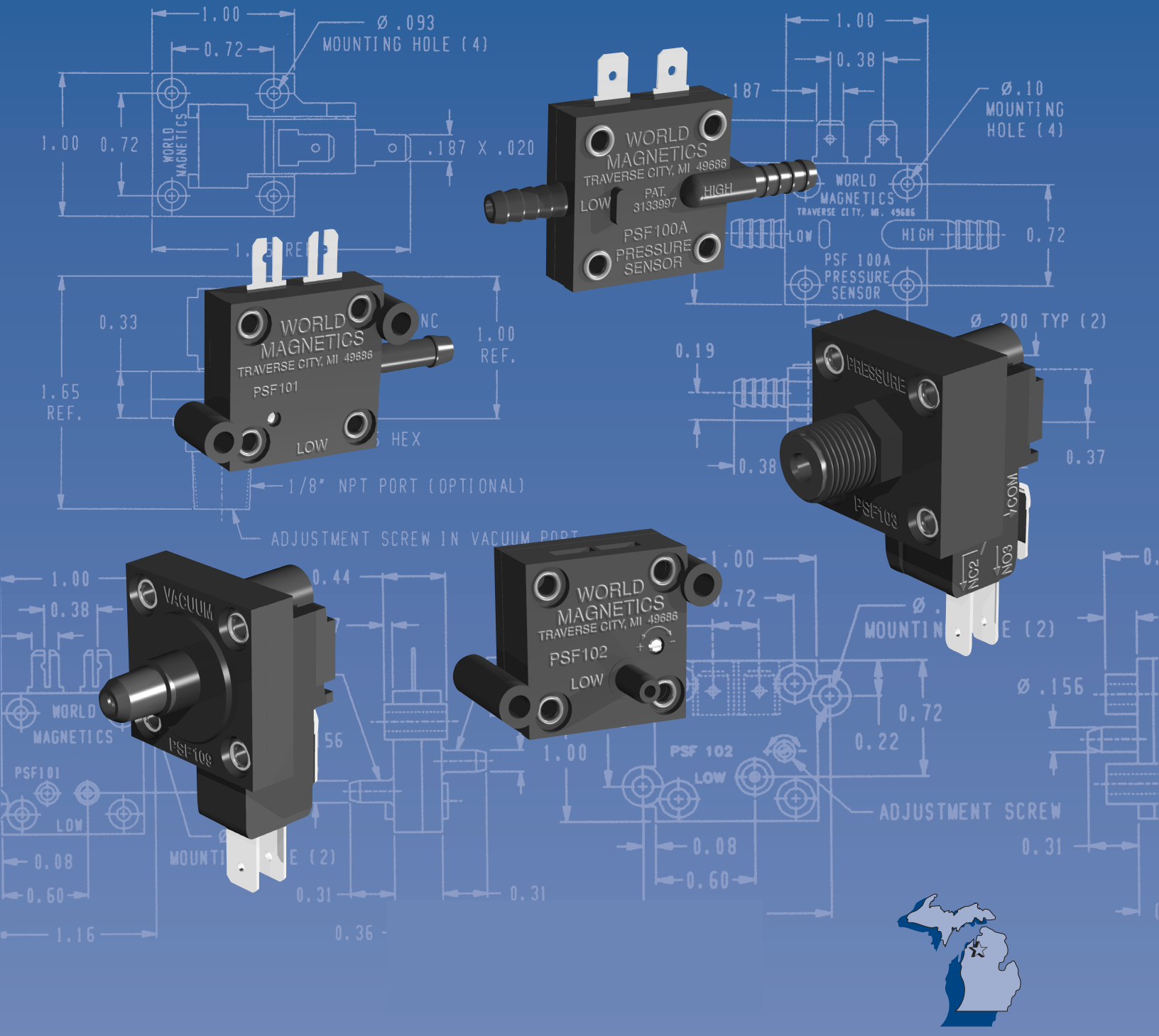
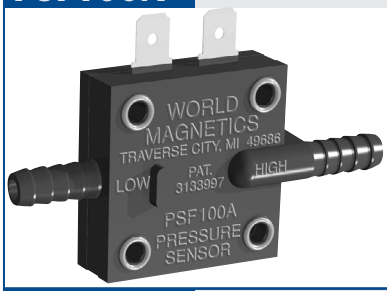
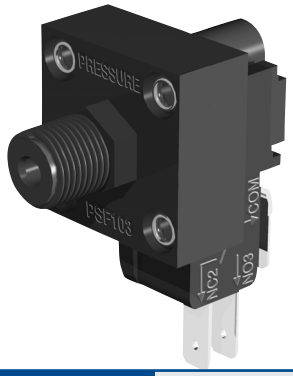
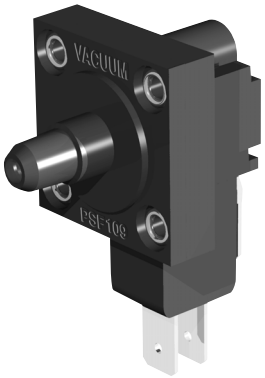
W O R L D M A G N E T I C S

