Preliminary Datasheet for (CO) Transmitter

Model : COD-200M / COD-200ML

COD-200M

COD-200ML (with LCD Display)

General

COD-200M and COD-200ML are the CO Transmitter which detect CO gas of the air and send signal to Host for the protect people at parking lots, Industrial working places and Buildings. COD-200 is upgraded from COD-100 to give wide reading range and better accuracy and stability.

Features

- Semiconductor used to measure CO levels.
- Fast Response.
- 3wired / 4 wired model or with/without LCD display model is selectable
- Output mode : 4-20mA / 2-10V,
  (0-20mA / 0-10V)
  RS485 Mod-Bus
- Exclusive Compensation Algorithm is adapted.

COD-200M CO Detector Specifications

General Performance

Operating Temperature range

-10 ~ 50℃

Operating Humidity range

10 ~ 90% RH (Non-condensing)

Storage Temperature

-30℃ ~60℃

Storage Humidity

10~95%RH (Non-condensing)

CO Measurement

Sensing Method

Semiconductor Type

Measurement Range

0 to 250 ppm(0 to 100, 300 ppm is option)

Accuracy

At 20℃, 50%RH after 4days since power-on.

0~100ppm : ±5% FS

100~250/300 : ±10% FS

Response Time

< 1 minutes

Sampling Interval

Every 30 seconds.

Sensor Life Expectancy

Over 3 years

Electrical Data

Power Input & Tolerance

24VDC (3-Wired) or 24VAC/24VDC (4-Wired)

17.5~30 V_{AC} / V_{DC}

Output

RS-485 ModBus,

Analog Output

· Voltage output

2 ~ 10VDC (0 ~ 10VDC)

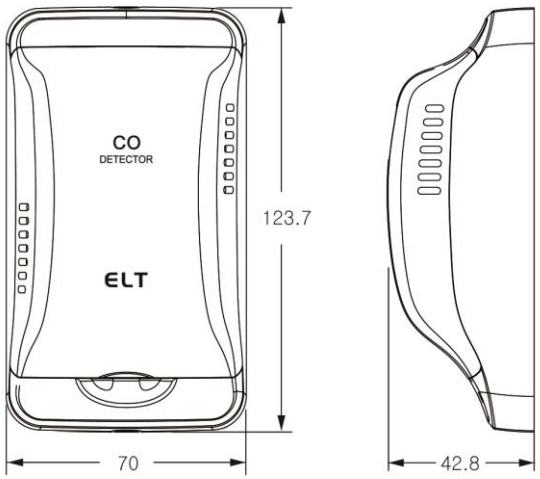
(0 ~100/250/300ppm, Linear output)

· Current output

4 ~ 20mA (0 ~ 20mA)

(0~100/250/300ppm, Linear output)

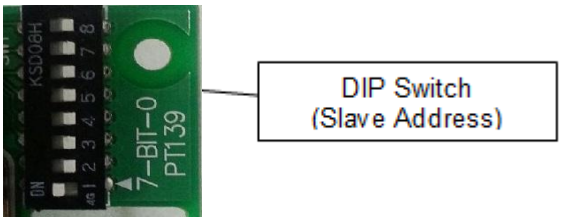
Dimensions (unit : mm)



• Size : 123.7mm x 70mm x 42.8mm
(Length x Width x Thickness)

RS485 Mod-Bus Slave Address setting

- Mod-Bus slave address can be set by DIP Switch.



- DIP Switch

ON	□							
OFF		□	□	□	□	□	□	□
	1	2	3	4	5	6	7	8

Example) setting Slave Address 1

RS485 Mod-Bus Protocol

1) Modicon Mod-Bus RTU Mode: Follow Modicon Mod-Bus protocol (http://www.modbus.org)

2) Communication Specifications

RS-485 (2-wire, half-duplex)

Parameter	Description
Baud rate	9600 BPS
Data Bit	8 Bits
Parity Bit	None
Stop Bit	1
Flow Control	None

