

# Inclinometer Systems

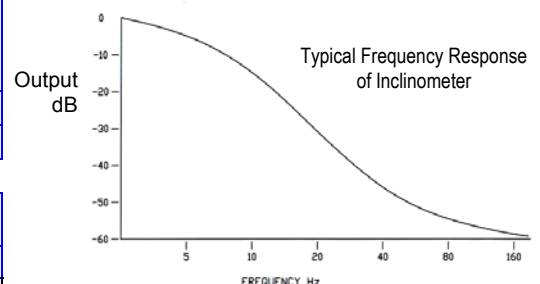
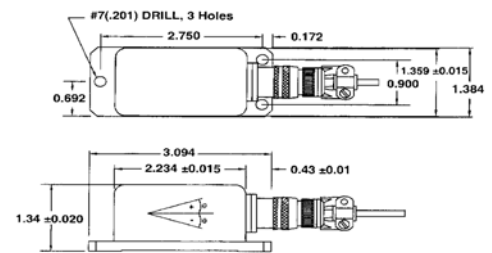
## DIS-7001, DIS-7012

Columbia Models DIS-7001 and DIS-7012 Inclinometer Systems include a temperature-compensated force balance inclinometer in conjunction with a power module and convenient digital display. Linearization is supplied in the readout module which eliminates the need for conversion from the inclinometer sine output to degrees. Both systems are available with optional analog output via a BNC connector. The optional carrying case enhances portability. *Consult the factory for customized versions of these systems.*

- \* Superior Force Balance Technology
- \* Choice of Input Power & Cable Configurations

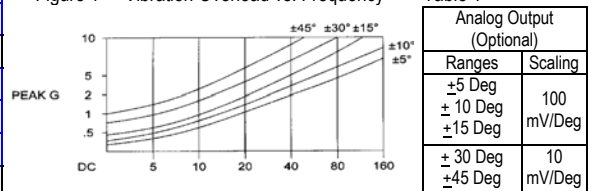


### Sensor Outline



**Note:** The frequency response is intentionally limited in order to eliminate ripple on the output signal.

Figure 1 - Vibration Overload vs. Frequency



Analog Output (Optional)	
Ranges	Scaling
±5 Deg	100 mV/Deg
±10 Deg	
±15 Deg	
±30 Deg	10 mV/Deg
±45 Deg	

### Ordering Information:

<b>DIS-7001 (+/- X Deg) - Digital Inclinometer System For 115V Operation</b> Range +/- X Deg (Required)	10	A	C	
<b>DIS-7012 (+/- X Deg) - Digital Inclinometer System For 10-28VDC Operation</b> Range +/- X Deg (Required)	10	A	C	-X

Sensor Interface Cable (Indicate Length in Ft)  
Standard Length = 10 Ft.  
Optional Lengths: 5 Ft. thru 50 Ft.  
Optional Analog Output (BNC) – See Table 1

Optional Carrying Case

Optional Input Power Cable without Lighter Plug  
Indicate X Length in Ft: 6 Ft. thru 20 Ft.

### Specifications Readout

	DIS-7001	DIS-7012
Input Power:	115V, 60 Hz, 1 Amp Max.	10 VDC To 28 VDC, 12.6 VDC Nom., 1 Amp Max.
Available Ranges & Corresponding System Accuracy	Range ±5 Degrees: ±0.03 Deg Accuracy Range ±10 Degrees: ±0.05 Deg Accuracy Range ±15 Degrees: ±0.10 Deg Accuracy Range ±30 Degrees: ±0.20 Deg Accuracy Range ±45 Degrees: ±0.30 Deg Accuracy	
Display	3-1/2 Digit LCD Readout	
Offset Range	Adjustable to Zero	
Controls	AC Power Switch Null Potentiometer Input Power Fuse	DC Power Switch Null Potentiometer Input Power Fuse
Operating Temperature	0 Deg. C To +52 Deg. C	
Sensor Interface Cable	10 Ft. (Standard Length) Optional Lengths: 5 Ft. To 50 Ft.	
Input Power Cable	6 Ft. Cord	Standard: 6 Ft. Cord with DC Lighter Plug Optional: Selectable Length without Lighter Plug (6 Ft. thru 20 Ft)
Size	7.5 In. L x 5.9 In. W x 2.7 In. H	
Weight	28 Oz (0.8 KG)	23 Oz (0.65 KG)

### Sensor

Output Voltage	±5 VDC at Full Range Output Proportional to the Sine of the Angle
Output Noise	<3 mV RMS
Non-Linearity	±0.15% F.R.
Non-Repeatability	±0.05% F.R.
Scale Factor Tolerance	±1%
Scale Factor Temp Coefficient	±0.02% / Deg C
Zero Bias	±0.15% F.R.
Zero Bias Temp. Coefficient	0.001% F.R. / Deg. C
Resolution	0.001% F.R.
Bandwidth	0 – 3 Hz; -18 dB / Oct Roll-off
Orthogonal Sensitivity	<0.5%
Case Alignment	±0.3°
Vibration Overload vs. Frequency	See Figure 1
Temperature, Operating	-50 To +85 Deg C
Temperature, Storage	-60 To +100 Deg C
Vibration Survival (2 To 2,000 Hz)	10 G RMS, 0.5" Disp D.A.
Shock Survival	125 G, 1 mSec, Half Sine
Ambient Pressure	0 To 5 Atmospheres
Humidity	95% R.H.
Weight	4.6 Oz (130 Gm)
Size (Excluding Connector)	2.27 In L x 1.39 In W x 1.37 In H (8.3 cm L x 3.6 cm W x 3.5 cm H)
Case Material	Black Anodize Aluminum
Sealing	Environmental



Columbia Research Laboratories, Inc. 1925 Mac Dade Blvd. Woodlyn, PA 19094 USA

Phone: 1.800.813.8471 / Fax: 610.872.3882 / email: sales@columbiaresearchlab.com