

Safety Instruction

NRR261

Converter for Oil Leak Detector NAR300

IECEX FMG 14.0024X

FM 14 ATEX 0048X

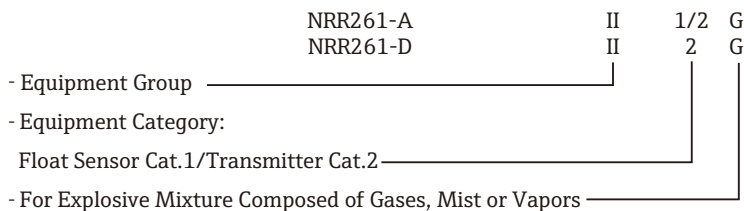


Safety Instructions for Electrical Apparatus Certified for Use in Explosion-hazardous Areas

Designation according to IECEX 02

Equipment Protection Level (EPL): NRR261-B Ga/Gb
NRR261-E Gb

Designation according to Directive 94/9/EC:



Hazardous Zone at Mounting Point		Category to Directive 94/9/EC	Ignition Protection Provided		
			Ga	Gb	Gc
Hazard due to explosive gas-air mixture	Zone 0	1G	○	×	×
Hazard due to explosive gas-air mixture	Zone 1	2G	○	○	×
Hazard due to explosive gas-air mixture	Zone 2	3G	○	○	○

○ : Applicable ×: Not Applicable

Designation of Explosion Protection

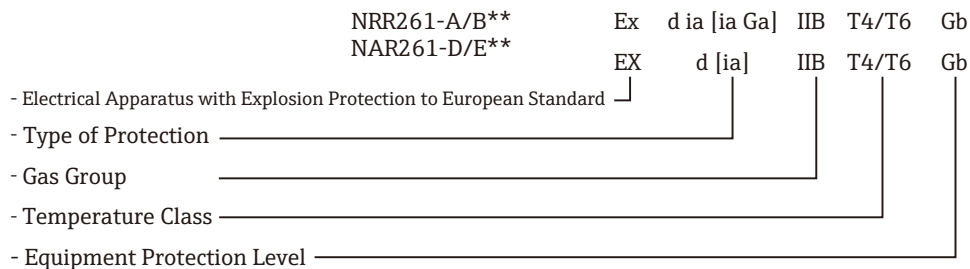


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1 Wiring of NRR261

Converter NRR261 wiring is shown as follows.

