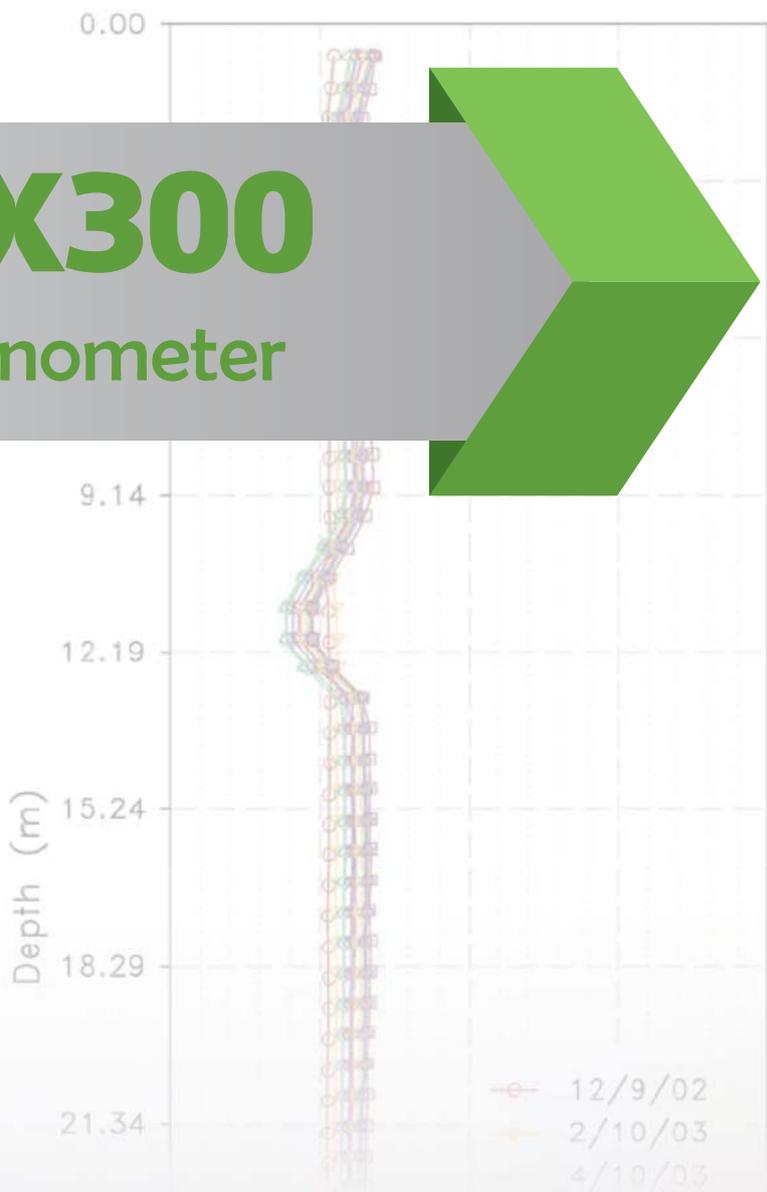
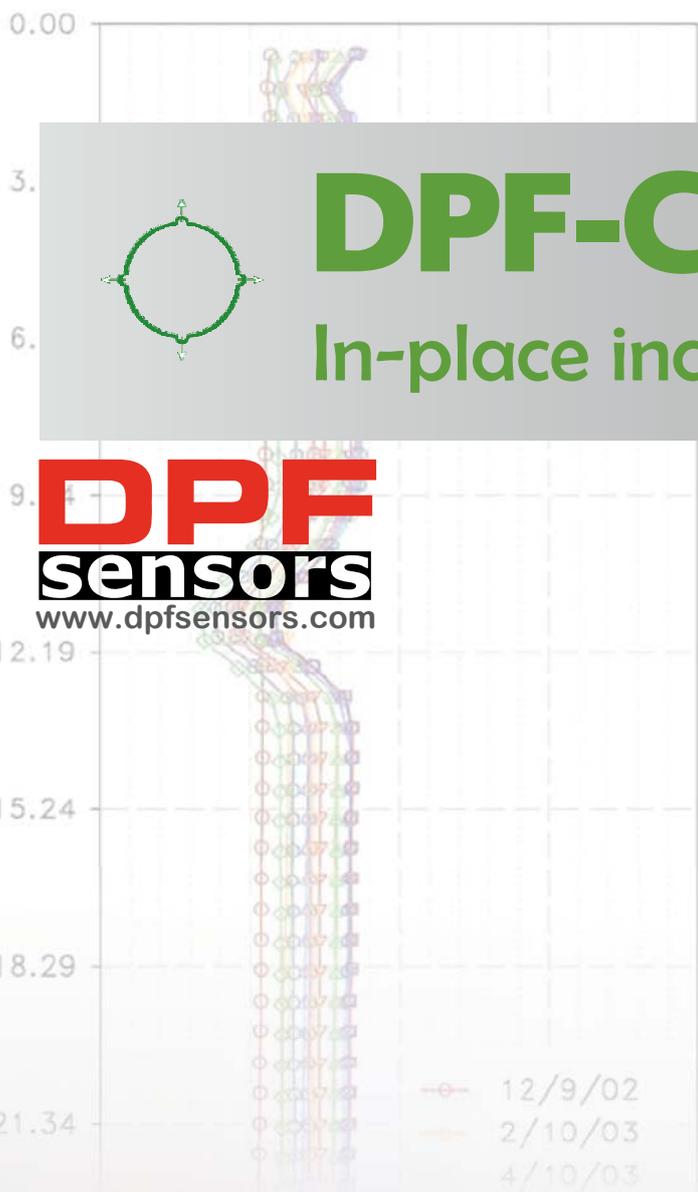


