

ELECTRONIC PCB ENCLOSURE  
NEMA 4X, FIBERGLASS

2X 1/2" F-NPT Process Connection Port  
(FLUID INPUT/OUTPUT)  
FLUID MAY FLOW IN EITHER DIRECTION

- CUSTOMER CONNECTION CABLE
- INPUT POWER (+24 VDC)
  - 4-20mA LIVE DENSITY
  - 4-20mA LIVE TEMPERATURE
  - RS232 (3-WIRE)

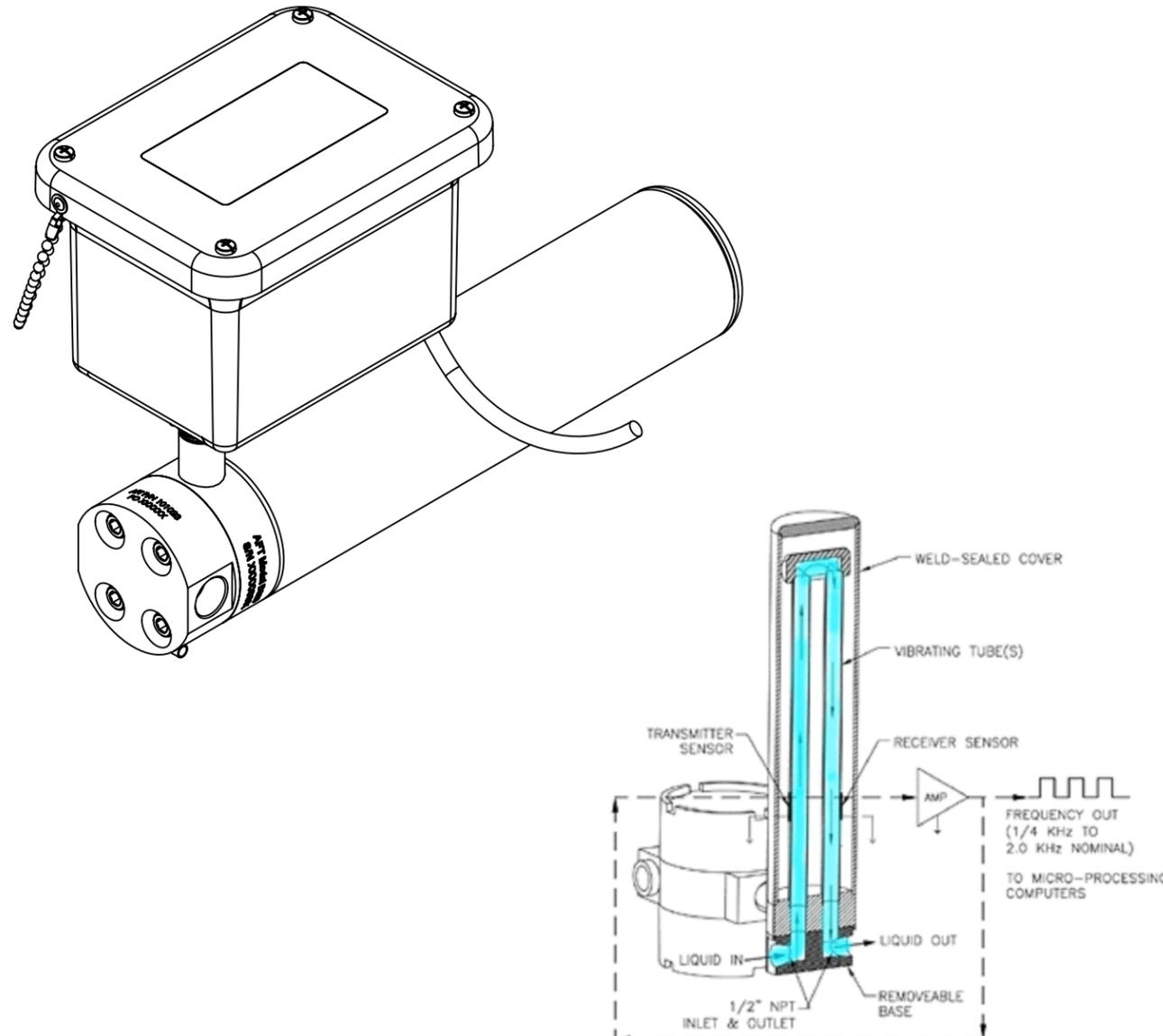
- LOCAL LCD DISPLAY
- LIVE FLUID DENSITY
  - LIVE FLUID TEMPERATURE

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES REMOVE ALL BURRS AND SHARP EDGES .005 - .015 TOLERANCES: ANGULAR: MACH ±1° BEND ±1° ONE PLACE DECIMAL ±0.1 TWO PLACE DECIMAL ±0.02 THREE PLACE DECIMAL ±0.005		DRAWN	
INTERPRET GEOMETRIC TOLERANCING PER: ASME Y14.5M-1994		CHECKED	
MATERIAL		ENG APPR.	
FINISH		MFG APPR.	
DO NOT SCALE DRAWING		Q.A.	
NHA:		COMMENTS:	
 Scottsdale, AZ, USA PH: 480-443-0168			
TITLE: DENSITRAK D625 ASSEMBLY # 201036			
SIZE	DWG. NO.	REV	
<b>B</b>	201036	NC	
SCALE: 1:3	WEIGHT: ~12 lb	SHEET 1 OF 2	

**PROPRIETARY AND CONFIDENTIAL**  
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANALYTICAL FLOW TECHNOLOGIES, LLC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ANALYTICAL FLOW TECHNOLOGIES, LLC IS PROHIBITED.

ANALYTICAL FLOW TECHNOLOGIES D625 Product Specifications Chart

Density Operating Range	0.40 – 2.00 grams/cubic centimeter [gr/cm <sup>3</sup> ]
Maximum Density Span	0.70 gr/cm <sup>3</sup> (range can be extended with reduction in accuracy)
Density Resolution	0.00001 gr/cm <sup>3</sup>
Meter Accuracy	0.0001 gr/cm <sup>3</sup>
Repeatability	Better than 0.01% (full scale)
Operating Temperature	Standard: 32°F to 212°F [0°C - 100°C] Optional: -58°F to 302°F [-50°C - 150°C]
