MYAIR VENTILATION GROUP

UK Design and Engineering

Carbon Monoxide Transmitter

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Applications

- Vehicle exhaust measuring at garages, auto parks
- Early fire detection
- Air quality applications: measuring CO concentrations as of odors; smoke, body odor, or material fumes in cinema/theatre halls, exhibition halls, restaurants, canteens, shopping malls and conference rooms etc

Features

- Replaceable 20mm Round Type Electrochemical Cell
- Estimated operating life 6 years, long term output drift <5% each year
- Zero-Span Calibration & Linear output
- CO ranges, standard: 50ppm, 100ppm, 200ppm and 300ppm
- CO output signal 4-20 mA and 0...10 Vdc
- Operating voltage 24V AC/DC

Options

- Modbus / RS485 port
- Relay, 1 or 2 relays, can be set individually
- Buzzer, can be set individually
- PID, RTC and Datalogger advanced options for special applications
- CO ranges, extended: 100ppm, 300ppm, 500ppm and 1.000ppm

General Notes

- High density of some other gasses may effect the measurements.
- Observe maximum permissible cable lengths.
- If cable runs parallel to the mains cable: Use shielded cables.
- Test only with certified calibration gasses.
- The cable entry always should have to be pointing downwards.
- The data indicated under ‘Technical Data’ apply only to vertically mounted transmitters.
- Wall/Room type transmitters should have to be mounted in the center of wall but not near to any doors and windows.

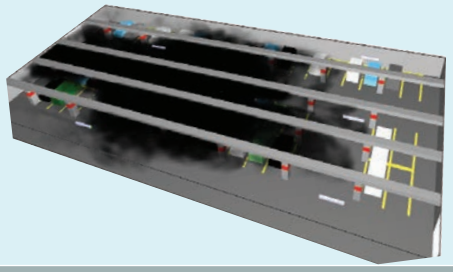
Made by MyAir UK

Technical Data

Electrical	Power Supply	AC 24V (± %5), 50-60 Hz DC 15…35 V
	Power Consumption	< 2.5 W
Outputs	Current Output	4…20 mA, maximum 500 Ω
	Voltage Output	0…10 Vdc, minimum 1.000 Ω 0…5 Vdc, minimum 1.000 Ω
	Relay Output	max. rating 1A @ 220 Vac
Accuracy	CO	±3 %
Sensor	t90	< 50 sec.
	life time	> 6 years expected
	drift	< 5% per year
	resolution	0.5 ppm
	repeatability	< ±2 %
	baseline	< 5 ppm
	filter capacity	> 20.000 ppm per hour
	Operating Temperature	-20 …+50°C
	Operating Humidity	15…90 %rH
	Operating Pressure	800…1.200 mbar
General Data	Sensing Element	Electrochemical Cell
	Media	Air or non-aggressive gasses
	Storage Temperature	0 …+20°C recommended
Ranges	CO	0…50-100-200-300 ppm ranges for standard types 0…100-300-500-1.000 ppm ranges for extended types
Connections	Cable	maximum 1.5mm2
	Cable Gland	M16
Protection	MCMT.W series	IP41 or NEMA 3
Standards	EMC Directive	EN 61326-1
Dimensions	MCMT.W series	98.0 x 81.5 x 45.5 mm
Weight Packed	MCMT.W series	229 gr

Modbus RS485 Protocol

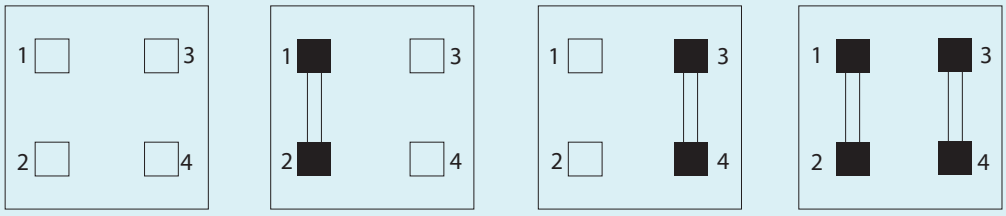
Default Settings: Modbus ID:1, 9600, 8bit, None, 1. Register Table starts from Base 1.
Use Function 3 for Reading and Function 6 for Writing Holding Registers. Whenever writing to any Modbus parameter, new parameter is activated instantly and you should have to configure master device according to new parameters. For every reboot/initializing, Modbus is activated with default parameters for 3 seconds. After 10 seconds, Modbus is reconfigured according your parameter settings.
Unlisted registers are for analog output calibrations and some system parameters. Please do not change unlisted registers.