3) Hold Register Specifications

- Mapping Base Address : 0x0050.
- Hold Register. Max. Read Size : 4

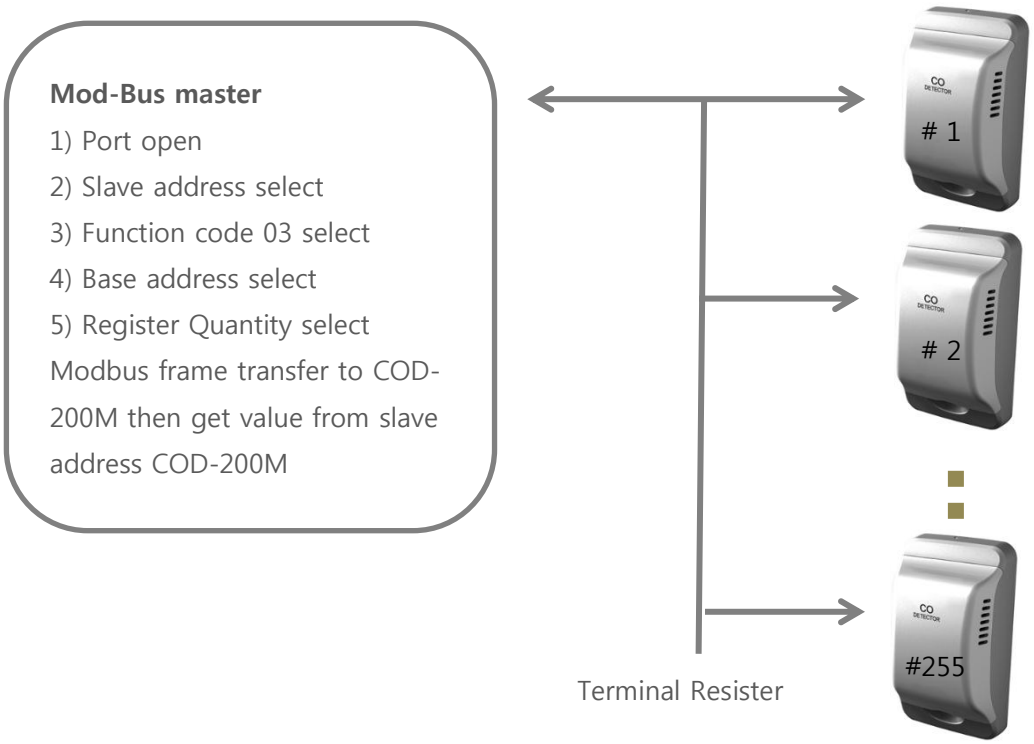
Register Address	Value	Data Type	Unit	Description
0x0050	CO	2 Byte WORD	PPM	Co Ex) 80 -> 80 PPM
0x0051	Reserved			
0x0052	Reserved			
0x0053	Reserved			

4) Supported Function Code

- Currently supported only code 03 and exception responses.
- Error code 0x83 or other (CODE + 0x80)

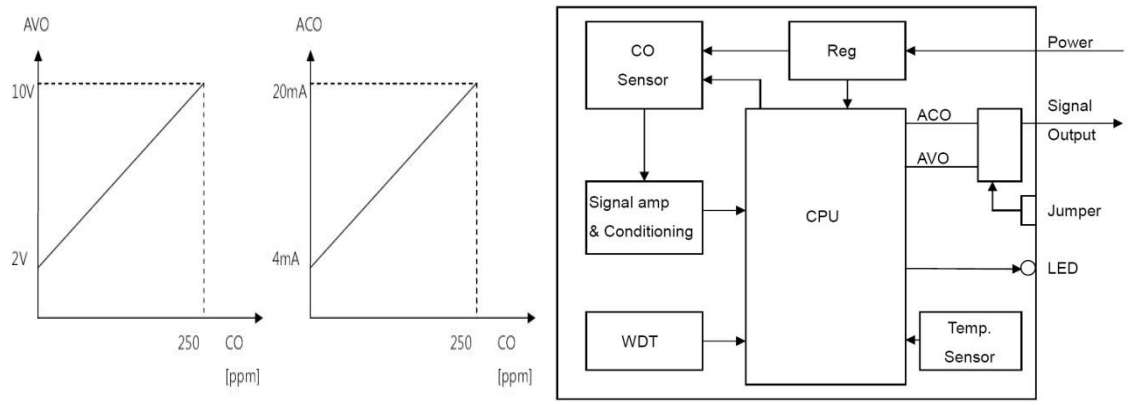
Exception code	Description
01	Exception of Function code
02	Exception of Starting Address
03	Exception of Quantity of Registers

5) Example How to get value from COD-200M by Mod-Bus protocol



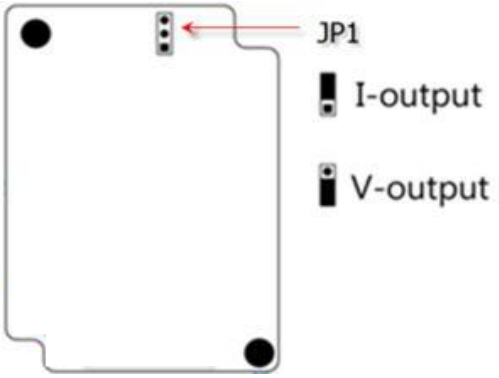
Analog Voltage & Current Output and Block Diagram

