



270 NH3

Sample Probe and Ammonia Converter

Sample System Specialists for Gas Analyzers

General Description

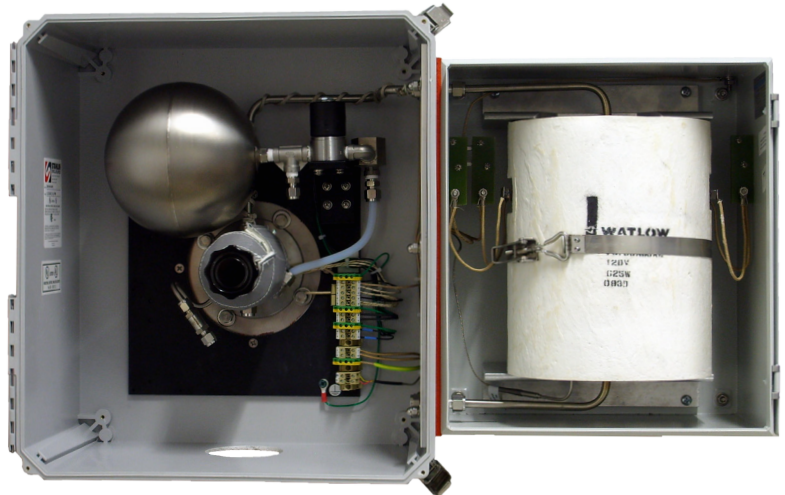
The Universal Analyzers Model 270 NH3 Heated Sample Probe and Ammonia Converter is designed for continuous use in extractive gas sampling systems. The modular design of the sample probe is used to filter dust and particulates from a wide variety of gas streams in exhaust stacks and duct applications. The ammonia converter, attached and adjacent to the sample probe, converts NH₃ and NO₂ into NO.

Ammonia is converted in a thermal oxidizing canister that is easily replaced, and requires no other spare parts. The canister is housed in an all-in-one heater and insulation unit. Additionally, the 270 NH3 is designed for a *no-tools* filter replacement.

To avoid sample condensation in the probe, a heater is used to keep the filter chamber, element and tube connections hot and above the dew point. Temperature is controlled up to 340°F standard or 600°F in the “HiTemp” configuration.

For continuous operation in low to moderate dust loading environments, it is important to provide filter blowback for periodic cleaning of the filter chamber and probe tube. High-pressure plant air is stored in an accumulator tank and then released through a Hi-flow solenoid valve.

Optional ANSI flanges, standard and corrosion resistant probe tubes and probe tip filters are also available.



Applications

- Natural gas
- SCR process
- Oil refinery
- Coal fired plant
- Large diesel engines

Features

- **Easy, 3 step canister replacement:** (1) remove heater half, (2) remove thermocouple, and (3) replace thermal oxidizer (a.k.a. conversion canister).
- **Increase of usable surface area:** our converters are layered with an innovative tortuous path for NH₃ conversion; this design ensures longer life of the system and increased efficiency especially in oil-fired boiler applications where coating is a major problem.
- **High efficiency:** >95%
- **Ammonium salts inhibition:** through high heat setting of 550°F; keeps ammonium salts from precipitating in applications where SO_x is present.
- **Ceramic fiber heater/insulation:** 1000°F temperature differential between inside (canister side) and outside.
- **Universal design:** may be sold with Model 270 Sample Probe or as a standalone unit.

