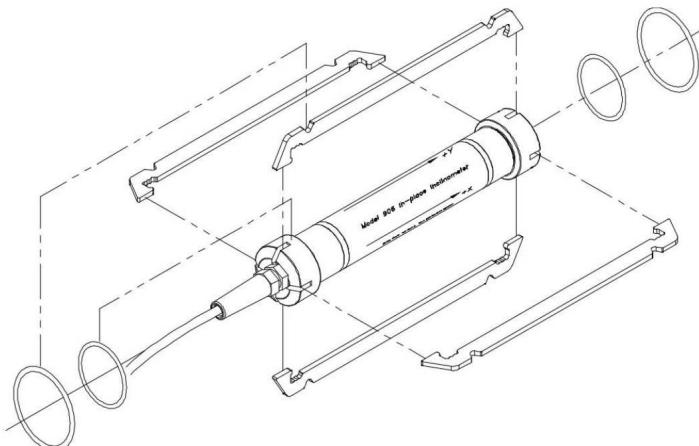
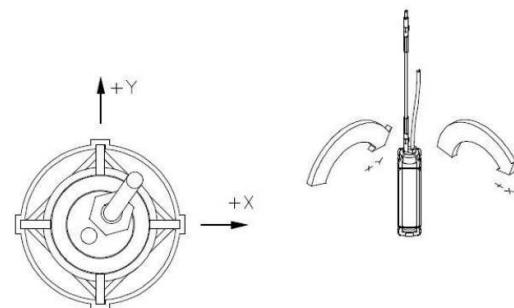


## Model A906 “Little Dipper” In-Place Inclinometer

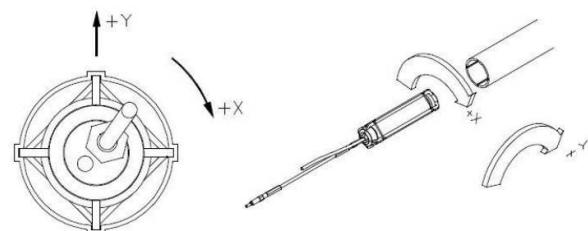
The model A906 “Little Dipper” is a precision, low-cost In-Place Inclinometer (IPI) system for monitoring slopes, retaining walls, embankments, ground subsidence and settlement, and more. Units install easily in standard inclinometer casings, or can be grouted or buried directly into place. All A906 IPI’s are pressure rated to +72 psi. With  $\pm 2.5$  and 0-5 VDC output units also easily connect to any voltage input datalogger. The A906 is configurable for use in both vertical and horizontal boreholes. Units ship standard with 3m cable (specify additional cable length on order).



A906 “Little Dipper” Dimensions: 231 x 39 mm (9.25 x 1.55 in.)



Placement of Little Dipper Model 906-V in vertical casing



Placement of Little Dipper Model 906-H in horizontal casing

### PIN OUT:

Color	FUNCTION
Red	+8 TO +24 VDC
BLACK	PWR GND
GREEN	X-OUT
BLUE	Y-OUT
YELLOW	TEMP OUT
WHITE	SIG GND

# PERFORMANCE SPECIFICATIONS

## PERFORMANCE

VERSION	High-Gain	Standard	Wide-Angle
ANGULAR RANGE (°) <sup>1</sup>	±12°	±30°	±50°
RESOLUTION	<0.005°	<0.01°	<0.02°
NONLINEARITY (%FRO) <sup>2</sup> max	0.8% (full span)	1% (half span); 4% (full span)	7%
NONREPEATABILITY	0.01°	0.02°	0.02°
SCALE FACTOR <sup>3</sup>	4.8°/V	12°/V	20°/V
TIME CONSTANT	0.15 sec		
K <sub>Z</sub> TEMP COEFFICIENT (°/°C)	±5 arcsec/ °C (typical)		
K <sub>S</sub> TEMP COEFFICIENT (%/ °C)	±0.03%/C (typical)		
OUTPUT VOLTAGE	±2.5V or 0-5V		
CHANNELS	X-tilt, Y-tilt, Temperature		

## ELECTRICAL & ENVIRONMENTAL

NUMBER OF AXES	2
NATURAL FREQUENCY	10 Hz
POWER	+8 to +24 VDC (bipolar output); +10.5 to +26.5 VDC (0-5V output); 7mA, 250 mV ripple max, reverse polarity protected
OPERATING TEMPERATURE RANGE	-25° to +70°C
STORAGE TEMPERATURE RANGE	-25° to +70°C
SUBMERSIBLE	UP TO 72 PSI
WEIGHT	0.35kg (0.75lb.)
MATERIALS	Cylindrical ABS housing, Delrin (guide fins)
CABLE	6-conductor, 24 AWG, PVC jacket, polypropylene insulation, overall shield, 0.2 in. (5mm) dia., 3m cable included. For additional cable length, please specify in order (price per ft.)

