

*carbon dioxide + Humidity, Temp.*

# CO<sub>2</sub> METER

**Model : GCH-2018**

*ISO-9001, CE, IEC1010*



**LUT Lutron**

**LUTRON ELECTRONIC**

*The Art of Measurement*

# CO<sub>2</sub> METER + Humidity, Temperature

## Model : GCH-2018

### FEATURES

* NDIR method principal for CO <sub>2</sub> ( Carbon dioxide ) measurement, available for long term operation.
* High repeatability and high accuracy.
* Two probes, one is for CO <sub>2</sub> /Temp. measurement, the other probe is for Humidity/Temp./Dew point measurement.
* Separate probe, easy operation and convenient for remote measurement.
* CO <sub>2</sub> function with alarm setting.
* Humidity measurement with fast response time.
* Large S-TN LCD, high contrast, easy readout.
* Data hold function for freezing the desired value on display.
* Records Maximum and Minimum readings with Recall.
* RS232 computer interface.
* Microprocessor circuit assures maximum possible accuracy, provides special functions and features.
* Heavy duty & compact housing with hard carrying case, designed for easy carry out & operation.
* Auto shut off is available to save battery life.
* Power supply from batteries or DC 9V adapter in.

### GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 52 mm x 38 mm dual function LCD display.
Measurement	CO <sub>2</sub> ( Carbon dioxide ), Temp. Humidity, Dew point, Temp.
Unit	CO <sub>2</sub> ppm
	Humidity % RH
	Dew point °C, °F
	Temp. °C, °F
Response Time	CO <sub>2</sub> : < 2 min. typically. @ Reach the 63% reading value @ Depend the environment air circulation.  Humidity/Dew point : 10 to 30 seconds typically. @ Reach the 85% reading value
Temperature Compensation	Automatic temp. compensation.
Advanced setting	CO <sub>2</sub> altitude value setting
	CO <sub>2</sub> alarm value setting
	°C/°F setting
	Auto power off enable/disable setting
Alarm setting	For CO <sub>2</sub> measurement only.
Data Hold	Freeze the display reading.
Memory Recall	Maximum & Minimum value.
Display Sampling Time	Approx. 1 second.
Power off	Auto shut off saves battery life or manual off by push button.
Data Output	RS 232 PC serial interface.
Probes no.	Two probes : * Probe 1 is for CO <sub>2</sub> , Temp. measurement. * Probe 2 is for Humidity, Dew point. Temp. measurement.
Operating Temperature	0 to 50 °C.
Operating Humidity	Main instrument : Less than 85% R.H.
	CO <sub>2</sub> probe : Less than 85% R.H.
	Humidity probe : 0 to 95 %RH.
Power Supply	DC 1.5 V battery ( UM4, AAA ) x 6 PCs, or equivalent.

Power Current	CO <sub>2</sub> measurement Approx. DC 9.6 mA for 90% period. Approx. DC 128 mA for 10% period. Humidity measurement Approx. DC 5.6 mA.
Weight	Main instrument : 312 g/0.68 LB. @ Battery is included. CO <sub>2</sub> probe : 158 g/0.35 LB. Humidity probe : 82 g/0.18 LB.
Dimension	Main instrument : 173 x 68 x 42 mm (7.9 x 2.7 x 1.2 inch) CO <sub>2</sub> Probe : 185 x 38 x 26 mm Humidity Sensor Probe : 200 x 23 x 19 mm
Accessories Included	Instruction manual..... 1 PC CO <sub>2</sub> probe..... 1 PC Humidity probe..... 1 PC Hard Carrying case..... 1 PC
Optional Accessories	RS232 cable, UPCB-02 USB cable, USB-01 Data Acquisition software, SW-U801-WIN

### ELECTRICAL SPECIFICATIONS (23±5 °C)

#### CO<sub>2</sub> ( Carbon dioxide )

CO <sub>2</sub> ( Carbon dioxide )	Range	0 to 4,000 ppm
	Resolution	1 ppm
	Accuracy	± 40 ppm * ≤ 1,000 ppm.
		± 5% of reading * > 1,000 ppm ≤ 3,000 ppm.
23 + 5 °C.	± 250 ppm typically * > 3,000 ppm, reference only	
	Repeatability	± 20 ppm * ≤ 3,000 ppm.
Temperature	Range	0 °C to 50 °C, 32 °F to 122 °F.
	Resolution	0.1 degree
	Accuracy	°C - 0.8 °C, °F - 1.5 °F.

#### Humidity/ Temp./Dew point

#### Humidity/ Temperature

Humidity	Range	10 % to 95 % R.H.
	Resolution	0.1 % R.H.
	Accuracy	≥ 70% RH : ± (3% reading + 1% RH). < 70% RH : ± 3% RH.
Temperature	Range	0 °C to 50 °C, 32 °F to 122 °F.
	Resolution	0.1 degree
	Accuracy	°C - 0.8 °C, °F - 1.5 °F.

#### Dew Point

°C	Range	-25.3 °C to 48.9 °C
	Resolution	0.1 °C
°F	Range	-13.5 °F to 120.1 °F.
	Resolution	0.1 °F.

Remark : \* Dew Point display value is calculated from the Humidity/Temp. measurement automatically.  
\* The Dew Point accuracy is sum accuracy value of Humidity & Temperature measurement..