

Portable Gas Analyzer PG-300 Series

NO_x—SO₂—CO—CO₂—O₂—CH₄—N₂O

Precision analyses, anywhere.



Effortless measurement, almost instinctive in its simplicity.
Delivers the same accuracy and reliability as
laboratory-grade analyzers, all within a portable,
robust unit designed for field applications.

Functionality

Cutting-edge features for advanced measurement needs

- Cross-modulation type detector
- Designed to measure greenhouse gases (GHGs)
- Shorter warm-up time
- Timer function

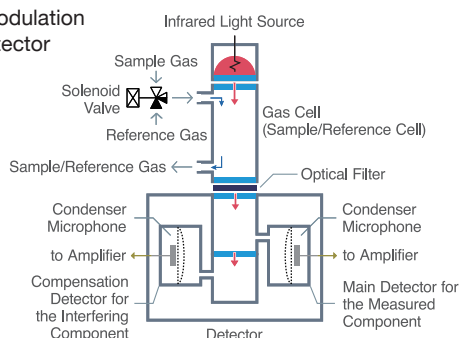
- Data management with Ethernet and LAN
- Reduced response time for SO₂ measurement
- Upgrade to IP42 ingress protection (optional)

Advanced accuracy and stability by cross-modulation NDIR technology

In the PG-300, cross-modulation NDIR technology is applied to SO₂, CO, and CH₄ analyzers. With cross-modulation NDIR method, sample gas and reference gas flow into a single measurement cell alternately.

This approach offers several advantages, including no need for optical adjustment, stable zero point, clean sample cell, and reduced span drift. Additionally, the equipment will be kept safe for a long time.

Cross-Modulation NDIR detector



Seamless integration of core greenhouse gas (GHG) parameters

CN models with build-in CO₂, CH₄, and N₂O parameters in a single analyzer to simplify regulatory emission monitoring, and other research and development applications. This capability can be applied across a variety of industrial fields.



Ethernet communication facilitates data management*

Standard Ethernet interface for connection to LAN environment enables real-time data import.

Collecting data over LAN network*

With network connectivity on the PG-300, data uploads and status checks can be performed remotely.



* Requires separate software.

Rugged Lightweight Design

20% lighter than previous models, the PG-300 offers exceptional portability. Side guards help protect against accidental impacts during transport.

PG-300 provides full support for your field measurements and analyses.

Lightweight makes it easy to transport.

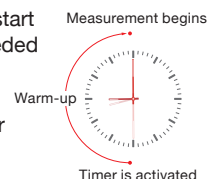


Significantly shorter warm-up time

Ready in 30 minutes instead of 1 hour - PG-300 maximizes uptime and productivity.

Timer function enables automatic start and sleep modes

For example, setting the PG-300's automatic start time 30 minutes before measurements are needed eliminates waiting time for the instrument to warm up; it will be ready when you are. There is also a sleep mode that reduces power consumption when the unit is idle.



Reduced response time for SO₂ analyzer

The response time of the SO₂ analyzer is faster than that of previous models, enhancing the overall measurement performance.

Multi languages and Global certificates

<Languages>

English, Chinese, Korean, German, French, Russian, Japanese

<Certificates>

QAL1 (EU), China, Korea, Japan, MCERTS (UK), GOST (Russia)

Upgrade to IP42 ingress protection for enhanced dust and drip resistance

A special rear cover is attached to prevent intrusion of water droplets and solid matter, and it is resistant to light rain.

IP=Ingress protection

IP42 means protection against solid objects of 1 mm diameter and greater, and vertically falling water drops when enclosure is tilted up to 15 degrees. Wiping off water drops on the measuring spots are necessary in order to obtain accurate value.



Easy Operation

Designed for simple, intuitive operation - both in the lab and out in the field

- SD™ memory card slot
- Screen capture function
- On-screen guidance
- Color trend graph

Instant data storage with the SD™ memory card slot

The SD™ memory-card slot lets you instantly store data in universal CSV format.

The SD™ card slot is located on the front of the unit for easy access.



Screen capture function enables data to be saved immediately as a bitmap image onto the SD memory card.

No need for paper or pen – just tap the SCREEN CAPTURE icon, and the screenshot is saved directly to memory.

