

Handy, efficient all-in-one gas analysis

Perfect for engine inspection and tuning, the MEXA-584L portable gas analyzer, complies with international standard ISO 3930/OIML R99 (2000) class0 and is loaded with features to make your analysis easier and accurate. It allows you to simultaneously measure CO, HC, CO₂ (non-dispersive infrared: NDIR) and air-to-fuel ratio (AFR) or excess air ratio(λ) in idle state. It optionally measures O₂, NO, engine speed (RPM) and oil temperature (TEMP). Lightweight and compact with a clear LCD and effortless operation, it can be used as a simple measurement instrument in any work situation.

Measurement of each component during the two-speed idle test as an optional function

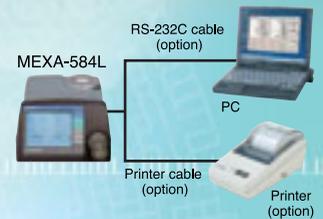
Lightweight (Approx. 4kg), compact and robust

Visual icon display for quick reference

-  Sensitivity drop.
-  Large reading fluctuation.
-  The probe is disconnected.
-  Filter needs replacement.
-  Reading exceeds the measurable range.



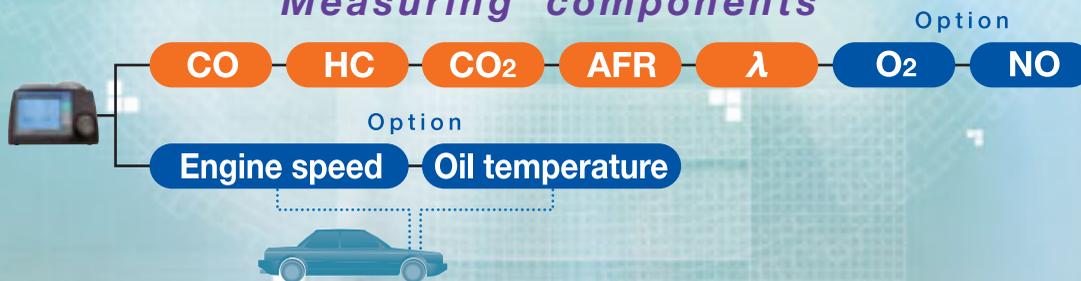
RS-232C enables remote control, data acquisition and printer capability



Calibration



Measuring components



Easier to use than ever!

● Remote control and data acquisition available from PC by optional kit.

● Light, durable sampling tube is easy to handle and worry free.



Optional drain separator improves the ability to remove water from the sample, and protects the detector from water damage.



Specifications

Model: MEXA-584L

Conformed standards : ISO 3930/OIML R99 (2000) Class0 *1
CE - FCC

Application: Exhaust gases in idling status from gasoline vehicle (two-wheel or four-wheel vehicle), LPG vehicle (four-wheel vehicle)

Principle:

- CO, HC, CO₂: non-dispersive infrared (NDIR)
- Air-to-fuel ratio (AFR), Excess air ratio (λ , lambda): carbon balance method, or Brettshneider method (only with O₂ measurement) *2

Measured/displayed components:

Measured components (standard):

- CO: 0.00 % vol to 10.00 % vol
- HC: 0 ppm vol to 10,000 ppm vol, or 0 ppm vol to 20,000 ppm vol *3 (as hexane equivalent value)
- CO₂: 0.00 % vol to 20.00 % vol
- AFR: 10.0 to 30.0
- LAMBDA: 0.000 to 9.999

External input components (optional):

- O₂: 0.00 % vol to 25.00 % vol
- NO: 0 ppm vol to 5,000 ppm vol
- Engine speed (RPM): 0 rpm to 9,990 rpm (Guaranteed range for linearity is 200 rpm to 6,000 rpm)
- Oil temperature (TEMP): 0 °C to 150 °C

● **Monitor display:** LCD (black and white, 320 x 240 dot)

● **Input/outputs:**

- Digital input/output: RS-232C (standard), RS-485 (option) *4
- Printer: RS-232C

● **Calibration gas:**

- Dedicated cylinder
- Mixed gas of CO, C₃H₈ and CO₂,
- NO (for the instrument with NO analyzer (optional))

