

# MSA Series Specifications

MECHANICAL (X & Y AXES)	
ANGLE OF MOVEMENT	50° (25° EACH DIRECTION)
EXPECTED CYCLE LIFE	3 MILLION
CENTERING	SPRING RETURN
MAX. VERTICAL LOAD	50 lbf
MAX. HORIZONTAL LOAD	50 lbf *

\* Measured 0.44" Above Panel Surface, Y Direction

ELECTRICAL	
SENSOR TYPE	HALL EFFECT
RESOLUTION	12 BIT
SUPPLY VOLTAGE	5VDC ± 0.01VDC
OUTPUT VOLTAGE	SEE OPTIONS
RETURN TO CENTER VOLTAGE	± 50mV
OVERVOLTAGE MAX.	20VDC
REVERSE POLARITY MAX.	-10VDC

ENVIRONMENTAL	
OPERATING TEMPERATURE	-40°F TO 185°F
STORAGE TEMPERATURE	-40°F TO 185°F
IP SEALING ABOVE PANEL	IP67
EMC IMMUNITY LEVEL	EN61000-4-3 *Compliance to 30A/m
EMC EMISSIONS LEVEL	EN61000-6-3
ESD IMMUNITY LEVEL	EN61000-4-2 *Compliance to ±15kV/±8kV
VIBRATION TESTING	Per SAE J1455 Section 4.9 & MIL-STD810G 514.6
MECHANICAL SHOCK	Per SAE J1455 Section 4.10 & MIL-STD-202G

\*Extended Testing Levels

MOLEX 510210400 CONNECTOR		
PIN #	WIRE COLOR	DESCRIPTION
1	N/A	N/A
2	YELLOW	SENSOR
3	BLACK	GROUND
4	RED	POWER (+5V)



MATERIALS	
HOUSING	MINERAL & GLASS FILLED NYLON
BOOT	SILICONE
ACTUATOR	SILICONE or M&G FILLED NYLON

**IP RATING: IP67 (ABOVE PANEL, ALL CONFIGURATIONS)**