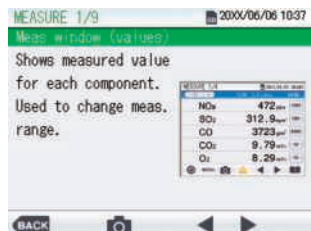
On-screen guidance function allows you to instantly confirm the review operating procedures

The simple guidance function provides assistance if you forget how to perform an operation. You can easily review regular operational procedures or important points directly on the screen.

[Measurement display]



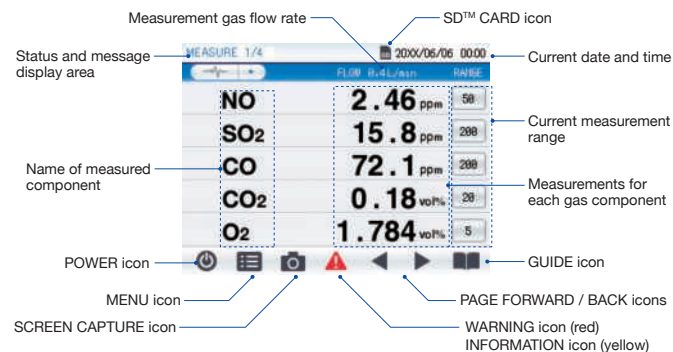
When you press the GUIDE button...



...and then the screen shows information that you can handle at the current operation.

LCD touch screen for easy operation

All functions - from calibration and measurement to on-screen data saving are accessible via the touchscreen, while the high-visibility color display ensures status information is always clear.



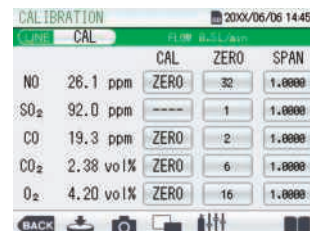
Easy real time analysis using the color trend graph

A convenient color trend graph provides an instant overview of gas component trends over time.

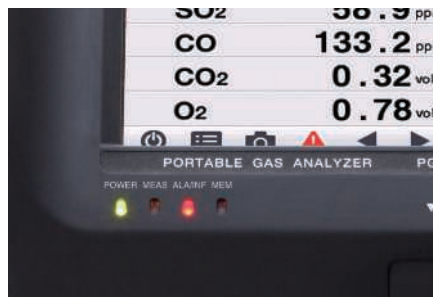
[Color trend graph]



[Calibration screen]



Calibration requires a separately purchased calibration gases and pressure regulators.



- Front panel LED provides an immediate status overview.



- User-friendly design ensures accurate, high-precision analyses.



- Color LCD touchscreen with exceptional visibility.

•SD is a trade mark for SD-3C, LLC.

Analyzer Specifications for PG-300 Series (Standard Model)

Type of analyzer		2-component analyzer		3-component analyzer			4-component analyzer	5-component analyzer	2-component analyzer	4-component analyzer
Model		PG-320	PG-325	PG-330	PG-335	PG-337	PG-340	PG-350	PG-324	PG-344
Components		CO/CO ₂	NOx/O ₂	CO/CO ₂ /O ₂	NOx/CO/O ₂	NOx/SO ₂ /O ₂	NOx/CO/CO ₂ /O ₂	NOx/SO ₂ /CO/CO ₂ /O ₂	CH ₄ /CO ₂	CH ₄ /CO/CO ₂ /O ₂
Measuring principle		NOx: Cross-Modulation Chemiluminescence Method SO ₂ , CO, CH ₄ : Cross-Modulation Non-Dispersive Infrared Absorption Method CO ₂ : Non-Dispersive Infrared Absorption Method O ₂ : Galvanic Method, or Paramagnetic Method (Dumb-bell type)								
Measurement range		NOx : 0-25/50/100/250/500/1000/2500 ppm SO ₂ : 0-200/500/1000/3000 ppm CO : 0-200/500/1000/2000/5000 ppm CO ₂ : 0-10/20/30 vol% O ₂ : 0-5/10/25 vol% (Galvanic Method) or 0-10/25 vol% (Paramagnetic Method)							CH ₄ : 0-2000/5000 ppm CO : 0-2000/5000 ppm CO ₂ : 0-5/10/20 vol% O ₂ : 0-5/10/25 vol%*	
Repeatability		±0.5% of full scale (NOx : ≥ 100 ppm range / CO : ≥ 1000 ppm range) ±1.0% of full scale (Except above)							±1.0% of full scale	
Linearity		±2.0% of full scale								
Drift		±1.0% of full scale / day (For SO ₂ analyzer only : ±2.0% of full scale / day)							±1.0% of full scale / day	
Response time (Td+T ₉₀)		Analyzers except SO ₂ analyzer : 45 sec. or less (from analyzer inlet) SO ₂ analyzer : 180 sec. or less (from analyzer inlet)								
Sample gas flow rate		Approx. 0.5 L/min.								
Display		Measurement (3 or 4 digit display), range, flow rate, etc.								
Output		DC 4-20 mA (non-insulated) [Standard] or DC 0-1 V (non-insulated) [Optional] is selectable / Ethernet™								
Warm-up time		With 30 min. warm-up, ±2.0% of full scale / 2 hours								
Data saving		SD™/SDHC™ memory card								
Environment condition	Ambient temperature	0°C to 40°C / 32°F to 104°F								
	Ambient humidity	Max. relative humidity 80% (For temperatures up to 31°C decreasing linearly to 50% at 40°C)								
Power supply		AC 100 V - 240 V ±10% (max. voltage: 250 V), 50/60 Hz								
Power consumption		Approx. 160 VA in a steady state, max. 220 VA								
Dimensions		260 (W) x 520 (D) x 260 (H) mm 10.2" (W) x 20.5" (D) x 10.2" (H) (without side guards) 300 (W) x 520 (D) x 260 (H) mm 11.8" (W) x 20.5" (D) x 10.2" (H) (with side guards) (projections excluded)								
Weight		Approx. 13 kg to 15 kg / Approx. 29 lb to 33 lb								
Environmental rating		IP42 (optional)								
Sample gas conditions		Temperature : ambient temperature, moisture : below the ambient temperature saturation, dust : 0.1 g/Nm³ or less, pressure : ±0.98 kPa Contains no gases that react with either corrosive gas or the measured gas.								