● **Environment:**

- Ambient temperature: 0 °C to 45 °C
- 5 °C to 40 °C (for OIML conformity)
- Humidity: below 90 % as relative humidity
- Ambient pressure: 80 kPa to 106 kPa

● **Power supply** *5: 100 V to 240 V AC 50/60Hz, single phase

● **Power capacity:** Approx. 90 VA at stable state

● **Dimensions:**

260(W) x 357(D) x 157(H) mm (without optional units)

● **Mass:** Approx. 4 kg (without optional units)

● **Response speed** *6,7: Within 15 s, as Td + T95,

● **Repeatability** *7,8:

- CO: Within 0.01 % vol, or within 1.7 % of reading (whichever is larger)
- HC: Within 3.3 ppm vol, or within 1.7 % of reading (whichever is larger)
- CO₂: Within 0.17 % vol, or within 1.7 % of reading (whichever is larger)

● **Warm-up time:** 5 minutes

Options

● **O₂ sensor**

● **NO sensor**

● **Engine Speed sensor**

● **Oil temperature sensor**

● **Serial printer**

● **Printer cable** (1.5 m)

● **Input/output cable**

(RS-232C cable; 2.5 m, 5 m, 10 m)

● **Analog output board** (0 - 1 V)

● **Optional probe** (φ6/φ4 mm, copper pipe)

● **Drain separator** (external-connection type)

Printout example

```
***** VEHICLE *****
***** INSPECTION *****
***** REPORT *****
CO      3.76  %vol
HC      636  ppmvol
CO2     7.96  %vol
AFR     17.5
LAMBDA  1.180
NO      103  ppmvol
O2      0.02  %vol
H/C     1.85
O/C     0.00
```

Remarks

*1 Excluding some items. Please, contact HORIBA for the more details.

*2 Air-to-fuel ration (AFR) and excess air ratio (λ) are calculated by the carbon balance method in standard configuration.

In case that an optional O₂ sensor is connected, the Brettshneider equation is applied for the calculation.

*3 For optional range for HC, 20,000 ppm vol, display resolution is 2 ppm vol within the range of 0 ppm to 4,000 ppm, and 10 ppm vol within the range of 4,000 ppm vol to 20,000 ppm.

*4 Contact HORIBA for quotation on RS-485 connection (optional). For connecting by USB, please use a RS232C/USB converter.

*5 For using the analyzer with a DC power source, please prepare a DC/AC inverter.

*6 Span gas for the performance test shall be approx. 0.5 % vol for CO, 200 ppm vol for C₃H₈ and 14 % vol for CO₂.

*7 When calibration gases are switched at sample inlet with the sampling tube, Pre-filter and Sampling probe attached.

*8 Repeatability is described as the standard deviation of values of 20 repeated measurements.



The HORIBA Group adopts IMS (Integrated Management System) which integrates Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System OHSAS18001. We have now integrated Business Continuity Management System ISO22301 in order to provide our products and services in a stable manner, even in emergencies.



Please read the operation manual before using this product to assure safe and proper handling of the product.

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<http://www.horiba.com> e-mail: info@horiba.co.jp

HORIBA, Ltd. Japan

Head Office

2 Miyano Higashi, Kisshoin, Minami-ku, Kyoto, Japan
Phone: 81 (75) 313-8121 Fax: 81 (75) 321-5725

Tokyo

Kanda-Awaji-cho Nichome Building 2-6, Awaji-cho, Kanda, Chiyoda-ku, Tokyo, Japan
Phone: 81 (3) 6206-4721 Fax: 81 (3) 6206-4730

HORIBA (China) Trading Co., Ltd. China

Shanghai

Unit D, 1F, Building A, Synnex International Park, 1068 West Tianshan Road, Shanghai, 200335, China
Phone: 86 (21) 6289-6060 Fax: 86 (21) 6289-5553

Beijing

12F, Metropolis Tower, No.2, Haidian Dong 3 Street, Beijing, 100080, China
Phone: 86 (10) 8567-9966 Fax: 86 (10) 8567-9066

