



GTH53 Indoor Gas monitoring transmitter



Application

〈 Feature 〉

- Integrated COMS temperature and humidity Sensor
- Electrochemistry CO & HCHO sensor
- High technical sensor of humidity comes with high accuracy, long-term life and stability
- With exposed sensor to raise sensitivity of CO
- Remote monitor by RS-485 (Modbus RTU)

〈 Application 〉

- Monitor and control air quality system for various building
- Monitor for HVAC process / air conditioning / environmental ventilation control
- Monitor temperature & humidity, CO, & HCHO for house & building

Specification

Input - Sensor Type

CO	electrochemistry
Temperature & Humidity	CMOS
HCHO	electrochemistry
VOC	MEMS metal oxide sensor

Measuring Range

CO	0 ... 500 PPM
Temperature	0 ... 50 °C
Humidity	0 ... 100 %
HCHO	0 ... 5 PPM
VOC	0 ... 10 PPM

Output

analogue output	0~1 V / 0~5 V / 0~10 V / 1~5 V / 0~20 mA / 4~20 mA
modbus	RS-485 (programmable)
signal connection	3-wire

Linear accuracy (at + 23 °C ; V = 24 VDC)

CO	± 3 % of f.s. (best zero)
Temperature	± 0.3 °C
Humidity	± 3 % RH (20 ... 80 % RH)
HCHO	± 5 % of f.s.
VOC	± 5 % of f.s.
sensitivity (CO)	< ± 10 PPM of measured value
drift of zero (HCHO)	< 0.03 PPM
output calibration adjustment range	software

Response time

CO	t90 (at + 23 °C) < 60 secs.
HCHO	t90 (at + 23 °C) < 30 secs.

Environment

media measured	air
working temperature	0 ... 50 °C / HCHO : -10 ... 40 °C
working humidity	0 ... 95 % (non-cond) / HCHO : 15 ... 90 %
working influence	CO Tolerance of zero-point : < ± 10 PPM
temperature drift	HCHO : 0.35 % / °C

Electronic

power supply	8 ... 35 VDC / 12 ... 30 VAC
current consumption	DC 24V : 72 mA / DC 8V : 210 mA AC 24V : 175 mA / AC 12V : 275 mA
electrical connection	M12 metal connector

Installation

installation	wall
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Protection

protect degree	body : IP54 ; probe : IP 20
electric protection	☉Polarity protection ☉over-voltage ☉short-circuit