Register	R/W	Range	Description
1	R & W	1...254	Modbus Address
2	R & W	0...4	Baudrate, 0: 9.600, 1: 19.200, 2: 38.400, 3: 57.600, 4: 115.200
3	R & W	0...3	Bit_Parity_Stop, 0: 8bit_None_1, 1: 8bit_None_2, 2: 8bit_Even_1, 3: 8bit_Odd_1
4	R	0...1.000	CO level as ppm
5	R	0...10.000	CO level as ppm x10, divide by 10 for exact value
6	R	0 or 1	Relay 1, contact position, 0: OFF - Contact is Open, 1: ON - Contact is Closed
7	R	0...1.000	Relay 1, LOW point
8	R	0...1.000	Relay 1, HIGH point
9	R	0...4	Relay 1, ACTION
10	R	0 or 1	Relay 2, contact position, 0: OFF - Contact is Open, 1: ON - Contact is Closed
11	R	0...1.000	Relay 2, LOW point
12	R	0...1.000	Relay 2, HIGH point
13	R	0...4	Relay 2, ACTION
14	R	0 or 1	Buzzer, 0: OK-Silence, 1: PreAlarm - warning intermittently, 2: WARNING continuously
15	R	0...1.000	Buzzer, LOW point
16	R	0...1.000	Buzzer, HIGH point
17	R	0...4	Buzzer, ACTION

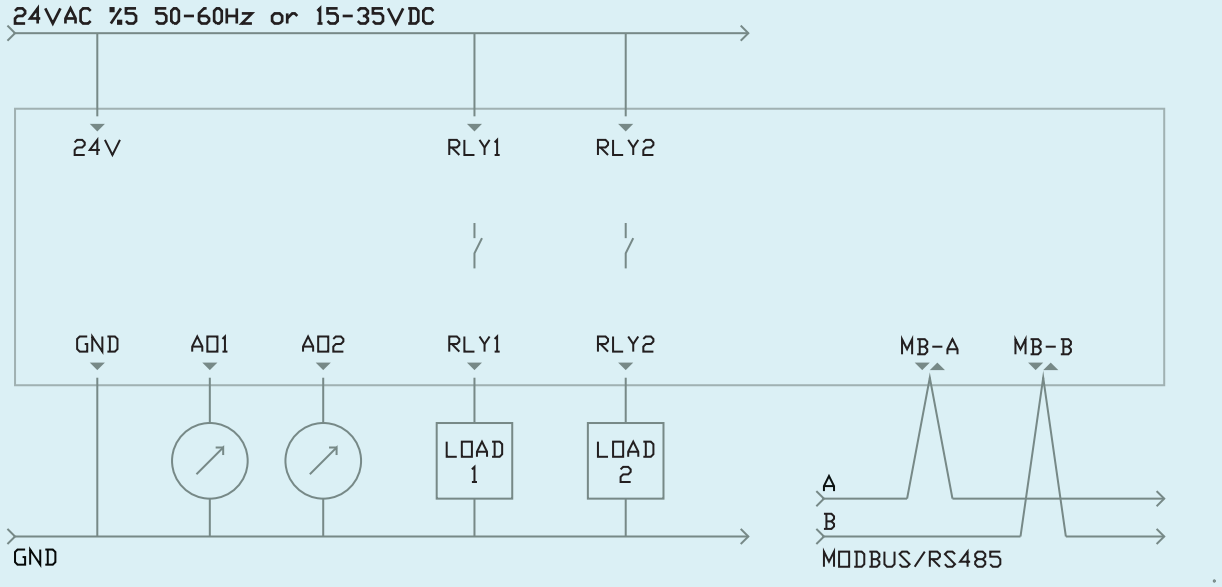
DIP Switch Settings

1. Please check if there is any special instruction on the enclosure or inside the cover
2. For any calibration, please choose 1 sec. response time for faster measurements