HORIBA Instruments (Singapore) Pte Ltd. Singapore

3 Changi Business Park Vista #01-01 Akzonobel House, Singapore 486051
Phone: 65 (6) 745-8300 Fax: 65 (6) 745-8155

HORIBA Vietnam Co., Ltd. Vietnam

Unit 6, 10 Floor, CMC Tower, Duy Tan Street, Dich Vong Hau Ward, Cau Giay District, Hanoi, Vietnam
Phone: 84 (4) 3795-8552 Fax: 84 (4) 3795-8553

PT HORIBA Indonesia Indonesia

Jl. Jalur Suter Blok 20A, No.16-17, Kel. Kunciran, Kec. Pinang Tangerang-15144, Indonesia
Phone: 62 (21) 3044-8525 Fax: 62 (21) 3044-8521

HORIBA (Thailand) Ltd. Thailand

East Office

850 / 7 Soi Lat Krabang 30 / 5, Lat Krabang Road, Lat Krabang, Bangkok 10520, Thailand
Phone: 66 (0) 2734 4434 Fax: 66 (0) 2734 4438

HORIBA Korea Ltd. Korea

10, Dogok-Ro, 6-Gil, Gangnam-Gu, Seoul-Si, 06259, Korea
Phone: 82 (2) 753-7911 Fax: 82 (2) 756-4972

HORIBA India Private Limited India

Delhi

246, Okhla Industrial Estate, Phase 3 New Delhi-110020, India
Phone: 91 (11) 4646-5000 Fax: 91 (11) 4646-5020

Technical Center

D-255, Chakan MIDC Phase-II, Bhamboli Village, Pune-410501, India
Phone: 91 (21) 3567-6000

HORIBA Instruments Inc. USA

Head Office

9755 Research Drive, Irvine, CA 92618, U.S.A.
Phone: 1 (949) 250-4811 Fax: 1 (949) 250-0924

Ann Arbor

5900 Hines Drive Ann Arbor, MI 48108 U.S.A.
Phone: 1 (734) 213-6555 Fax: 1 (734) 213-6525

TCA/HORIBA Sistema de Testes Automotive Ltda. Brazil

Head Office

Rua Goiás 191 Vila Oriental, Diadema, São Paulo, Brazil CEP 09941-690
Phone: 55 (11) 4224 0200 Fax: 55 (11) 4227 3133

HORIBA UK Limited UK

Northampton

Kyoto Close Moulton Park, Northampton NN3 6FL, UK
Phone: 44 (1604) 542-500 Fax: 44 (1604) 542-699

HORIBA Europe GmbH Turkey

Istanbul Office

Küçükbakkalköy Mah. Kayışdağı Cad., Flora Residence No:3 / 2504 34750 Ataşehir / Istanbul
Phone: (90) 216 572 1166 Fax: (90) 216 572 1167

HORIBA France SAS France

Les Ulis

12, Av des Tropiques Hightech Sud, F-91955 Les Ulis, France
Phone: 33 (1) 69-29-96-23 Fax: 33 (1) 69-29-95-77

HORIBA OOO Russia

Head Office

Altufievskoe shosse, 13, building 5, 127106, Moscow, Russia
Phone: 7 (495) 221-87-71 Fax: 7 (495) 221-87-68

HORIBA Europe GmbH Germany

Head Office

Hans-Mess-Str.6 D-61440 Oberursel Germany
Phone: 49 (6172) 1396-0 Fax: 49 (6172) 1373-85

Leichlingen

Julius-kronenberg Str.9 D-42799 Leichlingen Germany
Phone: 49 (2175) 8978-0 Fax: 49 (2175) 8978-50

HORIBA Sweden Sweden

Sydhamsvagen 55-57, SE-15138, Sodertalje, Sweden
Phone: 46 (8) 550-80701 Fax: 46 (8) 550-80567

HORIBA Itaria Srl. Italy

Strada Torino 43 / 45, 10043 Orbassano, Torino, Italy
Phone: 39 (11) 904-0601 Fax: 39 (11) 904-0448

HORIBA Czech Czech

Prumysl'ova 1306 / 7, CZ-10200, Praha 10, Czech Republic
Phone: 420 (2) 460-392-65

HORIBA (Austria) GmbH Austria

Kaplanstrasse 5 A-3430 Tulln, Austria
Phone: 43 (2272) 85225 Fax: 43 (2272) 65230

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