



AILSI SERIES
DC-Operated, Gravity-Referenced, Servo Inclinator

FEATURES

- Fully self-contained - connect to a DC power source and a readout or control device for a complete operating system
- High-level DC output signal proportional to sine of the angle of tilt
- $\pm 14.5^\circ$, $\pm 30^\circ$ & $\pm 90^\circ$ ranges available

APPLICATIONS

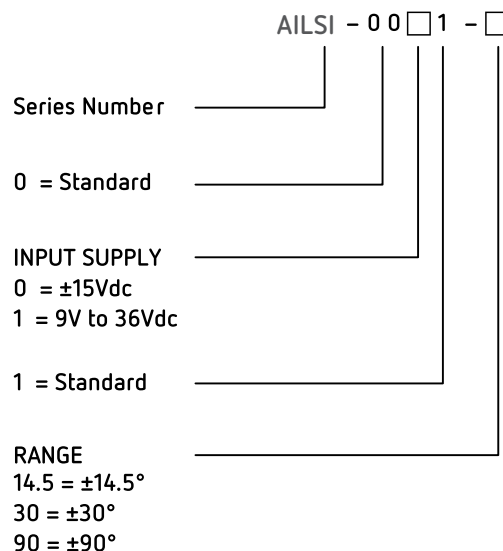
- Level control of machines and structures
- Safety control of cranes and lifting equipment
- Civil engineering studies
- Marine ballast transfer systems

DESCRIPTION

The AILSI Series is a precision gravity referenced servo inclinometer that can be used for a wide variety of industrial and military applications. Versions are available in a choice of angular ranges and power supply options. Electrical terminations are via solder posts.



DESIGNATION & ORDERING CODE

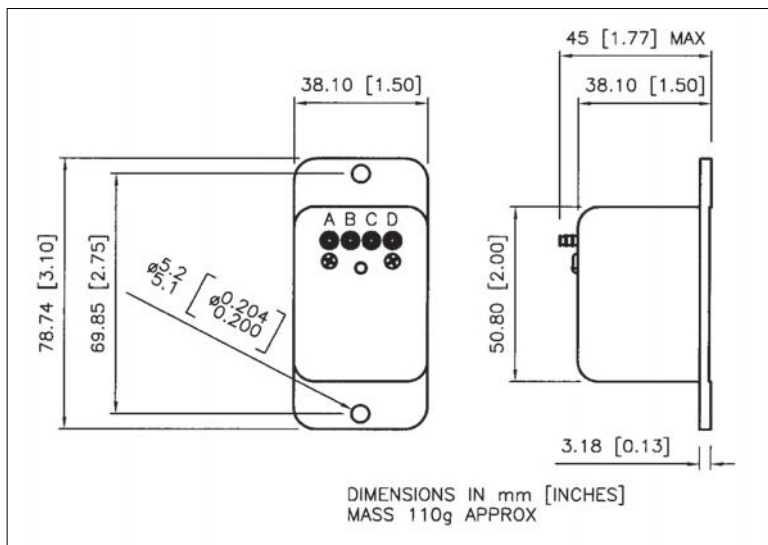


PIN OUT ($\pm 15Vdc$)

- A = +ve Supply
- B = -ve Supply
- C = 0V Common
- D = Signal Output

PIN OUT (9 to 36 Vdc)

- A = +ve Supply
- B = 0V Supply
- C = 0V Signal
- D = Signal Output





ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range	°C	-20 to 80
Survival Temperature Range	°C	-40 to 90
Shock Survival		500g, 0.5msec, ½ sine
Environmental Sealing		IP 64

SPECIFICATIONS @ 20°C

		±14.5°	±30°	±90°
Excitation Voltage options	Volts dc		±15 or +9 to +36	
Power Consumption	W (max)	±15V version = ±0.6	+9V to +36V version = 1.5	
Full Range Output (FRO) options <small>(see note 1)</small>	Volts dc		±5 ±0.5%	
Output Impedance	Ω		less than 10	
Output Noise (DC to 10kHz)	µV/√Hz (max)	±15V version = 2	+9V to +36V version = 20	
Non-Linearity <small>(see note 2)</small>	% FRO (max)	0.02	0.02	0.05
Non-Repeatability	% FRO (max)		0.004	
-3 dB Frequency	Hz		5	
Cross-axis sensitivity <small>(see note 3)</small>	% FRO (max)		± 1	
Zero Offset <small>(see note 4)</small>	Volts dc (max)		± 0.050	
Thermal Zero Shift	%FRO/°C (max)		± 0.003	
Thermal Sensitivity	%Reading/°C (max)		± 0.01	
EMC Directive	EN 61326: 1998			
EMC Emissions	EN 55022: 1998, 30 MHz to 1 GHz			
EMC Immunity	EN61000-4-2 1995 inc A1: 1998 & A2: 2001, ±4 kV EN61000-4-3: 2002, 10 V/m EN61000-4-4: 2004, ± 1 kV EN61000-4-4: 2004, ± 2 kV EN61000-4-6 1996 inc A1: 2001, 3 Vrms EN61000-4-6 1996 inc A1: 2001, 10 Vrms EN61000-4-8: 1994 Incorporating Amendment A1: 2001, 30 A/m			

NOTES

1. Full Range Output is defined as the full angular excursion from positive to negative, i.e. ±90° =180°
2. Non-linearity is determined by the method of least squares
3. Cross-axis Sensitivity is the output of unit when tilted to full range angle in cross-axis.
4. Zero offset is specified under static conditions with no vibration inputs

HOW TO ORDER

Specify model type, input supply and range.

e.g. AILSI-0001-30 = ±15Vdc supply, ±30°
AILSI-0011-90 = +9Vdc to +36Vdc supply, ±90° degree