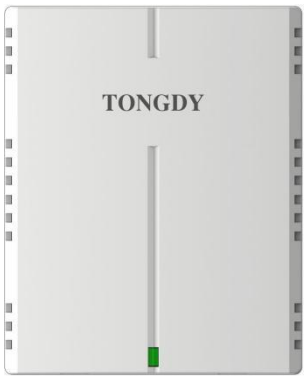
Tongdy Sensing Tech.

Carbon Monoxide Transmitter and Controller





Product Name: TSP-CO

Applications

- **Underground parking lots**
- **BMS systems**
- **Carbon monoxide or smoking monitoring and control**
- **All ventilation**

Features

- Real-time monitoring carbon monoxide and temperature in ambient air
- Industrial-grade enclosure with firm and durable design
- High quality Figaro carbon monoxide sensor, more than 5 years lifespan
- Replaceable sensor-module design
- 1x 0-10VDC or 4-20mA linear output for CO or 2x 0-10V or 4-20mA linear outputs for CO and temperature
- One or two on/off relay outputs to control one fan, or two-stage fan
- RS485 communication (Modbus RTU)
- OLED display optional
- Buzzer alarm available
- Provide zero-point calibration
- 24VAC/VDC power supply

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www.iaqtongdy.com
info@tongdy.com

Typical Applications

- Underground parking lots
- BMS systems
- Monitoring and warning carbon monoxide and smoking
- All ventilation control systems

Specifications

Parameters	
Power Supply	24VAC/VDC
Power Consumption	2.8W
Connection Standard	Wire cross-sectional area<1.5mm^2
Operating Environment	-10-50℃（0-50℃ for TSP-DXXX）, 0~99%RH
Storage Environment	-5-50℃/ 0~95%RH,non-condensing
Dimension/Net Weight	95mm(W)*117mm(L)*36mm(H) / 280g
Manufacturing Standard	ISO 9001
Housings and IP class	PC/ABS fire-proof material; IP30 protection class
Design Standard	CE-EMC Approval
Sensor	
CO Sensor	Figaro electrochemical sensor
Sensor Lifetime	Five years and replaceable
Warm Up Time	60 minutes(First use),1 minute(daily use)
Response Time(T90)	<130 seconds
Signal Refreshing	One second
CO Range (Optional)	0-100ppm(Default)/0-200ppm/0-300ppm/0-500ppm
Accuracy	<±1 ppm + 5% of reading (20℃/ 30~60%RH)
Stability	±5% (over 900 days)
Temperature Sensor	Capacitive sensor
Measuring Range	-5℃-50℃
Accuracy	±0.5℃ (20~40℃)

Display Resolution	0.1℃
Stability	±0.1℃/year
Outputs	
Display (Optional)	OLED screen, display real-time measured values with CO & Temp or CO, Temp & RH. (LCD display is required for models with relay outputs)
Screen Saver	Timeout > 300 s (no key input) → Display dims. Wake-up: Any key press
Analog Output	1x0-10VDC/4-20mA linear output for CO measured value Or 2x0-10VDC/4-20mA linear outputs for CO and temperature
Analog Output Resolution	16Bit
Relay Dry Contact outputs	One or two on/off relay outputs, max current 5A (230VAC/30VDC), One relay is for CO concentration by controlling a fan. Two relays are for CO concentration by controlling two stage fan(default), or for CO and temperature control.
RS485 Communication (Optional)	Modbus RTU, Communication Baud: 9600bps(Default) 15KV anti-static protection
Indicating light	Green: normal work with flashing every 5 seconds Red : Activates when CO reaches alarm setpoint
Buzzer Alarm (not for transmitters)	Enable or disable

Alarm Standards (not applicable for transmitters)	
Audible alarm and CO set point	Chinese Standard: GB15322 European Standard: EN50291 (Default) American Standard: UL2034

Models Guide

Models		Descriptions
CO Sensor/Transmitter	TSP-CO-B100	1x0~10V / 4~20mA analog output for CO value
	TSP-CO-B101	1x0~10V / 4~20mA analog output for CO value with RS485 with Modbus RTU
	TSP-CO-B001	Modbus RS485 interface
	TSP-CO-B/D 200-T	2x0~10V / 4~20mA linera outputs for CO and temperature
	TSP-CO-B/D 201-T	2x0~10V / 4~20mA linera outputs for CO and temperature, RS485 with Modbus RTU