* For Paramagnetic Method (Dumb-bell type), please contact HORIBA representative in your area for the details.

• SD is a trade mark for SD-3C, LLC.

• TAKE GREAT CARE WHEN HANDLING SAMPLE GASES CONTAINING TOXIC OR FLAMMABLE GASES. TAKE MEASURES SUCH AS PROVIDING ADEQUATE VENTILATION, INSTALLING GAS DETECTORS, AND REMOVING IGNITION SOURCES IN THE WORKING AREA.

• THE PG-300 SERIES IS NOT EXPLOSION-PROOF. DO NOT USE THIS PRODUCT IN A HAZARDOUS LOCATION OR FOR MEASUREMENT OF SAMPLE GASES IN EXPLOSIVE ATMOSPHERES (MIXTURE OF A COMBUSTIBLE GAS AND AIR WITHIN THE FLAMMABILITY POWER SUPPLY). HORIBA, LTD. AND ITS AFFILIATES ARE NOT LIABLE FOR EMERGENCIES CAUSED BY LEAKAGE OR MISHANDLING OF SUCH GASES.

Standard Accessories

Part Name	Specifications	Quantity
Filter element	For reference line	24
Signal cable	For analog output (2 m) with connector	1
Power cord	2.5 m	1
Tube	φ6/φ4PTFE tube 0.12 m (for mist catcher short)	1
Tube	φ6/φ4PTFE tube 5 m (for sample)	1
Tube	φ9/φ5 Imron tube 5 m (for exhaust)	1
Tube	φ9/φ5 Imron tube 1 m (for drain discharge)	1
Joint	φ6 straight (for sample tube)	1
Cover	Dust cover (for storage)	1
SD™ memory card	512 MB	1

• Separate tubing and joint are required if a pretreatment unit is added.

Replacement parts

Replacement part intervals assume 8 hours of operation per day. Replacement interval may be more frequent depending on measurement gas conditions and use conditions.

[Consumable Items]

Name	Replacement cycle (general guideline)	Notes
Mist catcher	3 months	MC-025
Scrubber	3 months	For reference line
Air filter element	2 weeks	For reference line

[Replacement Parts] Not applicable for PG-324 and PG-344 B range

Name	Replacement cycle (general guideline)	Notes
Pump	1 year	Replace when broken
NOx converter catalyst	1 year	For NOx analyzer*
Zero gas purifier unit catalyst	1 year	*
Ozone generator	1 year	For NOx analyzer*
Deozoneizer	1 year	For NOx analyzer*
CR2032 battery	5 years	For clock backup
Galvanic O ₂ cell	3 years	Replace when broken*

* Differs depending on model

Analyzer Specifications for PG-300 Series (Carbon Neutral Model)