KANE I-1, A-Axis

KANE I-1, B-Axis



DPF-CX300

In-place inclinometer

DPF
sensors
www.dpfsensors.com





Product Model :	DPF-CX300
Measuring Range :	$\pm 15^\circ$ ($\pm 30^\circ$)
Output :	RS485
Power :	Voltage(8-30V)
Repeatability :	$\pm 0.003^\circ$
Accuracy :	0.001° - 0.005°
Application :	Geotechnical
IP Degree :	IP68

DPF-CX300 in-place inclinometer system is a high-precision monitoring system developed by Shanghai Electronic Technology. It is wide range measurement, stable performance, solid and easy maintenance.

The sensor probe of it has a maximum measuring range of ± 30 degrees. It is suitable for geological monitoring, construction, civil engineering and other similar safety monitoring application.

Technical Parameters (at 25°C)

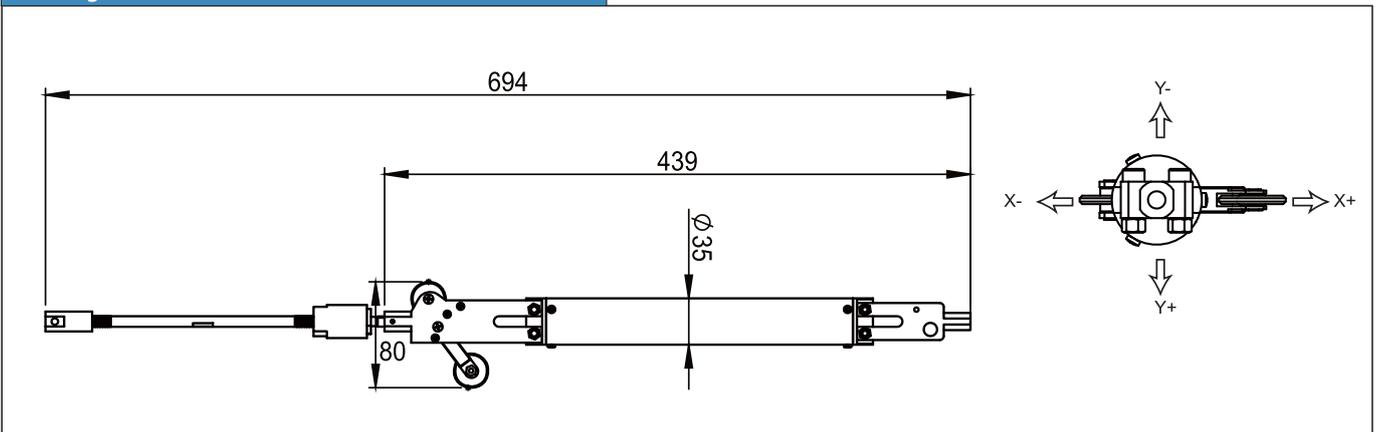
Item	Test Condition	Min	Type	Max	Unit
Power supply	DC	0	24	30	V
Quiescent current	VCC=24.00V		5	10	mA
Work temp		-30	0	+80	$^\circ\text{C}$
Total range	Dual-axis		± 30		$^\circ$
Resolution (1)			0.001		$^\circ$
Accuracy(2)	$-15^\circ \sim +15^\circ$		± 0.005	± 0.01	$^\circ$
	$-30^\circ \sim +30^\circ$		± 0.01	± 0.02	$^\circ$
Zero temp drift (3)	$-20 \sim +60^\circ\text{C}$		± 0.002		$^\circ/^\circ\text{C}$
				± 0.1	$^\circ$
Storage temp		-30		+80	$^\circ\text{C}$
IP grade	Water depth of 100m		IP68		