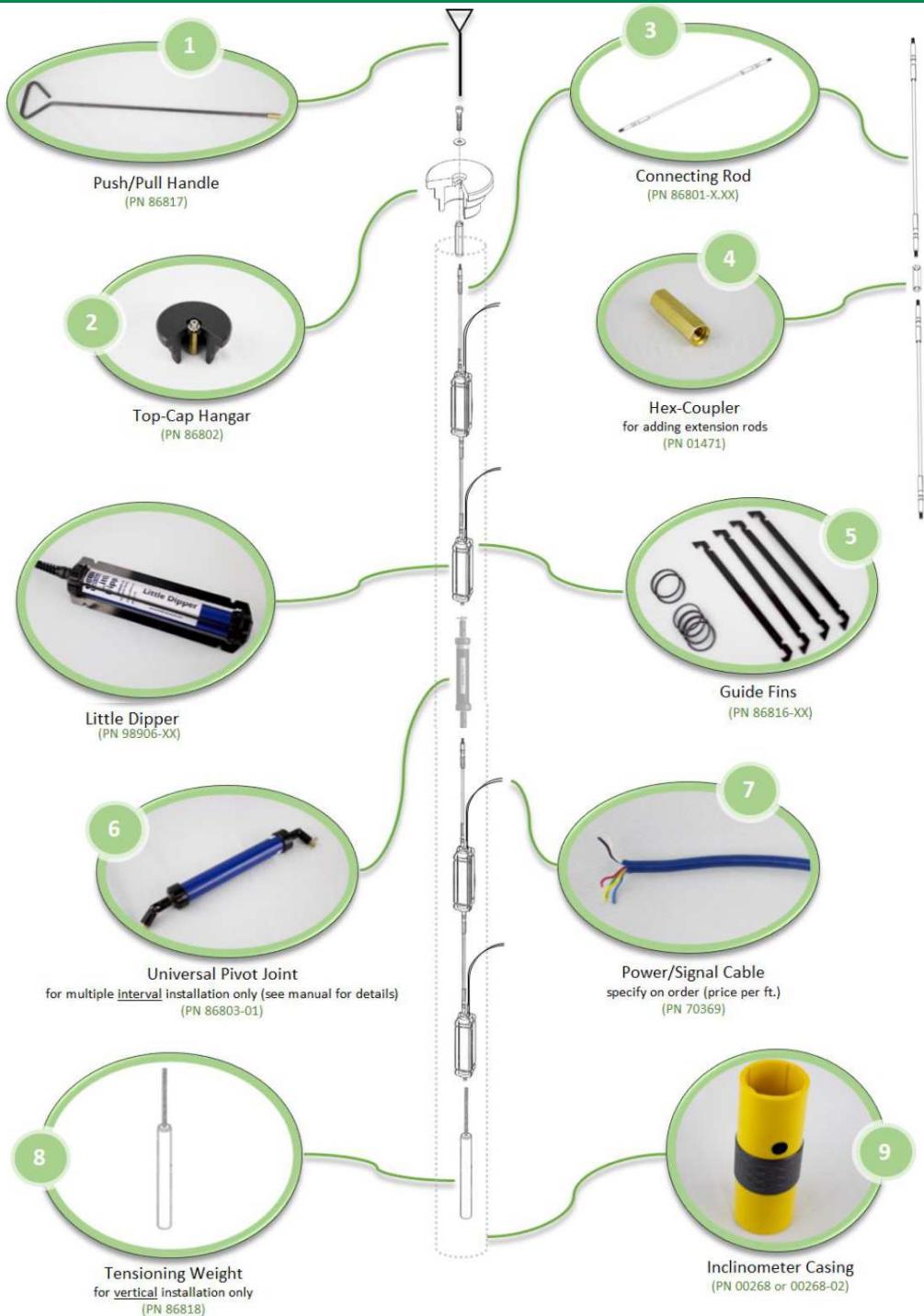
### NOTES:

1. Resolution calculated at 1mV.
2. Nonlinearity is specified as variation around the best straight line from null to full-range output.
3. Linear scale factor calculated from BFSL through calibration curve.