Type of analyzer	4-component analyzer	5-component analyzer
Model	PG-344CN	PG-350CN
Components	N ₂ O/CH ₄ /CO ₂ /O ₂	N ₂ O/CH ₄ /NO _x /CO ₂ /O ₂
Measuring principle	N ₂ O, CH ₄ : Cross-Modulation Non-Dispersive Infrared Absorption Method NO _x : Cross-Modulation Chemiluminescence Method CO ₂ : Non-Dispersive Infrared Absorption Method O ₂ : Galvanic Method, or Paramagnetic Method (Dumb-bell type)	
Measurement range	N ₂ O : 0-100/200/500/1000 ppm (C range) or 0-500/1000/2000/5000 ppm (D range) CH ₄ : 0-200/500/1000/2000 ppm (C range) or 0-500/1000/2000/5000 ppm (D range) NO _x : 0-25/50/100/250/500/1000/2500 ppm (A range) CO ₂ : 0-10/20/30 vol% O ₂ : 0-5/10/25 vol% (Galvanic Method) or 0-10/25 vol% (Paramagnetic Method (Dumb-bell type))	
Repeatability	±0.5% of full scale (NO _x : ≥ 100 ppm range / CO : ≥ 1000 ppm range) ±1.0% of full scale (Except above)	
Linearity	±2.0% of full scale	
Drift	±1.0% of full scale / day	
Response time (Td+T ₉₀)	45 sec. or less (from analyzer inlet)	
Sample gas flow rate	Approx. 0.5 L/min.	
Display	Measurement (3 or 4 digit display), range, flow rate, etc.	
Output	DC 4-20 mA (non-insulated) [Standard] or DC 0-1 V (non-insulated) [Optional] is selectable / Ethernet™	
Warm-up time	With 30 min. warm-up, ±2.0 of Full scale / 2 hours	
Data saving	SD™/ SDHC™ memory card	
Environment condition	Ambient temperature	0°C to 40°C / 32°F to 104°F
	Ambient humidity	Max. relative humidity 80% (For temperatures up to 31°C decreasing linearly to 50% at 40°C)
Maximum N ₂ O concentration*	1 ppm or less	
Maximum CH ₄ concentration*	2 ppm or less	
Power supply	AC 100 V - 240 V ±10% (max. voltage: 250 V), 50/60 Hz	
Power consumption	Approx. 160 VA in a steady state, max. 220 VA	
Dimensions	260 (W) x 520 (D) x 260 (H) mm 10.2" (W) x 20.5" (D) x 10.2" (H) (without side guards) (projections excluded) 300 (W) x 520 (D) x 260 (H) mm 11.8" (W) x 20.5" (D) x 10.2" (H) (with side guards)	
Weight	Approx. 13 kg to 15 kg / Approx. 29 lb to 33 lb	
Environmental rating	IP42 (optional)	
Sample gas conditions	Temperature : ambient temperature, moisture : below the ambient temperature saturation, dust : 0.1 g/Nm ³ or less, pressure : ±0.98 kPa Contains no gases that react with either corrosive gas or the measured gas.	

* Please exhaust the air sufficiently away from the equipment so that the exhaust does not increase the N₂O and CH₄ concentrations in the operating environment. Please contact us for more information.
 • The note indicated on Page 4 of the specifications section for the standard model also applies to the CN model.



Field × Lab

Options

Additional optional components expand the PG-300 portable analyzer capabilities.



Drain separator



Drain pot

■ Drain separator unit ■ Drain pot unit

When the gas sample includes moisture ranging from ambient temperature saturation to 40 °C saturation, a Drain Separator and Drain Pot are installed at the stage before the analyzer unit.

■ Drain separator unit / Drain pot unit specifications

Model	DS-300 (drain separator)	DP-300 (drain pot)
Temperature	0°C to 40°C / 32°F to 104°F	
Sample conditions (at feed port)	Moisture	Ambient temperature saturation ~ 40°C / 104°F saturation
	Dust	0.1 g/m ³ or less
	Pressure	±0.98 kPa ±4.9 kPa

■ Electronic cooler unit

When the gas sample includes moisture exceeding 40 °C saturation, or when conducting continuous measurement (for five days or less), a thermoelectric cooler is installed at the stage before the analyzer unit. The electronic cooler unit can also accommodate low-temperature SO₂ measurements.



