

Standard Features & Specifications

Performance

Lowest Detection Level	2.00 ppb
Resolution	
Analytical (Sensitivity-smallest detectable change)	0.50 ppb
Display	0.01 ppb
Accuracy (greater of)	±3% of reading or ±1 ppb (Constant Conditions)
Speed of Response (typically)	10 minutes
Time to reach 90% of an upward step challenge	
Upset Recovery Time	< 5 minutes
Time from high ppb upset to within 10 ppb of the previously stable reading	
Range	0-20 ppm
Ambient Operating Temperature	50° to 105° F (10° to 40° C)
Background Gas Compatibility	
All inert and passive gases including N ₂ , He, H ₂ , Ar, and O ₂	
Gas Scale Factor permits accurate read-out of moisture in background gases other than nitrogen.	

Gas Sample Conditions

Sample Pressure	
Operating limits:	15 to 25 psig (2.03 to 2.8 BarA)
Sample Return Pressure	Atmospheric Vent (optimal)
Limits:	-2 to 2 psig (0.88 bar to 1.14 BarA)
Flow Rate:	
Operating:	0.5 to 4 slpm N ₂

Sample Line Temperature	10° C to 80°C (50° F to 176° F)
Pneumatic Pressure	60 to 100 psig (5.1 to 7.9 BarA)
(Required for 745-ISO)	

Gas Flow System

Construction Materials	300 Series stainless steel
Gas Connections	¼ inch VCR compatible inlet fitting ¼ inch compression outlet fitting ⅜ inch compression fitting for pneumatic gas inlet

Gas Delivery System Components

Pneumatically actuated springless diaphragm valves, orbital butt welded assembly with zero dead volume for sensor isolation (optional)

Construction

Enclosure:	NEMA 1 in 19" Rack Mount
Dimensions:	19" (48.3cm) W x 10.5" (26.7 cm) H x 22.5" (57.2 cm) D
Weight:	64 lbs. (29 kg.)
CE Conformance:	Added EMI/RFI and Conducted interference immunity

Maintenance & Logging

Data Logging & Graphing

Blocks of data downloadable to 3 ¼" disk drive mounted inside analyzer. User can create filenames and store data to analyzer hard drive and download blocks to disk at later date.

Automatic Maintenance Log

Records calibration information and system error logs. Automatically maintains records satisfying many ISO 9000 requirements

Electrical

Back Lighted Display 7.4" VGA Monochrome (640x480)

Visual Alarm Status Indicators

4 moisture levels, temperature, moisture sensor diagnostic, analyzer off-line, expanded range

Relays

(Failsafe action upon loss of power to alarm condition)

4 non-latching, independently assignable to alarms or indicators. SPDT contacts rated for 1A at 30 VDC.

Power Requirements

100-120 VAC @ 5A, 50/60 Hz (standard); 200-240 VAC @ 2.5A, 50/60 Hz (optional). Configurable at factory.

Output Signals

Analog Outputs:

Menu scaleable single output range of 0-2 ppb up to 0-10 ppm

Isolated 4-20 mADC, and choice of 0-1, 0-2, 0-5, or 0-10 VDC

Expanded Range Scales

Two user selectable secondary analog output ranges for re-scaling the output once the primary range is exceeded

Digital Output:

2-Way RS232 or RS485, configurable at factory

Hydrogen Safety

Optional safety system for use with hydrogen includes Sample Delivery Interlock and Case Purge Valves for instrument housing, and NEMA4 enclosure and Z-purge protection system for external vacuum pump. Optional Hydrogen Safety System can be ordered with or without the NEMA4 enclosure and Z-purge protection system for the pump.

NEMA4 pump enclosure is 16.6" (42.4 cm)W x 14.5" (36.8 cm)H x 11.6" (29.5 cm)D.

NOTE: Hydrogen Safety system limits available relays from 4 to 3

NanoTrace Moisture Analyzer

Ordering Codes

Base Model

745-0020 NanoTrace Moisture Analyzer

-V (added to model number)
230 VAC/50/60 Hz Input Power

Outputs

(pick one Serial Communication)

745-RS232 Two-Way Serial Communications
745-RS485 Two-Way Serial Communications

(pick one VDC Output)

745-OS-1 0-1 VDC
745-OS-2 0-2 VDC
745-OS-5 0-5 VDC
745-OS-10 0-10 VDC

Cabinet

745-KYLK Key Lock

Plumbing

745-HSS1

Hydrogen Safety System with Pump Purge

Includes Sample Delivery Interlock and Case Purge valves for instrument housing, and enclosure with purge protection system for vacuum pump.

745-HSS2

Hydrogen Safety System without Pump Purge

Same as above, except vacuum pump is mounted on bracket only and does not include purge protection system.

745-ISO Note2

Isolation Package

Includes upstream and downstream internally air actuated electropolished isolation valves to isolate cell during transport and upon loss of power. Package also includes Bypass Rotameter and Inlet Pressure Regulator (rated up to 150 psig), and a back flow prevention valve. DF-745's with this option require 60-100psig connection to 1/8" compression inlet fitting for valve actuation.

NOTES:

1. Hydrogen Safety system limits available relays from 4 to 3
2. If the Isolation Package is not ordered, it is recommended that a regulator with bypass flow loop be incorporated in the sample line prior to the sample inlet of the instrument. Isolation valves and heat tracing can also be incorporated.



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