Ultra Sensitive Pressure and Vacuum Switches

TECHNICAL SELECTOR GUIDE

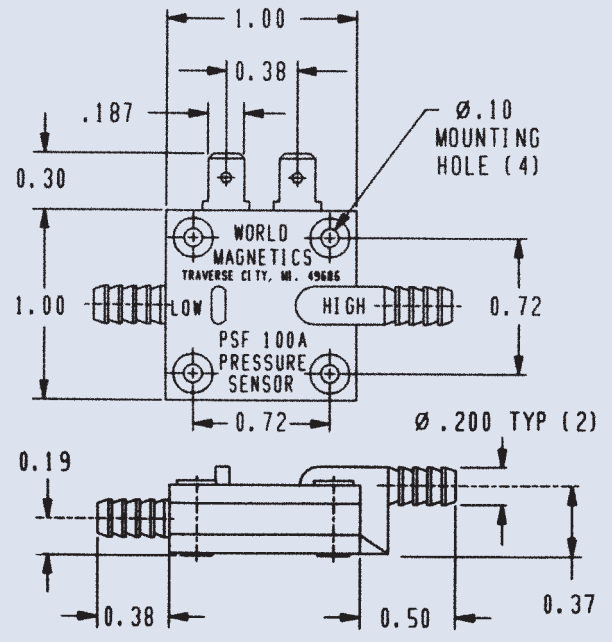


WORLD MAGNETICS PRODUCT OVERVIEW

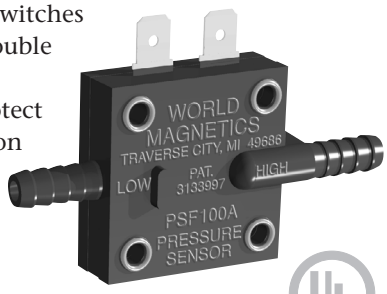
SERIES	Pressure	Vacuum	Differential	SERIES SET POINT RANGE	ELECTRICAL	SPECIAL FEATURES
PSF100A *See Catalog Page 3*						
	P	V	D	0.1" to 50" H_2O	30 VDC, 40 mA Nominal SPST	Double Make / Double Break Contacts Provide Shock and Vibration Resistance Dual Gold Inlay Contacts Military Approved
PSF101 *See Catalog Pages 4-5*						
	P	V	D	0.5" H_2O to 50" H_2O	30 VDC, 40 mA Nominal SPST	Variety of Housing and Port Options Gold Inlay Contacts
PSF102 *See Catalog Pages 6-7*						
	P	V	D	0.1" to 30psi	30 VDC, 40 mA Nominal SPST	High Resolution Field Adjustment Mechanism Allows "Fine Tuning" of Set Point Gold Inlay Contacts
PSF103 *See Catalog Page 8-9*						
	P			2.0" H_2O to 60 PSI	125/250 VAC, Up To 25A SPDT	Hysteresis (Deadband) For Compressor or Refill Motor Control Variety of Pressure Port Options Field Adjustable
PSF109 *See Catalog Page 10*						
		V		-3.0" H_2O to -12 PSI Vacuum	125/250 VAC, Up To 25A SPDT	Hysteresis (Deadband) For Motor Control .250" Diameter or 1/8" NPT Port Field Adjustable

