

Safety Instructions

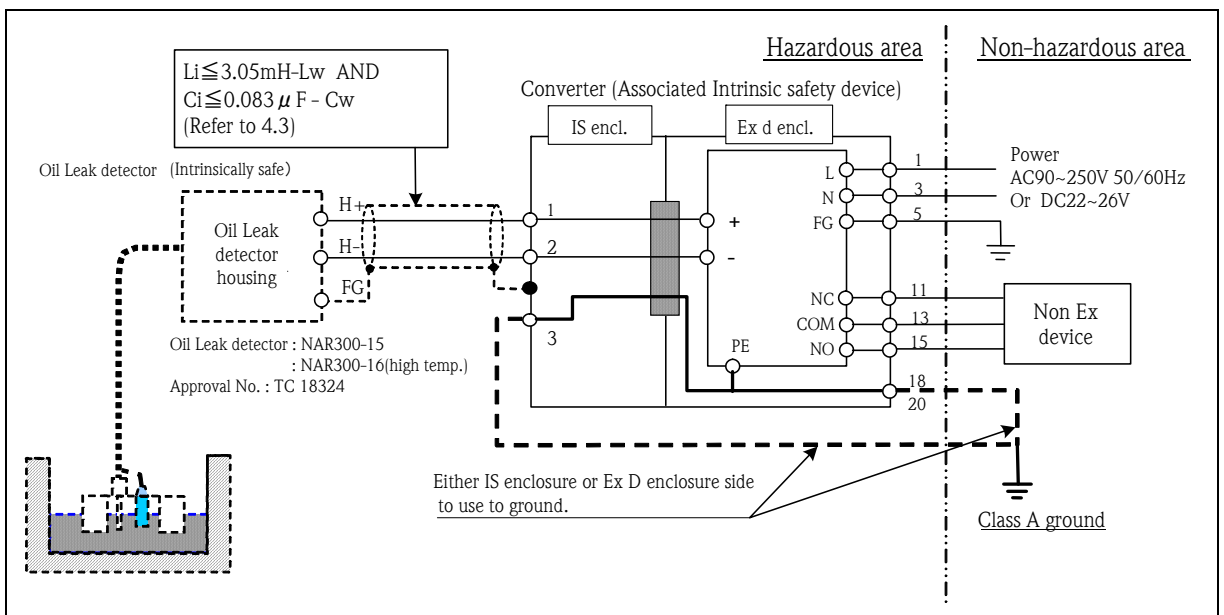
Converter NRR261 for Oil Leak Detector

TIIS TC18325

Safety instructions for electrical apparatus certified for use in explosion-hazardous areas.

This safety instruction manual describes precautionary items related to the certified instrument. The User should read and understand these safety instructions to ensure safe use.

1. Converter NRR261 is described in the architecture schematic below.



2. Ambient temperature for the converter is rated for -20 to + 60 °C.
3. Ground terminal of the safety barrier must connect from class A ground terminal in either IS enclosure or Exd enclosure side to class A ground at non-hazardous area.
4. Oil Leak Detector (Intrinsic safety device) which connect to the converter must be satisfied following conditions and TIIS approved.
 - 4.1 Intrinsic safety ratings
 - Maximum I.S. circuit voltage: $\geq 28V$
 - Maximum I.S. circuit current: $\geq 93mA$
 - Maximum I.S. circuit energy: $\geq 0.65W$
 - 4.2 Type of protection / Gas group
 - Type of protection: ia
 - Gas Group: IIA or IIB
 - 4.3 Relationship between maximum internal Inductance (Li) and maximum internal Capacitance(Ci) and the connected external wiring permissible Inductance (Lw) and Capacitance (Cw) are as shown below.
 - $Li \leq 3.05 \text{ mH} - Lw$ AND
 - $Ci \leq 0.083 \mu F - Cw$

The converters listed in the table below satisfy the conditions of sections 4.1 and 4.2 above.

Oil leak detector	Approval No.	Safety Instructions	Note
NAR300-15 NAR300 -16 (high temp.)	TC18324	Ex572-829XJ	Hazardous area setting : Ex ia IIB T4

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

5. Use cable for connecting the Oil Leak Detector and converter that is rated at $\geq 70^{\circ}C$.
And use cable for connecting the converter and non-Ex device that is rated at $\geq 70^{\circ}C$.
6. Cable entries which terminal box for intrinsic safety circuit should be sealed with cable gland or conduit rated at least IP65. If thread size of the cable gland or conduit is other than PF(G)1/2" a reducer shall be used.
7. The supplied power and internal voltage of Non-Ex device which connected to the converter must be less than AC250V 50/60Hz or DC250V in normal condition and abnormal condition.
8. Place the 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.
9. Place the Oil leak detector (Intrinsically Safe device), Converter (Associated Intrinsic safety device) and connecting wiring such as to prevent electrical interference from current or voltage induction.
10. Do not modify the internal parts or wiring of the devices.

*This document should be stored together with Installation Instructions BA01027G

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