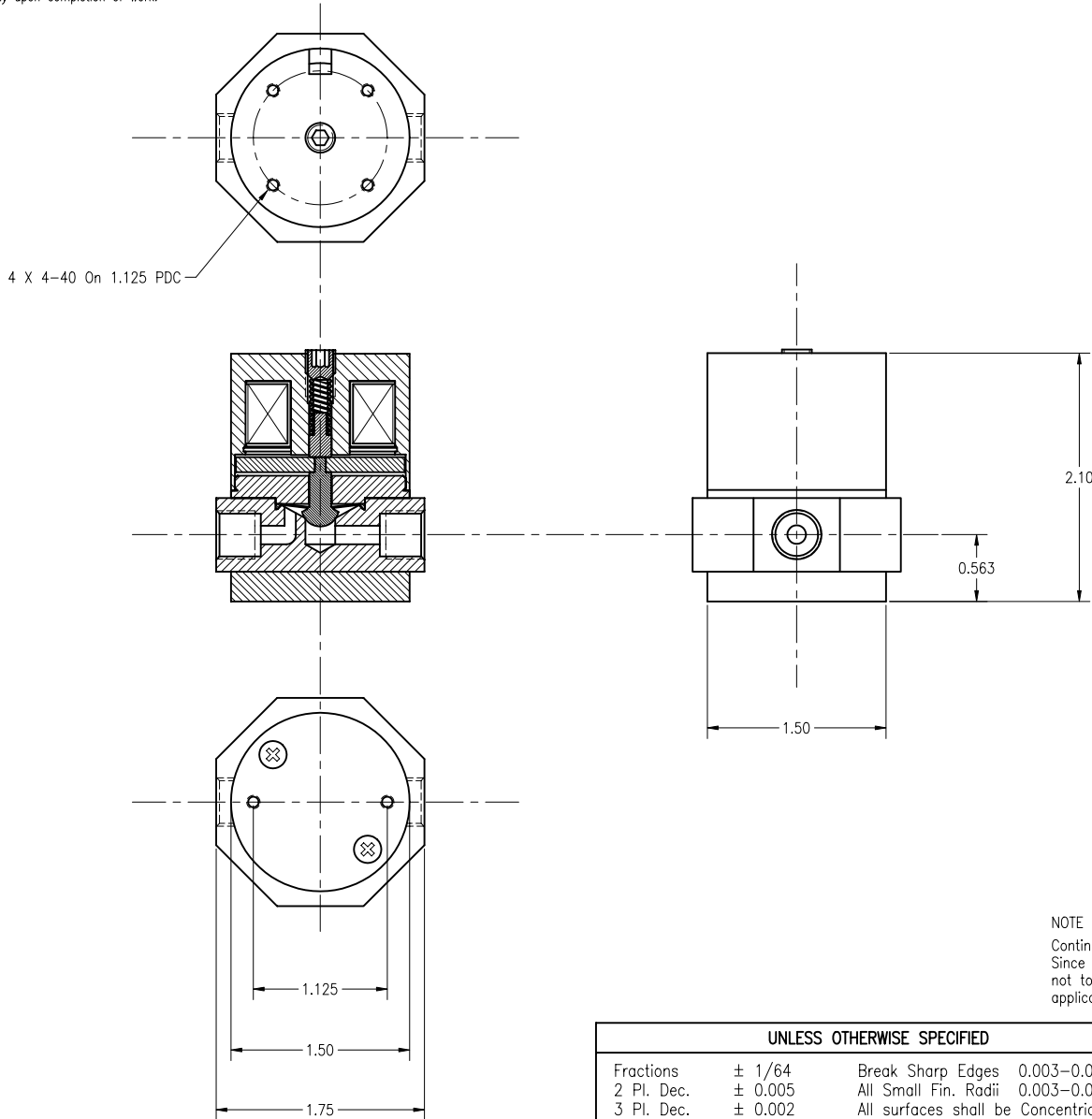


This drawing is NOT to be used for making reproductions thereof, or for making or using any apparatus, equipment, subject matter, or technical information without written authorization of Neptune Research and Development, Inc. All prints are to be returned to Neptune immediately upon completion of work.



**SPECIFICATIONS:**

**Mechanical:** (Each Port)


- TYPE: High Pressue 2-Way NC  
PORT CONNECTION: 1/8" NPTS Flat Bottom (Short)  
NOMINAL ORIFICE: 0.156 In. (4.0 mm)  
OPERATING PRESSURE: Vacuum to 100 PSI (6.9 Bars)  
TEST PRESSURE: 100 PSI N<sub>2</sub> (Leakage < 3μl/min)  
INTERNAL VOLUME: 713 microliters from bottom of ports.  
WETTED MATERIALS: TEFLON®  
MOUNTING ORIENTATION: Any Position

**Electrical:** (At 70° C No Pressure)

- OPERATING VOLTAGE: 12 VDC (Continuous, see note 1.)  
12 to 24 volts subject to duty cycle and/or holding voltage applied.  
POWER CONSUMPTION: 7.2 watts/12VDC (approx.)  
LEAD WIRES: #22 AWG, TFE Insulated  
Yellow 18 in. (457 mm) long.  
TEST VOLTAGE (ON): < 9 VDC  
TEST VOLTAGE (OFF): 0.5 to 4 VDC  
RESPONSE TIME (ON): 20ms Max. (12 VDC)  
5 to 20 ms subject to applied voltage and driving circuits.  
RESPONSE TIME (OFF): 30ms Max. (from 12 VDC)  
30 to 5 ms adjustable by driving circuits.

NOTE 1.)  
Continuous rating applies to solenoid construction only.  
Since other materials incorporated in the product may not tolerate temperature variations as well as the solenoid application of holding voltage is strongly recommended.

NOTICE:  
This product is protected by one or more of the following United States Patents: 4,496,133; 4,993,456; 5,143,118; Re. 34,261 5,433,244. Other Patents Pending.

UNLESS OTHERWISE SPECIFIED				Scale	1 : 1 (B)	Material	As noted	
Fractions	± 1/64	Break Sharp Edges	0.003–0.008	Dr. By	G Stevens	Date	06–Nov–2007	
2 Pl. Dec.	± 0.005	All Small Fin. Radii	0.003–0.008	Checked		Approved		
3 Pl. Dec.	± 0.002	All surfaces shall be Concentric, Parallel, Flat, Square and True to Each Other within 0.001 T.I.R.			Part Name		Drawing Number	
Angular	± 0.06°				HP648T011 2W NC 12VDC			
All Fin. Surf.								



Drawing Number  
VALM692