Analog Voltage(V) or Current(I) Output



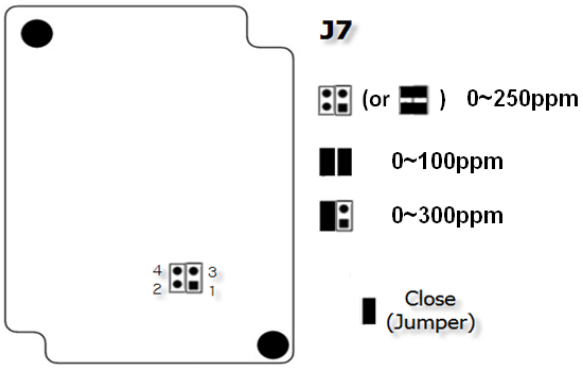
V/mA output Selection Method

Jumper Selection : J1

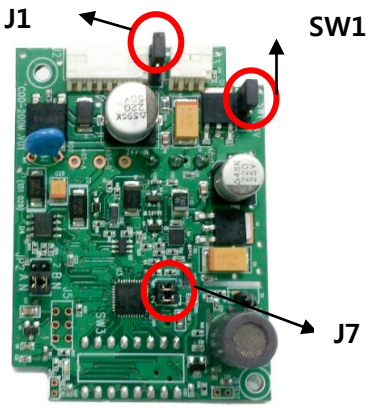


CO Range Selection

Jumper Selection : J7



Jumper location on PCB and Setting & Function

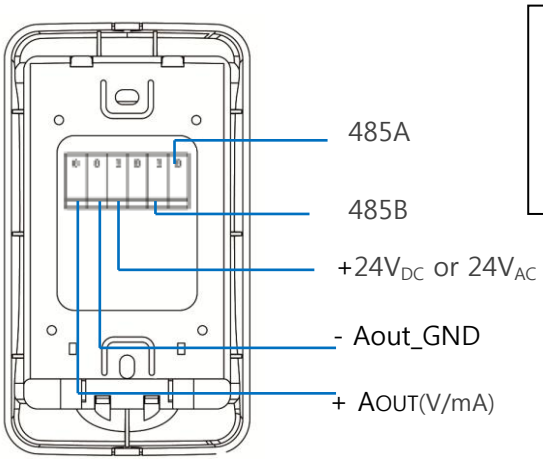


Jumper	Location	Setting
SW1	Right Up Side	24V/12V
J1	Left Up	Current/Voltage
J7	Center Down	Reading Range

※ Remark: Image is just for reference and could be changed without prior notice

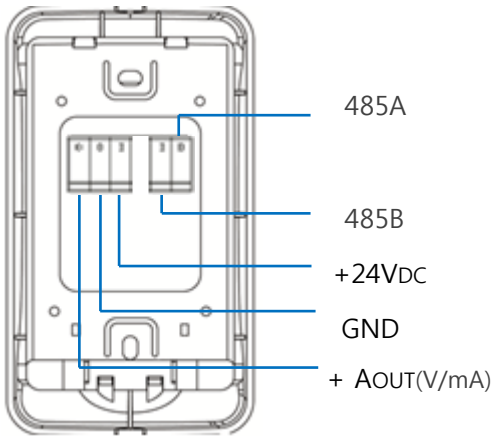
Wiring Method

4-Wired(AOUT, GND, 24V(+/-)_AC/DC)



※Please make it sure to use either 24VDC+ or 24AC(+/-) power wire only on right location because the insertion into wrong location such as AOUT/RS485 port brings the serious failure.

3-Wired(AOUT, Common_GND, +24VDC)



※Please make it sure to use +24VDC power wire only on right location because the insertion into wrong location such as AOUT or RS485 port brings the serious failure.

Ordering Code with Option selection

Ordering Code	LCD	3 wired or 4 wired	Remark
COD-200-4W	X	4 wired (AOUT+,AOUT_GND, 24VAC(+/-) or 24VDC)	4wired Default
COD-200M-4W	X	4 wired (485A, 485B, 24VAC(+/-) or 24VDC)	+ Modbus
COD-200L-4W	O	4 wired (AOUT+,AOUT_GND, 24VAC(+/-) or 24VDC)	+ LCD(O),
COD-200ML-4W	X	4 wired (485A, 485B, 24VAC(+/-) or 24VDC)	+Modbus + LCD(O)
COD-200-3W	X	3wired (AOUT, Common_GND, +24VDC)	3wired Default
COD-200M-3W	X	3 wired (485A, 485B, Common_GND, +24VDC)	+ Modbus
COD-200L-3W	O	3wired (AOUT, Common_GND, +24VDC)	+ LCD(O)
COD-200ML-3W	O	3 wired (AOUT, Common_GND, +24VDC)	+Modbus + LCD(O)

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