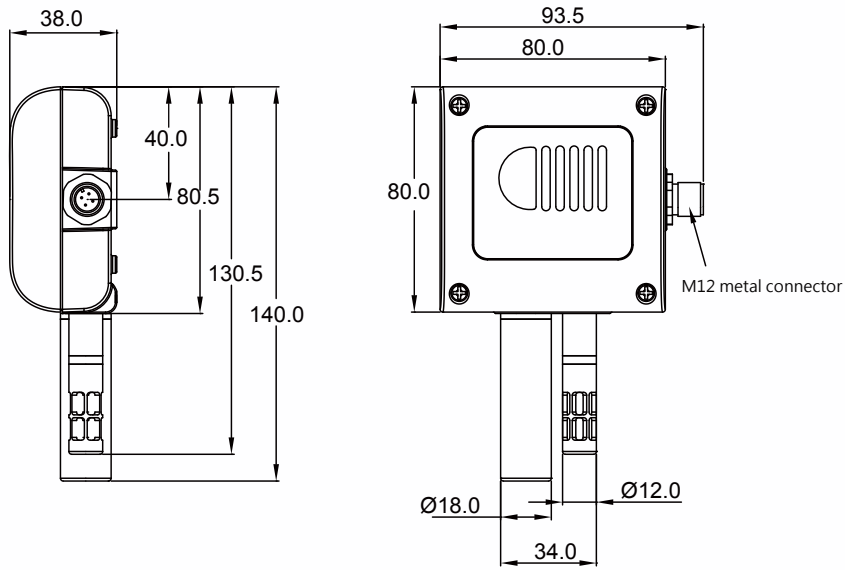
Certification

certification	CE
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Material

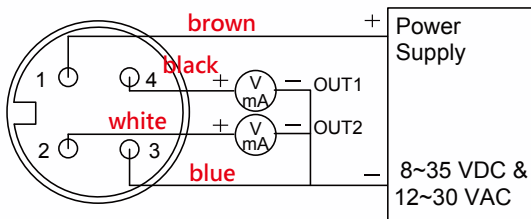
case	PC fire-proof class (PC-110) (UL94V-2)
probe	CO : POM T & H : PC fire-proof class (PC - 110)
filter	Non-woven
weight	168g

Dimension

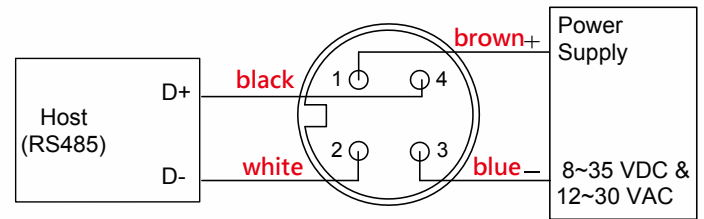


unit : mm

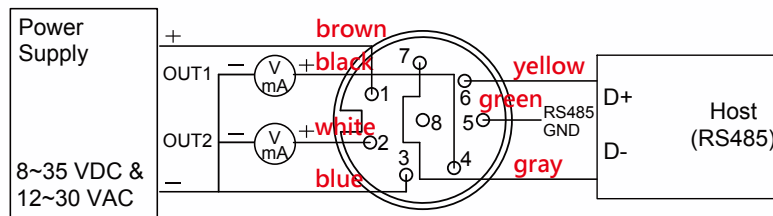
Analogue Diagram



RS-485 Diagram



Analogue + RS-485 Diagram



Ordering Guide

type	GTH53	-	40	6	6	-	A	1	D	3	-	2	Q
function	HCHO + VOC temp. & humidity + CO temp. & humidity + HCHO temp. & humidity + VOC CO + HCHO CO + VOC temp. & humidity + CO + HCHO temp. & humidity + CO + VOC CO + HCHO + VOC all (temp. & humidity + CO+ HCHO + VOC)		20 21 23 24 26 27 32 33 38 40										
output 1	4 ... 20 mA 0 ... 20 mA 1 ... 5 V 0 ... 10 V 0 ... 5 V 0 ... 1 V non / RS-485			1 2 5 6 7 8 N									
output 2	4 ... 20 mA 0 ... 20 mA 1 ... 5 V 0 ... 10 V 0 ... 5 V 0 ... 1 V non / RS-485				1 2 5 6 7 8 N								
physical quantity output 1	temperature humidity CO HCHO VOC as function item						A B D E F N						
physical quantity range 1	temperature : 0 ... 50 °C temperature : 0 ... 60 °C temperature : 0 ... 80 °C humidity : 0 ... 100 %RH CO : 100 PPM CO : 300 PPM CO : 500 PPM HCHO : 1 PPM HCHO : 5 PPM VOC : 10 PPM as function item : RS-485							1 2 3 0 1 3 5 1 2 1 0					
physical quantity output 2	temperature humidity CO HCHO VOC as function item								A B D E F N				
physical quantity range 2	temperature : 0 ... 50 °C temperature : 0 ... 60 °C temperature : 0 ... 80 °C humidity : 0 ... 100 %RH CO : 100 PPM CO : 300 PPM CO : 500 PPM HCHO : 1 PPM HCHO : 5 PPM VOC : 10 PPM as function item : RS-485									1 2 3 0 1 3 5 1 2 1 0			
modbus	analogue RS-485 RS-485 & analogue											0 1 2	
option	M12 (4P) metal connector (with 2 m cable) M12 (8P) metal connector (with 2 m cable)												M Q