CO Controller (with OLED display)	TSP-CO-D010	1x relay output for CO value
	TSP-CO-D020-T	2x relay outputs for CO(default) or for CO and temperature/ RH
	TSP-CO-D110	1x relay output , and 1x0~10V / 4~20mA analog output for CO value
	TSP-CO-D101	1x0~10V / 4~20mA analog output for CO value with Modbus RS485 interface

Notice:

1.All models with -T suffix mean this model has temperature measuring

2.Suffix CO range selection for all models:

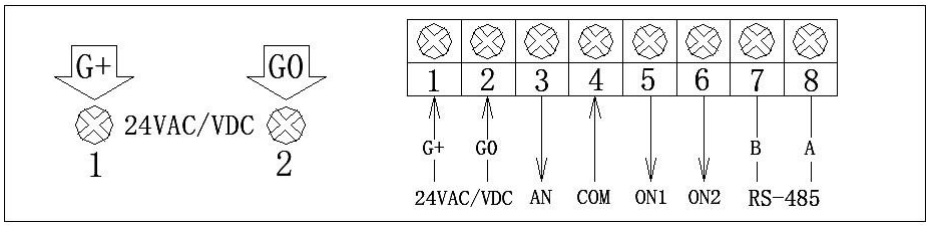
-001: 0~100ppm

-002: 0~200ppm

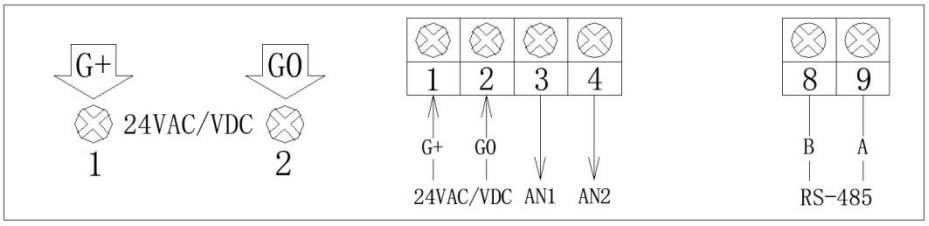
-003: 0~300ppm

-005: 0~500ppm

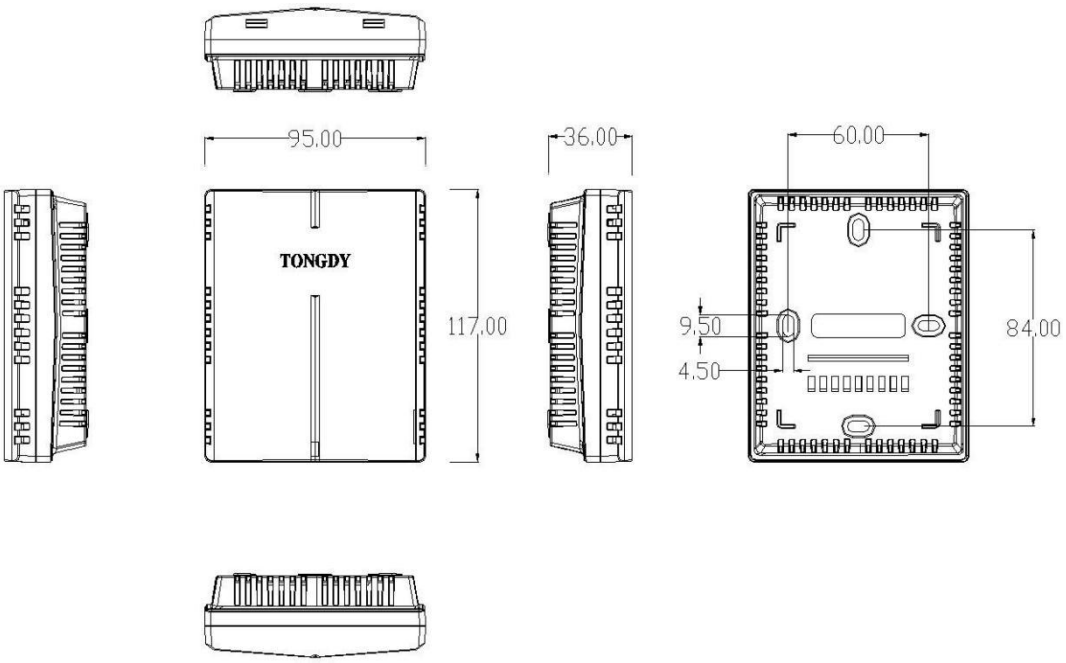
Wiring Diagram



Only TSP-B/D 200/201-T



Dimension and Mounting


95.00
36.00
60.00
TONGDY
117.00
9.50
4.50
84.00