

Thank you for selecting our "K9350LF NO₂/NO Converter".
The NO₂/NO converter, by using a special catalyst which efficiently converts NO₂ in sample gas to NO, is to be coupled with a NO_x gas analyzer or NH₃ gas analyzer for flue exhaust.

CAUTION

- Do not touch the converter section due to its high temperature. Wear protective gloves while exchanging catalyst.
- In order to protect the system controlled by the product and the product itself and ensure safe operation, observe the safety precautions described in this user's manual. We assume no liability for safety if users fail to observe these instructions when operating the product.
- Be sure to use the spare parts approved by Yokogawa Electric Corporation (hereafter simply referred to as YOKOGAWA) when replacing parts or consumables.
- Modification of the product is strictly prohibited.

● Notes on Handling User's Manuals

- Please hand over the user's manuals to your end users so that they can keep the user's manuals on hand for convenient reference.
- Please read the information thoroughly before using the product.
- The purpose of these user's manuals is not to warrant that the product is well suited to any particular purpose but rather to describe the functional details of the product.
- No part of the user's manuals may be transferred or reproduced without prior written consent from YOKOGAWA.
- YOKOGAWA reserves the right to make improvements in the user's manuals and product at any time, without notice or obligation.
- All names of company, brand of product used in this manual are registered trademarks or trademarks of their respective companies.
- TM or ® to signify brand or trademarks are not used in this manual.

● CE marking products

■ Authorized Representative in EEA

The Authorized Representative for this product in EEA is Yokogawa Europe B.V. (Euroweg 2, 3825 HD Amersfoort, The Netherlands).

■ Users

This product is designed to be used by a person with specialized knowledge.

■ Specification

Mounting:	Indoor surface mounting
Target Gases:	General boiler exhaust gas, atmosphere
Catalyst:	Amount; 2 cm ³ Replacement cycle; Approx. 8 months (at flow rate of 0.5 L/min with 5%O ₂ , 10 ppm NO ₂) Temperature set-point; 220 ±10°C (Sensing tip; K thermocouple)
Wetted materials:	Ceramic, glass filter, SUS316
Conversion efficiency:	95% or higher, conforms to JIS
Temperature alarm outlet:	Contact output normally closed Contact capacity: 220V AC/30V AC, 1A (resistive load)
Gas Flow Rate:	0.5 L/min
Gas inlet/outlet:	ø6 mm tube connection
Ambient Temperature:	-5 to 45°C
Power Supply:	100 to 240 V AC, 50/60 Hz
Power Consumption:	Approx. 85 W
Weight:	Approx. 1.2 kg
Sample gas requirements:	Dust/drain removed, gas temperature at 150°C or lower

Safety, EMC and RoHS conformity standards

Installation altitude;	2000 m or less
Pollution degree;	2 (Note)
Installation category;	II (Note)

- Note: • Installation category, called overvoltage category, specifies impulse with standing voltage. Category II is for electrical equipment.
• Pollution degree indicates the degree of existence of solid, liquid, gas or other inclusions which reduce dielectric strength. Degree 2 is the normal indoor environment.

Safety; EN61010-1

EMC;	EN61326-1 Class A, Table 2 (For use in industrial locations), EN61326-2-3, EN61000-3-2, EN61000-3-3 EMC Regulatory Arrangement in Australia and New Zealand (RCM) EN61326-1 Class A
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Note: The product mounted in a steel enclosure conforms to the requirements of EMC directive.

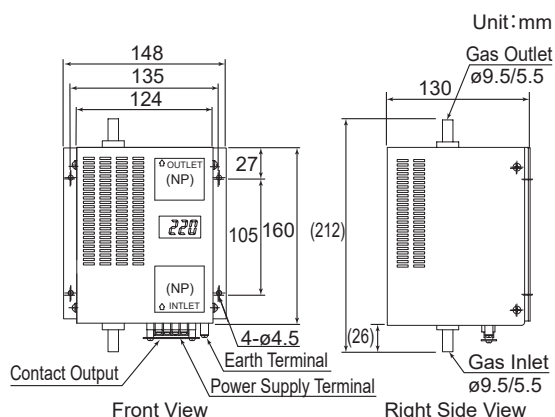
Caution: The instrument is a Class A product, and it is designed for use in the industrial environment. Please use this instrument in the industrial environment only.

RoHS: EN50581

Spare Parts

Item	Part No.	Note
Catalyst for NO ₂ /NO converter	K9350LP	
Glass wool for NO ₂ /NO converter	K9350LQ	
Fitting for NO ₂ /NO converter	K9350LV	use 2 pcs

External Dimensions



Installation, Piping, Wiring

1. The main frame should be installed vertically to the ground. Avoid installing it obliquely or laying it on its side.
2. Pipes should be connected so that the bottom port of converter block becomes an inlet and the top port becomes an outlet. (See "External Dimensions.")
3. Connect power supply to the terminals indicated in the wiring diagram. (Use type D for grounding.)
4. A Breaker that meet IEC60947-1 and IEC60947-3 should be included in installation.
5. A Breaker should be installed near the Converter where an operator can access it.
6. Confirm the piping and wiring before turning ON the converter.
7. Be careful of the high temperature after turning the power on. The temperature controller is set at 220°C. Since temperature has been factory-set, the temperature controller need not be operated.
8. When the temperature reaches $\pm 20^\circ\text{C}$ from the set-point of the temperature controller, the contact is opened.

How to Replace Catalyst

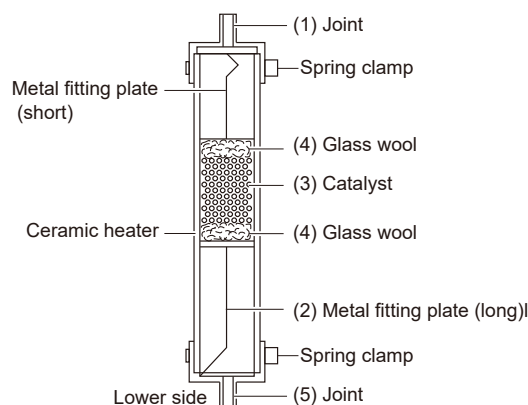
CAUTION

Do not touch the converter section due to the high temperature. Wear protective gloves when replacing catalyst.

Catalyst should be replaced with new ones once every eight months. When flow rate is 0.5L/min or lower and NO₂ concentration is 10 ppm or lower.

- 1: Turn off the main power supply for converter.
- 2: Remove the cover when it has cooled down. The cover is fastened by the screws on the side face.
- 3: By using a pair of pliers or the like, loosen and remove the spring clamps on the joint (1) and the joint (5). Then, remove the two joints. Be careful not to damage the ceramic heater.
- 4: After placing a catch pan to receive the falling catalyst (3) and glass wools (4), pull out the metal fitting plates (2).
- 5: Place (4) at the end of metal fitting plate (long) (2), insert it from the lower side of the ceramic heater, then inject the new (3) from the top, using a funnel or alike.
- 6: Attach new joints (1) and (5) to the heater, and put on and tighten the spring clamps on both joints.

- 7: Connect only the lower joint (5) to the pipe. Turn on the power and flow the zero gas through the pipe manually for about 20 minutes. (This is to remove moisture from the catalyst.)
- 8: Connect the upper joint (1) to the pipe.



Converter section

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