www.UniversalAnalyzers.com

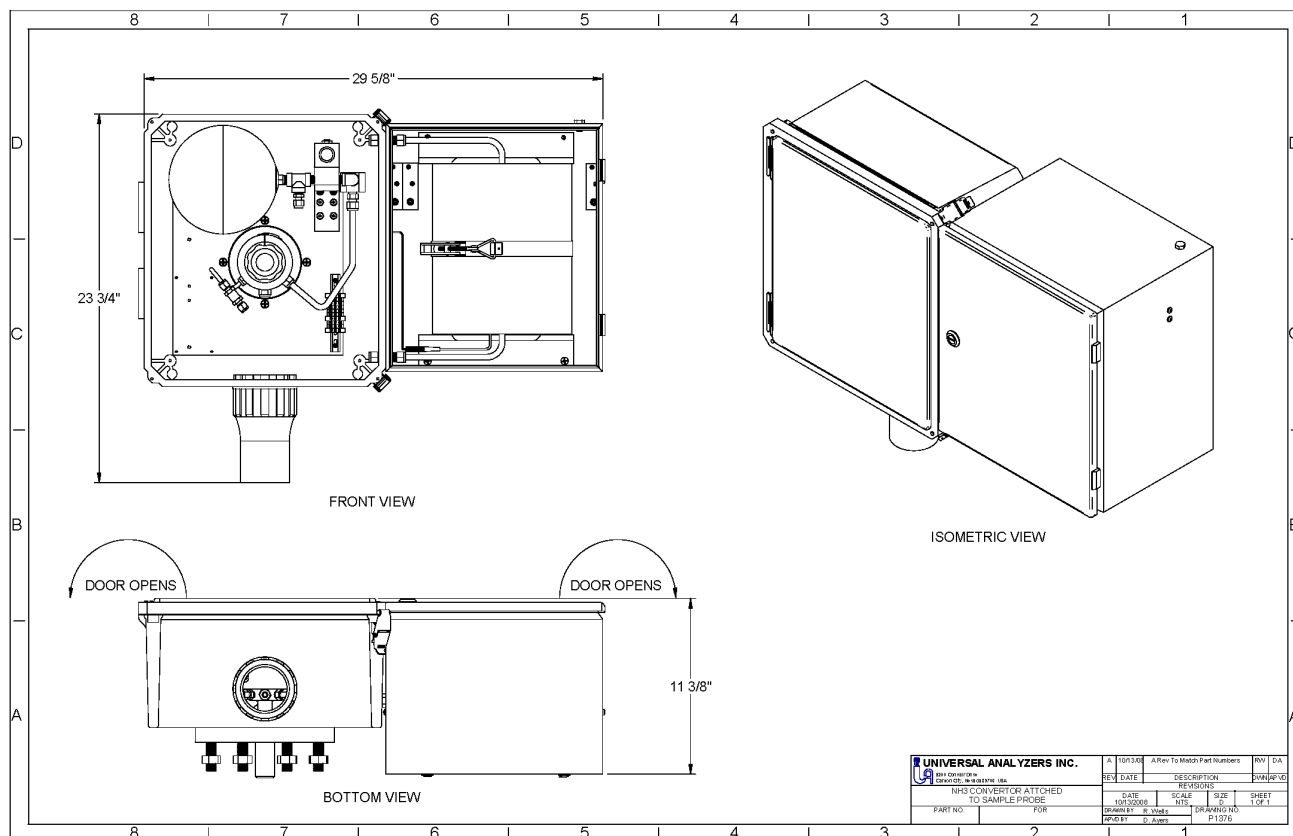
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**UNIVERSAL
Analyzers Inc.**

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Model 270 NH3 Probe with Ammonia Convertor



Technical Specifications

Sample Flow Rate:	0 to 20 LPM (probe) 0 to 2 LPM (ammonia convertor)
Calibration Gas Requirement:	Sample flow rate plus 10%
Operating Pressure Drop at 10 LPM:	12" water column
Maximum Stack Gas Temperature:	700°F Std (higher with optional extension spool)
Oven and Vaporizer Temperature:	User controlled via temperature controller, Type C Thermocouple: 1200°F-1550°F
Dimensions:	30" x 24" x 12", painted carbon seal enclosure, NEMA 4X, Stainless steel (optional)
Weight:	65-70 LB (depending on options included)
Input Power Requirement:	150 WATTS, 250 WATTS w/ heated blowback (probe) 1250 WATTS (ammonia convertor)
Input Voltage Requirement:	115 or 230 VAC at 50/60 HZ
Blowback Tank Volume:	0.1 SCF or 2.9 liters
Blowback Duration:	Two (2) seconds
Blowback Timer Period:	Exterior control (without timer card) 00:15 to 24:00 (with timer card)
Conversion Efficiency:	>95%

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