Tongdy

Tongdy Sensing Tech.

Carbon Monoxide Transmitter and Controller
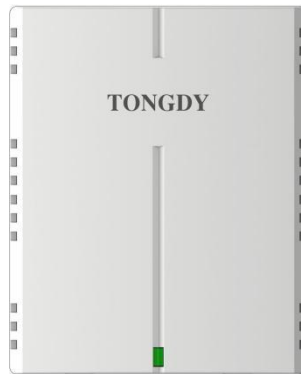
Product Name: TSP-CO

Applications

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

Features

- Real-time monitoring air carbon monoxide concentration and temperature
- Industrial grade shell structure with infirm and durable design
- High quality Figaro carbon monoxide sensor inside, more than 5 years lifetime
- Carbon monoxide module is replaceable
- 1x 0-10V or 4-20mA linear output for CO measurement
- One or two on/off relay outputs to control a fan or fan and alarm
- RS485 output in Modbus RTU
- OLED display optional
- Three-color light indicates three CO ranges
- Optional buzzer alarm for setpoint
- Provide zero point calibartion
- Coverage up to 30 meters radius subject to air movement.

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	-5-50℃（0-50℃ for TSP-DXXX）, 0~95%RH
Storage Environment	-5-60℃/ 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	
LCD 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)
Analog Output	1x0-10VDC/4-20mA linear output for CO measured value
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 : when CO reaches alarm setpoint
Buzzer Alarm (invalid for transmitter)	When CO concentration exceeds the alarm setpoint, the buzzer will ring
Alarm Standards (invalid for transmitter)	
Audible alarm and CO set point	Chinese Standard: GB15322 European Standard: EN50291 (Default） American Standard: UL2034

Models Guide

Models		Descriptions
CO 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 Modbus RS485 interface
	TSP-CO-B001	Modbus RS485 interface
CO Controller (with OLED)	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
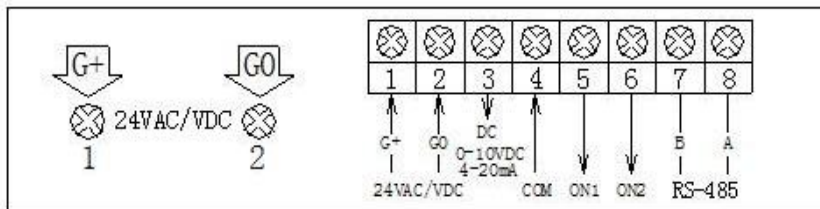
2.Suffix CO range selection for all models:

-001:   0~100ppm

-002:   0~200ppm

-003:   0~300ppm

-005:   0~500ppm

Wiring Diagram

Dimension and Mounting