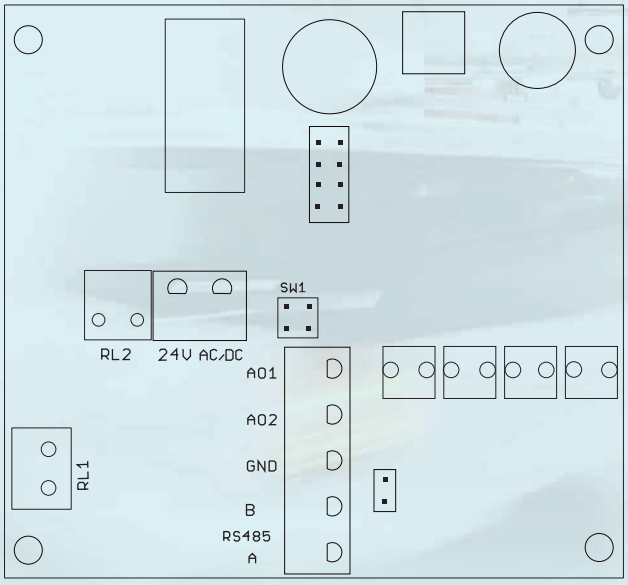


Electrical Connections

1. Please be sure about current direction for current outputs and polarity for voltage outputs.
2. Relay contact is Normally Open and rating is max. 1A at 230VAC
3. We kindly advise using 24V for avoiding high voltage harmonics and external power relay for bigger loads
4. Please use shielded and twisted paired cables for Modbus connections
5. Please observe RS485 termination rules, max. 32 devices in a single Modbus line



Transmitter Hardware



SW1 DIP Switch for configuration range

TERMINAL

24V	15…35 Vdc or 24 Vac (± %5, 50-60 Hz)
GND	ground for power and reference for outputs
AO1	analog output 1
AO2	analog output 2

TERMINAL

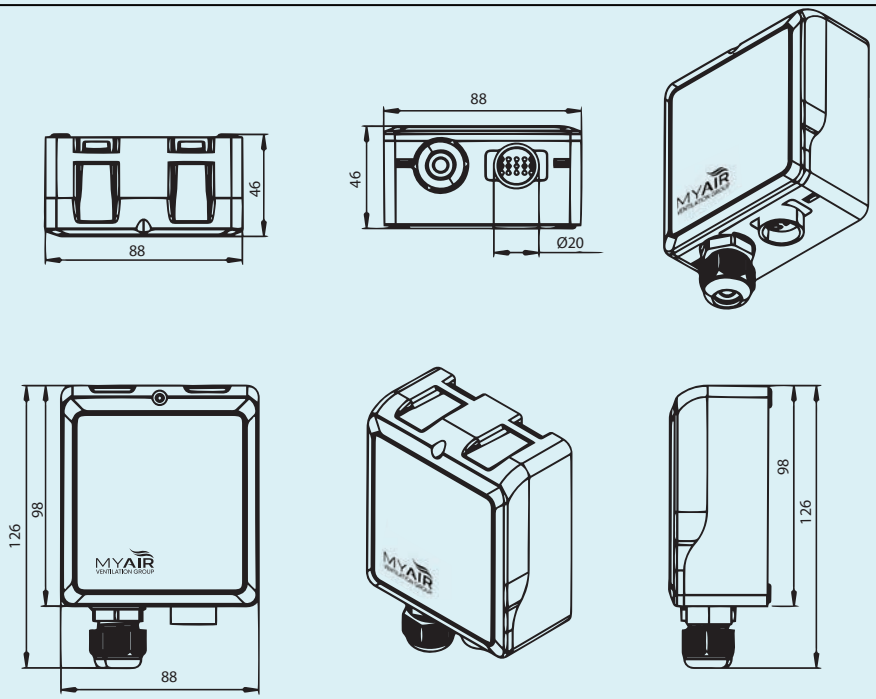
A / RS485	modbus communication positive pair
B / RS485	modbus communication negative pair

RL1 & RL2 relay 1 and relay 2

BZ buzzer

NO - RL1	relay 1 dry contact max. rating 1A @ 220 Vac
NO - RL1	relay 1 dry contact max. rating 1A @ 220 Vac
NO - RL2	relay 2 dry contact max. rating 1A @ 220 Vac
NO - RL2	relay 2 dry contact max. rating 1A @ 220 Vac

Drawings



Ordering Codes

model	mounting type	output 1	output 2	options	advanced options
MCMT	W wall	0 no output 1 0...10Vdc/4...20mA 2 2...10Vdc 3 0...5Vdc 4 1...5Vdc	0 no output 1 0...10Vdc/4...20mA 2 2...10Vdc 3 0...5Vdc 4 1...5Vdc	M modbus D display R relay 1x RR relay 2x B buzzer E 1.000ppm range	P PID out T RTC L Datalogger

sample order code: MCMT.W11 .MD

- MCMT: Myair Carbon Monoxide Transmitter
- W11: Wall type, out1:0...10Vdc/4...20mA out2:0...10Vdc/4...20mA
- MD: options: Modbus and Display

1. ROOM and DUCT types are available, please check own datasheets
2. Standart CO ranges are field selectable as 50ppm, 100ppm, 200ppm and 300ppm
3. Choose “E” for extended ranges 100ppm, 300ppm,500ppm and 1.000ppm
4. Relay and Buzzer options should have be ordered with Display option
5. For advanced options and special applications, please contact with us info@my-air.co.uk