



Solid State Pressure Switch

DESCRIPTION

Advances in sensing technologies and electronics have enabled AMETEK Aerospace & Defense to develop a highly reliable solid state pressure switch with excellent accuracy. The switch employs AMETEK Silicon-on-Insulator (SOI) sensor with the patent-pending field shield along with proprietary compensation/switching circuitry to ensure unsurpassed long cycle life with virtually no calibration drift. The performance and stability of AMETEK's SOI sensor has been demonstrated through rigorous testing and validated by exceptional performance and reliability in aerospace and military applications.

The all welded, stainless steel construction and ruggedized electronics packaging provide a robust design capable of withstanding the most demanding operating environments. With no moving parts, the solid state design is immune from the damaging effects of shock and vibration.

Real-time compensation is used for increased accuracy over a wide temperature range. To ensure proper operation in any environment, the compensation electronics are filtered to reduce emission of and mitigate the susceptibility to RF noise. The switch meets or exceeds the environmental requirements of RTCA/DO-160 and MIL-STD-810 and the EMC requirements of RTCA/DO-160 and MIL-STD-461.

A modular design allows for a wide range of configurations. Available in pressure that ranges from 0 to 6000 psi (0-400 bar) the switch can be customized to provide a highly reliable and accurate "drop-in" replacement for existing mechanical switches.

AMETEK Aerospace & Defense has built a reputation for supplying innovative pressure products for the aviation and military industry. The solid state pressure switch provides rugged reliability and intelligent design that takes advantage of the latest developments in electronics.



FEATURES

- ✓ Solid state construction with unsurpassed reliability
- ✓ Accurate over a wide temperature range
- ✓ Adjustable hysteresis
- ✓ Modular design allows for quick customization
- ✓ Optional multiple switch points

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SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

Pressure Range:	0 – 6000 psi [0 – 400 bar] gage or absolute
Switch Point Accuracy:	±1% of range (±0.5% optional)
Hysteresis Range:	Factory adjustable from 0% to 90% of full scale
Proof Pressure:	2X operating pressure range (higher proof ratings available)
Burst Pressure:	3X operating pressure range (higher burst ratings available)
Cycle Life:	>1,000,000 cycles

ELECTRICAL CHARACTERISTICS

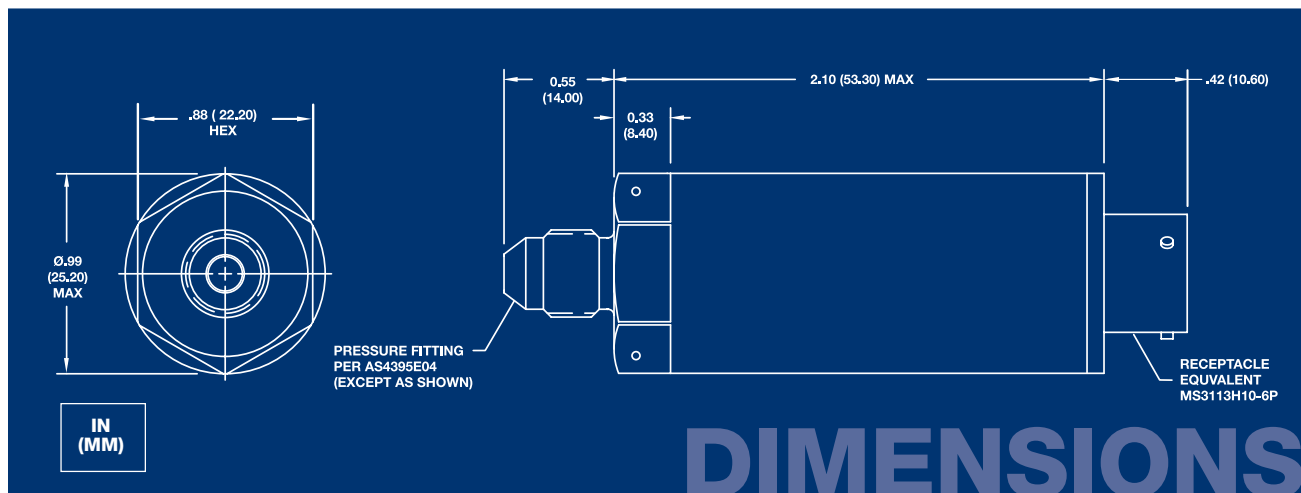
Excitation Voltage Range :	16 – 40 VDC
Electrical Rating (w/28 VDC excitation)	0.5A resistive 0.1A inductive 0.1A lamp load (other ratings available)
Insulation Resistance:	1MΩ @ 500 VDC
Dielectric Withstanding Voltage:	500 V _{rms}

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range:	-65°F (-54°C) to 257°F (125°C)
Storage Temperature Range:	-65°F (-54°C) to 300°F (149°C)

PHYSICAL CHARACTERISTICS

Pressure Port:	Per AS4395E04 (other configurations available)
Electrical Connector:	Per MS3113H10-6P (other configurations available)
Weight:	<0.26 lbs [118 grams]



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