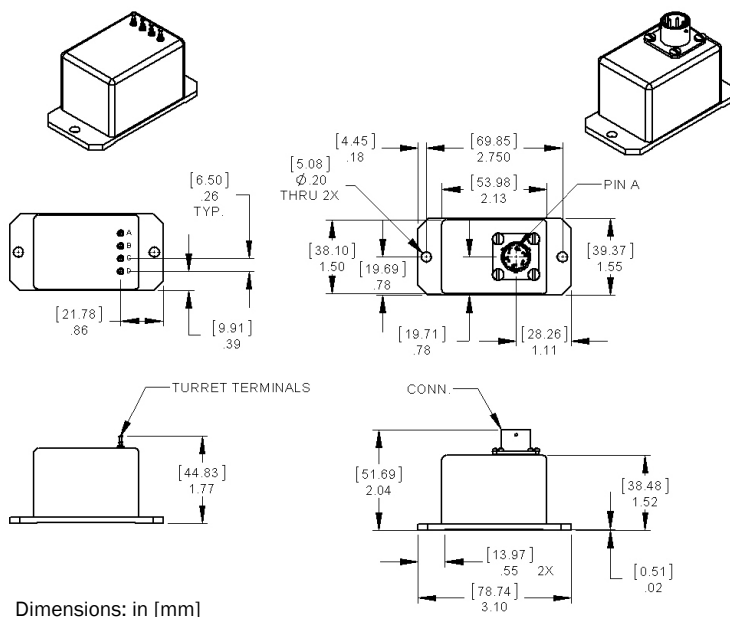


SMA SERIES Single-Axis Analog Inclinometer

The Jewell Emerald Series accelerometer is a low cost, high-precision sensor designed with higher accuracy than comparable MEMS devices. Applications include robotics, construction equipment, industrial measurement and control, and precision machining. All Emerald Series accelerometers are RoHS compliant.

FEATURES:

- Extremely Rugged
- Lower Cost than traditional Force-Balanced Accelerometers
- High Accuracy
- Greater Precision than MEMS Technologies
- ± 5 V DC Output
- Dual-Ended Power Input
- RoHS Compliant

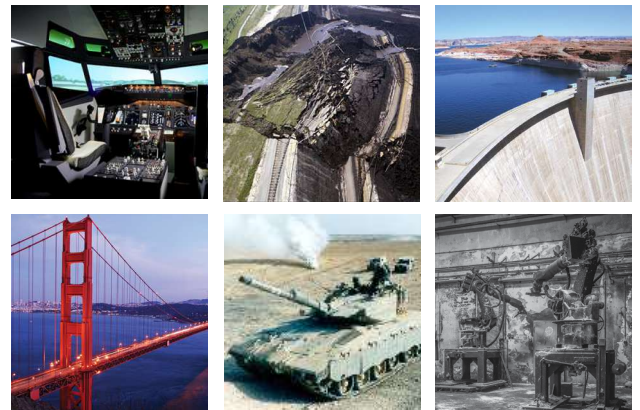


Dimensions: in [mm]



JEWELL EMERALD SERIES

The Jewell Emerald Series inclinometer is a low cost inclinometer designed with higher precision than comparable MEMS devices.



APPLICATIONS:

- Aerospace
- Military
- Robotics
- Academic Research
- Wind Turbine Controls
- Track Monitoring and Testing
- Vehicle Wheel Alignment

Performance Specifications

STATIC/DYNAMIC

INPUT RANGE (°)	±0.25	±0.5	±1	±2
FULL RANGE OUTPUT (VDC, FRO ±0.5%) ¹	±5			
NONLINEARITY (% FRO) ² max	0.02	0.02	0.05	0.05
SCALE FACTOR (Volts/g) nominal	20.0	10.0	5.0	5.0
SCALE FACTOR TEMP. SENSITIVITY (SFTS) PPM/°C max	100			
BANDWIDTH (-3dB) Hz, nominal	5.0			
OUTPUT AXIS MISALIGNMENT, ° max	0.50			
PENDULOUS AXIS MISALIGNMENT, ° max	0.50			
RESOLUTION & THRESHOLD (µrad) ³	3.5			