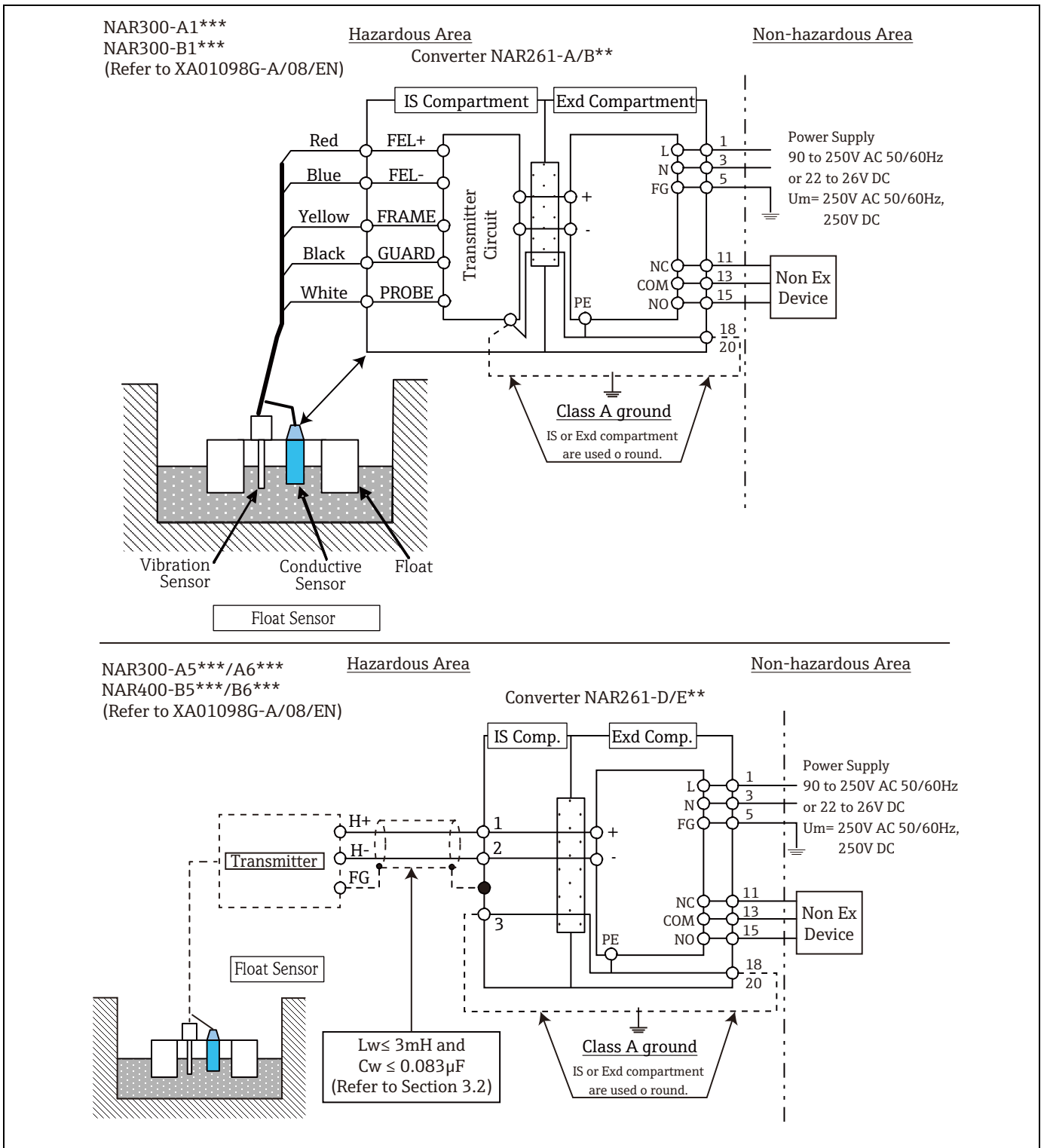


Figure 1: Wiring of NAR300-1

NOTICE

Detail of wiring are shown in Operating Instructions (BA00402G or BA00403G).

- between NAR300 system and associated equipment (NRR261 and NRR262).
- between NAR300 electronics and the sensor(s) with float.

2 Guideline for Safety Use

1. Ambient temperature for converter is rated for -20 to + 60°C.
2. Ground terminal of the safety barrier must connect from class A ground terminal in either IS or Exd compartment to class A ground.
3. The supplied power and internal voltage of Non-Ex device which connected to the converter must be AC250V 50/60Hz or DC250V or less in normal condition and abnormal condition.
4. Oil leak detector (Intrinsic Safety Device) which connect to the converter must be satisfied with the following conditions.

4-1. Combination of NRR261 and NAR300 is shown below.

Transmitter	NAR300						Remarks
	Converter	A1****	A5****	A6****	B1****	B5****	
NRR261-A**	○	×	×	×	×	×	ATEX version
NRR261-D**	×	○	○	×	×	×	
NRR261-B**	×	×	×	○	×	×	IECEx version
NRR261-E**	×	×	×	×	○	○	

NOTICE

○ : Applicable × : Not applicable

4-2. Relationships between the Intrinsic safety circuit permissible Inductance (Lo) and Capacitance (Co), and the connected external wiring permissible Inductance (Lw) and Capacitance (Cw) are shown below.

$$Cw < Co - 0 \text{ nF (Ci)} = 0.083\mu\text{F} \quad \text{AND} \quad Lw < Lo - 48\mu\text{H (Li)} = 3.0\text{mH}$$

4-3. The oil leak detector listed in the table below satisfy the conditions of sections 4.1 above.

Converter	Approval No.	Safety Instructions	Remarks
NAR300-A**	FM 14 ATEX 0048X	XA01104G-*/08/EN	Hazardous area setting: float sensor; Ex d ia IIB T5 Ga Transmitter: Ex ia [ia Ga] IIB T4
NAR300-B*:	IECEx FMG 14.0024X		

NOTICE

Refer to the precautionary items in related device's Safety Instructions.

5. Exd enclosure
 - Connection compartment cover and electronic compartment cover: "Do not open under voltage in explosive atmospheres"
 - Only certified cable entries must be used for the intended cables. Selection criteria as per EN/IEC 60079-14 must be observed.
 - Cable connection: the cable entry device shall be certified in type of protection flameproof enclosure "d", suitable for the conditions of use and correctly installed. The cable and cable glands shall be suitable for at least 70°C.
 - Conduit connection: certified sealing device in type of protection flameproof enclosure "d", such as a conduit seal with setting compound shall be provided immediately to the entrance of the enclosure. The wiring and setting compound in the conduit seal shall be suitable for at least 70°C.
6. Place converter (Associated Intrinsic Safety Device), oil leak detector (Intrinsically Safe Device) and connecting wiring such as to prevent electrical interference from current or voltage induction.
7. Do not modify internal parts or wiring of devices.
8. Install in conformance with local laws and regulations.
9. Rating of the fuse F1 is shown as follows.
 - NRR261-*A* (AC version): 250V 0.5A, φ5 X 20
 - NRR261-*B* (DC version): 250V 0.5A, φ5 X 20

NOTICE

This document should be stored with operating instructions (BA00402G or BA00403G).

IECEX	ATEX
IEC 60079-0 IEC 60079-1 IEC 60079-11	EN 60079-0 EN 60079-1 EN 60079-11

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