MINCO EXPLOSION PROOF / INTRINSICALLY SAFE HUMIDITY AND TEMPERATURE TRANSMITTER
HT880 SERIES

DESCRIPTION

The **Minco Model HT880 explosion proof / intrinsically safe humidity transmitter** is designed for rugged industrial use. Approved by FM for hazardous location, this system provides safe, reliable, and accurate humidity and optional temperature measurement. The capacitive film sensor is ideal for low and high humidity measurement with 4-20mA outputs. The **HT880** comes with a stainless steel sintered filter and an optional NIST traceable certificate. The **HT885** has a digital display.

HT880 with AC103168 bracket

FEATURES

- *Replaces Hy-Cal HCT880 Series*
- *Available with digital display*
- *Intrinsically safe with MTL7706 barrier*

HT885

CAUTION: Intrinsically safe devices require the use of an intrinsic safety barrier when applied in hazardous locations. Provide wiring and grounding in accordance with manufacturer's instructions. When the Model HT-880 is combined with the MTL7706 intrinsic safety barrier, total cable capacitance must be limited to 0.22 µF, and inductance must be limited to 4.0 mH (equivalent to 2700'/823m maximum Belden® #8760 18/2 shielded cable 0.18 µH/FT, 44 pF/FT).

CAUTION: Conduit seals MUST be installed within code-required distance from the enclosure to maintain explosion proof rating. For Group B and C atmospheres, conduit seals must be within 2" (5 cm) of the enclosure regardless of less stringent code requirements. NOTE: When using the temperature option, both humidity and temperature loops must be connected to operate.

SPECIFICATIONS

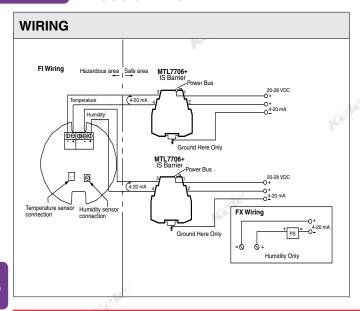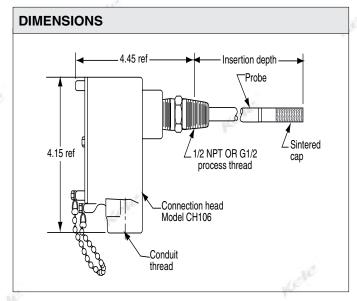|			
Supply Voltage	16.5 to 28.0 VDC	**Response Time**	50 seconds in slow moving air
Accuracy	±2.5% RH from 10 to 80% RH Includes hysteresis, linearity, repeatability, and all temperature and voltage effects	**Operating Temperature**	
		HT880	-40° to 176°F (-40° to 80°C)
		HT885	-4° to 176°F (-20° to 80°C)
Signal Output	4-20 mA	**Operating Humidity**	0 to 100% RH
Maximum Output Impedance		**Conduit Connection**	1/2" FNPT
FI	725Ω @ 24VDC	**Mounting**	1/2" MNPT and bracket sold separately
FX	375Ω @ 24VDC	**Adjustments**	Non-interacting zero/span
Entity Parameters	Vmax 28V, Imax 100mA, Ci 0.037µ, Li 0mH	**Display (HT885)**	3.5 digit LCD display, % RH and optional °F or °C
Area	FI	**Enclosure Rating**	NEMA 4X, Metal with screw-on cover
	Class I, Div. 1, 2, Groups A, B, C, D; Class II, Div. 1, 2, Groups E, F, G; Class III, Div. 1, 2; Class I, Zone 0, Aex [ia] IIC T4	**Sensor Filter**	60 micron stainless steel sintered filter
		Sensor Range	0% to 100% RH
FX	Class I, Div. 1, 2, Groups B, C, D; Class II, Div. 1, 2, Groups E, F, G; Class III, Div. 1,2	**Wiring**	Terminals, 22-14 AWG
		Weight	
		HT880	2.8 lb (1.3 Kg)
		HT885	4.5 lb (2.02 Kg)
Sensor Type	RH: Thin film capacitive element	**Approvals**	FM
Optional Temperature:	1000 platinum RTD, 385 curve	**Warranty**	3 years

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HAZARDOUS LOCATIONS

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HT880 SERIES

WIRING

FI Wiring

Hazardous area | Safe area

Temperature
4-20 mA
Humidity

MTL7706+ IS Barrier
Power Bus
20-28 VDC
+
+
4-20 mA
−

Ground Here Only

Temperature sensor connection
Humidity sensor connection

MTL7706+ IS Barrier
Power Bus
4-20 mA
20-28 VDC
+
+
4-20 mA
−

Ground Here Only

FX Wiring
+
PS
4-20 mA
−
+
−
+
Humidity Only

DIMENSIONS

4.45 ref — Insertion depth
Probe
4.15 ref
1/2 NPT OR G1/2 process thread
Sintered cap
Connection head Model CH106
Conduit thread

WARNING: All circuits MUST be de-energized before opening the cover of this device for any purpose. If work must be performed with an energized circuit, the atmosphere inside and outside the enclosure must be proven safe with a listed intrinsically safe combustible gas detector.

ORDERING INFORMATION

MODEL	DESCRIPTION				
HT880	Industrial-grade, ±2.5% RH, 4-20 mA transmitter				
HT885D	Industrial-grade, ±2.5% RH, 4-20 mA transmitter with LCD display				
	CALIBRATION				
	N25	NIST three-point ±2.5% calibration certificate			
	S25	Standard ±2.5% calibration			
		TEMPERATURE OPTIONS (other ranges available)			
		NT	No temperature transmitter		
		EN	-20° to 140°F (-28° to 60°C)		
		S	0° to 100°F (-18° to 38°C)		
		- -	Special calibration ranges available (must call)		
			PROBE LENGTH		
			60	6" inch probe length	
			12	12" inch probe length	
				AGENCY APPROVAL	
				FX	FM approved, explosion proof (**NT** option only)*
				FI	FM approved, intrinsically safe

* Not for use as intrinsically safe

RELATED PRODUCTS

AC102765	HT885 pipe/wall bracket
AC103168	Separate pipe/wall mounting hardware kit
AC103253	Duct mount kit for HT880
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT
DCPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT
EYM-50	1/2" size, 1.06" turning radius, 1 oz Kwiko cement required, Malleable Iron construction
GFF-50	1/2" galvanized mounting flange
MTL7706+	Intrinsic safety barrier, 4-20 mA two-wire transmitters