L = 1500 mm (59.1")	HT-740-T-09	HT-741-T-09
RH Transmitter L = 200 mm (7.9")	HX-740-T-10	HX-741-T-10
RH + Temperature Transmitter L = 200 mm (7.9")	HT-740-T-10	HT-741-T-10
<i>Remote</i>	<i>3/4-wire transmitter (740)</i>	<i>2-wire transmitter (741)</i>
RH Transmitter, 7/8" -14 UNF Cable 5 ft (1.5m)	HX-740-T-04	HX-741-T-04
RH + Temperature Transmitter, 7/8" -14 UNF Cable 5 ft	HT-740-T-04	HT-741-T-04
RH Transmitter, miniature diam. 8 mm (.315") Cable 5 ft	HX-740-T-05	HX-741-T-05

Accessories	
Accessory	Part Number
Protection cap, plastic (max. 150 °C / 270 °F)	A-000002
Protection cap with PVDF Dust Filter	A-000015
Sintered Stainless Steel Dust Filter	A-000020
Humidity Calibration Bottle 12 %RH	A-000050
Humidity Calibration Bottle 33 %RH	A-000060
Humidity Calibration Bottle 55 %RH	A-000070
Humidity Calibration Bottle 75 %RH	A-000080
Humidity Calibration Bottle 90 %RH	A-000090
Adjustable Fitting 3/4" NPT Stainless Steel	A-000100
Aluminum Adjustable Flange 80 mm dia. (2.3")	A-000110



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