



# THR23

## Indoor Temperature & Humidity Transmitter



### Features

- Measuring temperature and humidity
- 2 analog outputs or Modbus RS-485
- Optional analog output+RS-485
- Quick easy installation and maintenance due to well designed
- Cost-efficient and reliable
- Data can be logged and transferred to PC via RS-485 function link free software

### Application

Monitoring indoor environments HVAC / Air conditioning / Museums / Testing environments work places / Supermarkets / Data centers / Production warehouses / Indoor public places to regulate the ventilation system to save energy

## Specification

### Display

Display	LCD without backlight
Display readout	Double-row (Up : Temp. ; Down : Humidity)
Digit	3 digits and 1 decimal
Digit height	17.84 mm

### Input sensor type

Temperature	MEMS
Humidity	MEMS

### Measuring range

Temperature	0 ... 50°C
Humidity	0 ... 100%RH(Non-condensing)

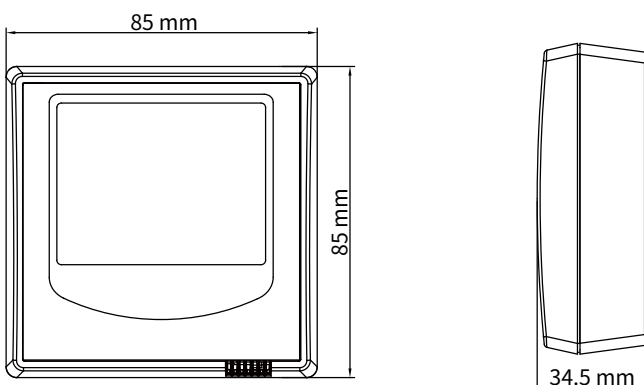
### Output

Analog output	0 ... 5 V / 0 ... 10 V / 4 ... 20 mA
Modbus	RS-485
Signal connection	3-wire
Load resistance(Voltage)	Voltage output : $\geq 10 \text{ k}\Omega$ Current output : $< 250 \Omega$
Warm-up time	$< 2 \text{ min}$ ; Stable time 20 min
Temp. influence	Max. $-0.15\% \text{RH}/^\circ\text{C}$ ( $0^\circ\text{C} \dots 80^\circ\text{C}$ )
Response time	$t_{63}(15 \dots 45^\circ\text{C} / 33 \dots 75\% \text{RH}) \leq 10 \text{ sec}$
Sampling time	About 3 sec
Data logger	Via RS-485 by using eYc free software

### Accuracy(at+25°C ; DC 24 V)

Temperature	$\pm 0.5^\circ\text{C}$
Humidity	$\pm 5\% \text{RH}$ (30 ... 80%RH)

## Dimension



### Environment

Medium	Air
Operating environment	0 ... +50°C 0 ... 100%RH(Non-condensing)
Storage environment	-20 ... +60°C

### Electrical

Power supply	DC 12 ... 36 V & AC 24 V $\pm 10\%$
Power consumption	DC : 20 mA ; AC : 30 mA
Instant switching current	DC 24 V : 80 mA ; DC 12 V : 100 mA AC 24 V : 100 mA
Electrical connection	Analog & Communication : 4P Connector

### Installation

Installation	Indoor & Wall mount
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### Protection

IP rating	IP20
Electrical protection	■ Polarity protection ■ Short-circuit

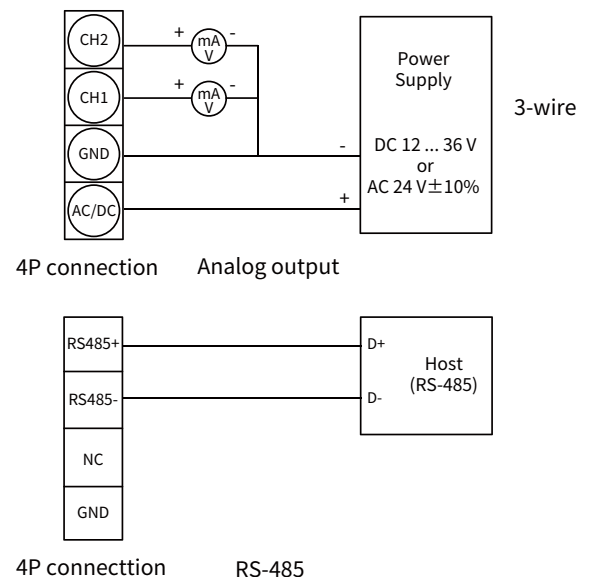
### Certification

Certification	CE
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### Material

Housing	PC(PC-110)(UL94V-2)
Weight	95 g

## Diagram



## Ordering Guide

Type	THR23	-	T	H	6	1	-	30	-	0	D
CH1 Function	Temperature	-	T								
	Humidity	-	H								
	RS-485	-	N								
CH2 Function	Temperature			T							
	Humidity			H							
	RS-485			N							
Output	4 ... 20 mA				1						
	0 ... 10 V				6						
	0 ... 5 V				7						
	RS-485				N						
Power supply	DC 12 ... 36 V					1					
	DC 12 ... 36 V & AC 24 V ±10%					3					
Temperature range	0 ... 50°C						-	30			
	RS-485						-	00			
Modbus	Analog								-	0	
	RS-485								-	1	
	RS-485+analog								-	2	
Option	without display										N
	Display										D

## | Additional Option (ILAC / TAF) Test Report |



Additional option: (ILAC / TAF) Test report - Standard calibration laboratory (TAF accreditation: 3032, complying with ISO / IEC 17025)  
TAF has mutual recognition arrangement with ILAC MRA

Project	Measurand level or range
Resistance thermometer	-40°C ... +300°C
Thermocouple thermometer	-20°C ... +300°C

Project	Measurand level or range
Hygrometer	3 basic points (25°C / 30%, 50%, 80%)
	Temperature: 0°C ... 70°C
	Humidity: 10% ... 95%