

Temperature / Humidity Sensors

THD Series



Features

- Compact design
- Built-in high accuracy temperature / humidity sensor
- 7 segment LED display (THD-DD / THD-WD)
- Various output options: DC4 - 20 mA, 1 - 5 VDC, RS485 (Modbus RTU)
- Wide measurable range of temperature / humidity: -19.9 to 60.0 °C / 0.0 to 99.9 %RH
- Communication speed: 115200 bps

Specifications

Model	THD-R-PT			
Sensor type	Temperature sensor			
Display type	Non-display type			
Temp. measuring range	-19.9 to 60.0 °C			
Temp. accuracy	± 0.8 °C			
Temp. output	DPT100Ω resistance value (TCR: 3850 ppm/°C)			
Protection structure	IP10 (IEC standards)			
Ambient temperature	-20 to 60 °C, Storage: -20 to 60 °C (rated at no freezing or condensation)			
Approval	CE ENEC			
Model	THD-R-PT/C	THD-R-C THD-R-V THD-R-T	THD-D□□ THD-W□□	THD-DD□□ THD-WD□□
Power supply	24 VDC ± 10 %			
Power consumption	≤ 2.4W			
Sensor type	Temperature/Humidity Sensor			
Sensor response time	10 sec			
Display type	Non-display type			7 seg. LED display
Display digit	-			Each 3 digits for temp. / humi.
Temp. measuring range	-19.9 to 60.0 °C			
Humi. measuring range	0.0 to 99.9 %RH (THD-R is required to attend for using over 90 %RH)			
Temp. accuracy	± 1.0 °C (at room temp.)			
Humi. accuracy	± 3 %RH (30 to 70 %RH, at room temp.) ± 4 %RH (10 to 90 %RH)		Typ. ± 2 %RH (10 to 90 %RH, at room temp.) ± 2.5 %RH	
Temp. output	DPT100Ω resistance value (TCR: 3850 ppm/°C)	DC 4-20 mA (allowable impedance: ≤ 600 Ω), 1-5 VDC, RS485 Communication (Modbus RTU)		
Humi. output	DC 4-20 mA (allowable impedance: ≤ 600 Ω)			
Resolution	1/1000			
Sampling period	0.5 sec			
Insulation resistance	≥ 100 MΩ (500 VDC megger)			
Dielectric strength	500 VAC ~ 50/60 Hz for 1 min			
Noise immunity	± 0.3 kV the square wave noise (pulse width: 1 μs) by the noise simulator			
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 1 hour			
Vibration (Malfunction)	0.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hour			
Shock	300 m/s ² (≈ 30 G) in each X, Y, Z direction for 3 times			
Shock (Malfunction)	100 m/s ² (≈ 10 G) in each X, Y, Z direction for 3 times			
Protection structure	IP10 (IEC standards)		IP65 (except sensor part, IEC standards)	
Ambient temperature	-20 to 60 °C, Storage: -20 to 60 °C (rated at no freezing or condensation)			
Cable spec.	-		Ø4 mm, 4-wire, length: 2 m	
Wire spec.	-		AWG22 (0.08 mm, 60-wire), Insulator diameter: Ø1.25 mm	
Approval	CE ENEC (only for THD-□□-T model) ENEC			
Comm. protocol	Modbus RTU			



View product detail