■ Electronic Cooler unit specifications

Model	PS-300
Material in contact with gas	Ti, SUS, PVC, PTFE, FKM, PVDF, PP, Glass
Inlet sample	Approx. 2 L/min.
Dehumidify	15°C / 59°F saturated
Usable temperature	0°C to 40°C / 32°F to 104°F
Usable humidity	85% or less
Power	100/110/115/120/220/230/240 V AC, 50 Hz/60 Hz (depend on specifications)
Outline	260(W) x 375(D) x 235(H) mm / 10.2"(W) x 14.7"(D) x 9.2"(H) (except for protrusion)
Mass	Approx. 12kg / 26.46 lb
Sample gas condition	Temperature: Ambient temperature, Dust: 0.1g/m ³ or less, Moisture: H ₂ O ≤ 20 vol%, Pressure: ±4.9 kPa

[Halogen scrubber] (optional)

The Halogen scrubber can be built into the electronic cooling unit as an option. It is used to prevent corrosion of the cells, tubes and other internal components when the gas analyzer is operated at waste incineration facilities or in other situations where the gas sample includes Cl₂.

■ Primary side filter probe

Either of two types may be selected depending on use.



Flue probe



Simple probe

■ Primary side filter probe specifications

Model	Simple probe	SE3 (flue probe)
Probe length (standard)	10 cm / 3.937"	1 m / 3'28"
Temperature	0°C to 50°C / 32°F to 122°F*	0°C to 120°C / 32°F to 248°F
Sample conditions (at feed port)	Moisture	40 vol% or less
	Dust	0.1 g/m ³ or less
	Pressure	±2.94 kPa

*At flange inlet

Note:

- Please contact HORIBA if the analyzer will be used in environments in which the temperature exceeds 120 °C.
- Please contact HORIBA in case of use under the environmental that the pressure condition is other than ±2.94 kPa.



■ PG-300 Carrying Case

■ Specifications

Model	PG-300 Carrying Case
Outline	630 (W) x 492 (D) x 352 (H) mm 24.8" (W) x 19.3" (D) x 13.8" (H)
Mass	12kg / 26.4lb
Materials	Case: Polypropylene Interior: Ethylene foam
Equipment	Carry handle, casters, handles, etc.

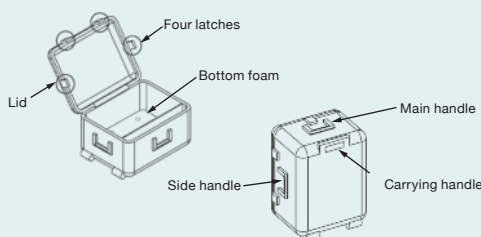
■ PG-300 Carrying Case (for IP42 Protection Class)

■ Specifications

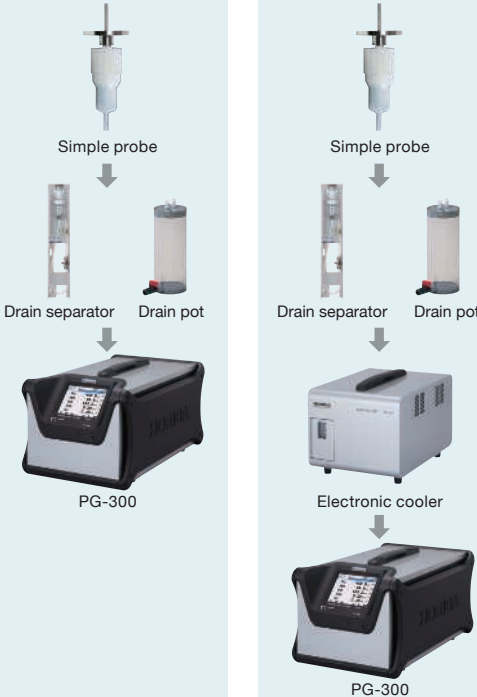
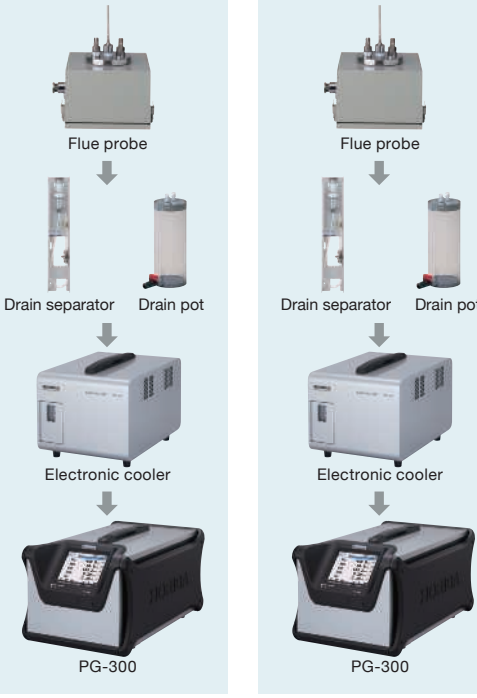
Model	PG-300 Carrying Case (for IP42 Protection Class)
Outline	687 (W) x 528(D) x 376 (H) mm 27.05" (W) x 20.79" (D) x 14.80" (H) ^{*1}
Mass	12kg / 26.4lb ^{*2}
Materials	Case: Polypropylene Interior: Polyethylene and polyurethane
Equipment	Carry handle, casters, handles, etc.