PIN OUTS

PIN OPTION

A	INPUT POWER
B	POWER/SIGNAL COMMON
C	N/C
D	SIGNAL

CONNECTOR OPTION

A	INPUT POWER
B	POWER/SIGNAL COMMON
C	RETURN
D	SIGNAL
E	N/C
F	N/C

NOTES:

1. Full Range is defined "from negative full input angle to positive full input angle."
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.
3. Full Resolution is achieved with noise reduction techniques

ELECTRICAL

NUMBER OF AXES	1
INPUT VOLTAGE RANGE (VDC)	±12 to ±18
INPUT CURRENT (mA, max)	40
OUTPUT IMPEDANCE (Ohms, nom)	10
NOISE (Vrms, max)	0.002

ENVIRONMENTAL

OPERATING TEMP. RANGE	-55° to +85° C
STORAGE TEMP. RANGE	-60° to +90° C
SHOCK	500g, 1 msec, ½ sine

ENCLOSURE

SEAL	IP65
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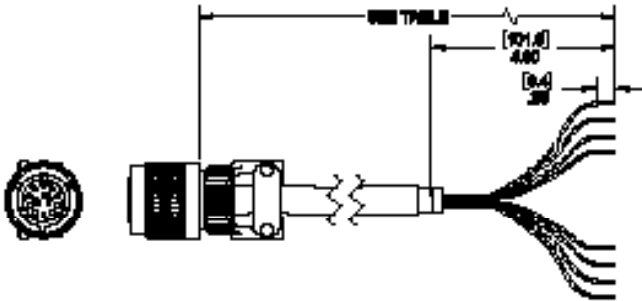
CUSTOM CAPABILITIES

- ±15V bipolar input option available
- Pigtail and Connector alternative options available
- Custom ranges and bandwidths available



ACCESSORIES

CONNECTOR CABLE

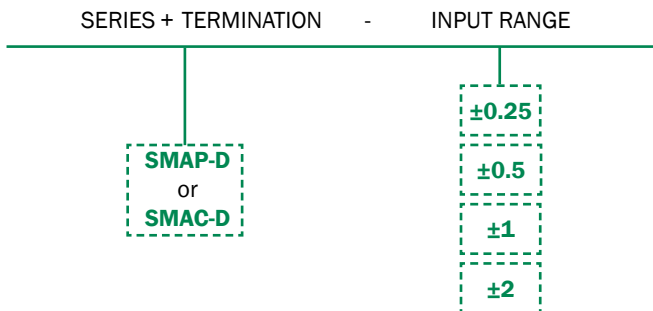


PART #	MODEL #	LENGTH m (ft)
62101011-001	6-Pin Mating Connector	-
879605-007	DSI-CBL-02M-1	2 (6.56)
879605-008	DSI-CBL-03M-1	3 (9.84)
879605-020	DSI-CBL-05M-1	5 (16.4)
Contact manufacturer for custom lengths		

SMI SERIES ORDERING INFORMATION

HOW TO ORDER

Model Numbers are comprised of the series and connectivity, the series version, and the input range.



	TERMINA-	MODEL #	PART #
±0.25	PIN	SMAP-D-0.25	02550353-001
	CONNECTOR	SMAC-D-0.25	02550354-001
±0.5	PIN	SMAP-D-0.5	02550353-002
	CONNECTOR	SMAC-D-0.5	02550354-002
±1	PIN	SMAP-D-1	02550353-003
	CONNECTOR	SMAC-D-1	02550354-003
±2	PIN	SMAP-D-2	02550353-004
	CONNECTOR	SMAC-D-2	02550354-004

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