- *All above World Magnetics pressure and vacuum switches are UL-RECOGNIZED COMPONENTS, FILE NUMBER E41523.*
- *Special materials available: FDA food grade, extreme temperature, NSF approved.*
- *Special approvals available: International and military standards.*
- *See catalog page 11 for additional products and accessories.*

PSF100A Series *for sensing pressure, vacuum & differential pressure*



PSF100A pressure switches utilize a patented double diaphragm/contact configuration to protect against false actuation due to shock and vibration.



E41523

FEATURES

- Shock and vibration resistance
- Lightweight, miniature size
- Extremely fast response time
- Military approval

SPECIFICATIONS

MECHANICAL	
Standard Tolerance	±20% Tighter tolerances available
Switch Type	SPST normally open, double-make/double-break
Switching Medium	Air; compatible fluids on "High" side
Mechanical Life	More than 20 million cycles
Proof Pressure	8 PSI for units where set point is 3.0" H_2O or less 15 PSI for units where set point is greater than 3.0" H_2O 8 PSI for units with Teflon diaphragm
Weight	Less than 10 grams
Shock and Vibration	At zero pressure, will not make at 50G's shock Will not make at 10G's, 50 to 2000 Hz vibration
Operating Temp.	+40°F to +150°F (standard) -46°F to +205°F (consult factory)
PHYSICAL	
Mounting	Eyeletted for No. 2 screws
Case Material	Polycarbonate standard (other materials available)
Contact Material	18K Gold inlay
Diaphragm Material	Polyurethane standard (Teflon® optional)
Electrical Connections	Terminals – .187"x.020" tab-type for use with quick disconnects (ref. AMP 2-520182-2 or equivalent)
Pressure Ports	Two .200" diameter barbed ports for use with 1/8" - 3/16" ID tubing
ELECTRICAL	
Current Rating	40mA resistive for life in excess of 20 million cycles
Operating Voltage	AC/DC – 30V or less with resistive load; 120 VAC neon lamp load For higher loads use SRF 100B solid state relay

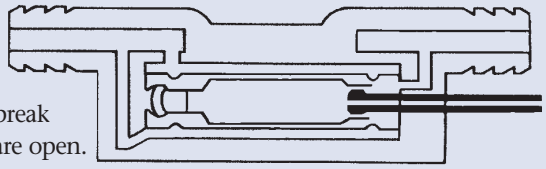
STANDARD MODELS

PRESSURE SET POINT			
Part Number	**In. H_2O**	**mbar**	**PSI**
PSF100A-0.5	.1 - .5	.25 - 1.25	.004-.018
PSF100A-1.0	1.0	2.49	.036
PSF100A-1.5	1.5	3.73	.054
PSF100A-2.0	2.0	4.97	.072
PSF100A-3.0	3.0	7.46	.108
PSF100A-4.0	4.0	9.95	.144
PSF100A-6.0	6.0	14.92	.217
PSF100A-8.0	8.0	19.89	.289
PSF100A-10.0	10.0	24.86	.361
PSF100A-12.0	12.0	29.84	.433
PSF100A-15.0	15.0	37.30	.541
PSF100A-20.0	20.0	49.73	.722
PSF100A-30.0	30.0	74.59	1.083
PSF100A-40.0	40.0	99.46	1.444
PSF100A-50.0	50.0	124.32	1.804

NOTE: For TEFLON® diaphragm add "T" to the part number.

HOW THE PSF100A WORKS

A. Normal state, no pressure applied: Both contacts of the double make/double break circuit configuration are open.



B. No pressure applied, subjected to shock or vibration: The contact arms move together in parallel. Since at least one contact is always open, the circuit cannot close in error.

C. Pressure applied: Both contacts are closed completing the circuit.