*1 except for protrusion

*2 The weight of the carrying case with the analyzer stored inside is 23 kg to 29 kg in total.



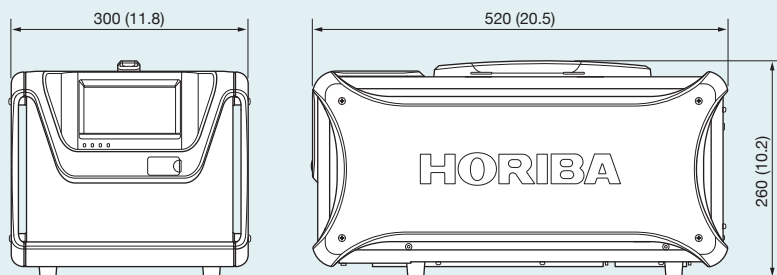
Please select the ideal combination according to your needs. **Sample Preprocessing Unit (optional) Typical Configurations**

Applications	Boiler gas turbines	Stack gas	Waste incineration	Combustion gas appliances	Steelmaking
Intermittent Measurement (8 hours or less)	 Simple probe Drain separator Drain pot PG-300 Electronic cooler PG-300	 Simple probe Drain separator Drain pot PG-300 Electronic cooler PG-300	 Simple probe Drain separator Drain pot PG-300 Electronic cooler PG-300	 Simple probe Drain separator Drain pot PG-300 Electronic cooler PG-300	
Continuous Measurement (5 days or less)*	 Flue probe Drain separator Drain pot PG-300 Electronic cooler PG-300	 Flue probe Drain separator Drain pot PG-300 Electronic cooler PG-300	 Flue probe Drain separator Drain pot PG-300 Electronic cooler PG-300		

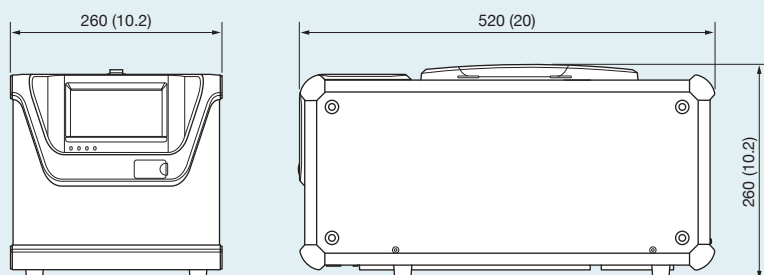
* Consult with us in case of measurements exceeding 5 days.

Note: regarding probe material and other matter related application, please consult with us.

● PG-300 Series Analyzer Unit



● PG-300 Series Analyzer Unit (Side guards excluded)



HORIBA Group is certified Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System ISO45001 and operate as Integrated Management System (IMS).



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

- The specifications, appearance or other aspects of products in this catalog are subject to change without notice.
- Please contact us with enquiries concerning further details on the products in this catalog.
- The color of the actual products may differ from the color pictured in this catalog due to printing limitations.
- It is strictly forbidden to copy the content of this catalog in part or in full.
- The screen displays shown on products in this catalog have been inserted into the photographs through compositing.
- All brand names, product names and service names in this catalog are trademarks or registered trademarks of their respective companies.

HORIBA

HORIBA, Ltd.
Group Head Office
2 Miyanoigashi-cho, Kisshoin, Minami-ku, Kyoto, 601-8510, Japan
Phone: 81 (75) 313-8121 Fax: 81 (75) 321-5725
<https://www.horiba.com/int/>



Worldwide locations of HORIBA