MAX Temp. Differential	ΔT <sub>max</sub> = 90°F [50°C]
Operating Pressure	Range: 0 to 2,220 PSI [0 – 149 bar] ANSI Flanged same as flange rating at 100°F Hydrostatic Test: 1.5 times line pressure
Flow Rate	MIN: .25 Gallons per Minute (GPM) MAX: 30 GPM
Frequency Signal Output	Nominal 0.30 kHz to 3.0 kHz
Temperature Sensor	3 Wire 100Ω Pt CLASS A RTD
Power Requirement	VOLTAGE: 24 V <sub>DC</sub> CURRENT: 50 – 250 mA nom.
Materials of Construction	Standard Wetted Parts: 316/316L Stainless Steel, HASTELLOY® C276 Non-Wetted Parts: 304 Stainless Steel
Electrical Classification	Designed to meet NEC/CSA Class 1, Div. 1, Group C & D, CE Mark Housing Approved: CSA, FM, EExd, UL RoHS Compliant
Physical Dimensions	SEE PAGE 1



**THEORY OF OPERATION**

The liquid density meter uses the spring mass principle for measuring the fluid density. A portion of the measurement tube is energized (transmit sensor) to vibrate and to maintain its natural resonant frequency by using an electrical feedback driving system. A change in the vibrating mass, (as a result of change in the fluid density) shifts the resonant frequency which is interpreted by the receive sensor. The signal is then output to the density processing unit via the rear mount electrical connector.  
An ANALYTICAL FLOW TECHNOLOGIES density processing unit uses algorithms that incorporate temperature (integrated into the meter), pressure (via an external pressure transmitter 4-20mA output) and the shift in frequency to determine the density of the measured fluid.

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