Specifications are subject to change without notice due to continued product development

The Little Dipper is most commonly installed in shallow boreholes, generally at depths less than 150 feet (45m) for purposes of monitoring ground movement. They can also be installed in concrete block walls, caissons and cast into concrete slabs for tracing of structural deformation."

# BOREHOLE DIAGRAM

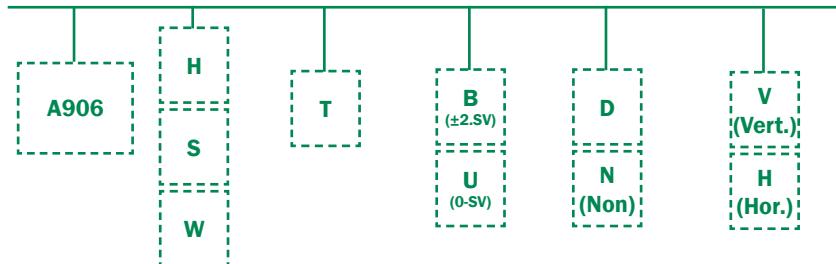


See bottom cap ordering details on next page.

# ORDERING INFORMATION

## HOW TO ORDER

Model Numbers are comprised of series, range, temp sensor, output, dampening, and orientation  
 SERIES - RANGE - TEMP SENS. - OUTPUT - DAMPENING - ORIENTATION



Bipolar Output ( $\pm 2.5V$ )		Unipolar Output (0-5V)		
MODEL #	PART #	MODEL #	PART #	
Vertical Installation	A906-HT-BN-V	98906-01	A906-HT-UN-V	98906-11
	A906-HT-BD-V	98906-02	A906-HT-UD-V	98906-12
	A906-ST-BN-V	98906-03	A906-ST-UN-V	98906-13
	A906-ST-BD-V	98906-04	A906-ST-UD-V	98906-14
	A906-WT-BN-V	98906-05	A906-WT-UN-V	98906-15
	A906-WT-BD-V	98906-06	A906-WT-UD-V	98906-16
Horizontal Installation	A906-HT-BN-H	98906-07	A906-HT-UN-H	98906-17
	A906-HT-BD-H	98906-08	A906-HT-UD-H	98906-18
	A906-ST-BN-H	98906-09	A906-ST-UN-H	98906-19
	A906-ST-BD-H	98906-10	A906-ST-UD-H	98906-20
	A906-WT-BN-H	98906-23	A906-WT-UN-H	98906-21
	A906-WT-BD-H	98906-24	A906-WT-UD-H	98906-22

Accessories	
Part #	Description
86817	Push/Pull Handle - For installing Little Dipper string, 26in long
86802	Top-cap Hangar Assembly (fits both Inclinometer Casing), 3.75in diameter, 2in height
86801-0.5M	Fiberglass Connecting Rod, 0.5m Length, w/ Brass Swivel Connectors
86801-1.0M	Fiberglass Connecting Rod, 1.0m Length, w/ Brass Swivel Connectors
86801-1.5M	Fiberglass Connecting Rod, 1.5m Length, w/ Brass Swivel Connectors
86801-2.0M	Fiberglass Connecting Rod, 2.0m Length, w/ Brass Swivel Connectors
86801-2.5M	Fiberglass Connecting Rod, 2.5m Length, w/ Brass Swivel Connectors
86801-3.0M	Fiberglass Connecting Rod, 3.0m Length, w/ Brass Swivel Connectors (Maximum length)
01471	Hex Coupler, Brass, for Con. & Ext. Rods, 1.375in long
86816-03	Guide Fins for 2.75 inch (70 mm) O.D. Inclinometer Casing, Set of 4
86816-04	Guide Fins for 3.34 inch (85 mm) O.D. Inclinometer Casing, Set of 5
86803-01	Universal Pivot Assembly - Joins Little Dipper to 86801 Connecting Rod for Interval Monitoring (Guide Fins not included), 14.64in long, 1.5in diameter
70369	Power/Signal Cable, 6-conductor, 24 AWG, Polypropylene Jacket, (price per ft.)
86818	Tensioning Weight Assembly for Model 906- Vertical Little Dipper String
00268	Inclinometer Casing, 2.75" O.D. x 10 Ft. Long. (For 10 little dippers max)
00268-02	Inclinometer Casing, 3.34" O.D. x 10 Ft. Long. (For 20 little dippers max)
00268-01	70mm bottom cap (used with PN 00268)
00268-03	85 mm bottom cap (used with PN 00268-02)

850 Perimeter Road Manchester, NH 03103 USA

SENSORS: 800.227.5955

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