(1: Resolution is the smallest angle that can be detected by the inclinometer sensor.

(2: Accuracy is the differences between the real angle value and the measured value in total range.

(3: At room environment, with fixed zero angle output, zero temp drift is the angle deviation with changes of temp

Housing Size (unit: mm) & Measurement





High Precision

Our in-place clinometer accuracy reaches 0.01 degree. We have tilt angle platform with accuracy 0.003 degree to calibrate our inclinometer. Ensure each product satisfy the accuracy in specification.

High level waterproof

Each inclinometer sensor probe must be strictly tested under 120 meters depth water pressure for 12 hours. Make sure all sensor probes fulfill IP 68 waterproof level.

High reliability

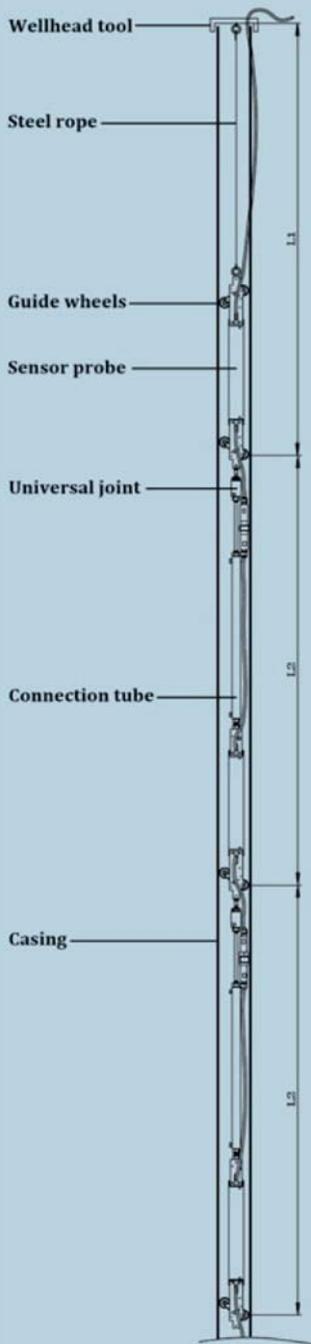
Aging test is strictly performed for the PCB of in-place inclinometer. Keep it in aging test box with 85 °C temperature for 6 hours to ensure high reliability.

Excellent process

All components of sensor probe are high strength stainless steel. Every detail is carefully designed to ensure durability.

Freely customized length

There are three standard length of sensor probe unit, i.e. 1 m, 2 m, 3 m, for your selection. If these are all not suitable, we could customize the length of sensor unit as you request.



CX300-1 (sensor plus 1 meter tube)
 CX300-2 (sensor plus 2 meter tube)
 CX300-3 (sensor plus 3 meter tube)



DC02 datalogger 2 ch



CX-CAP



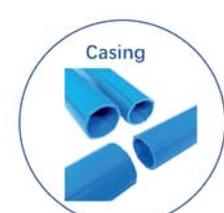
CX-GUIDE



CX-TAIL



CX-STEEL-x meter



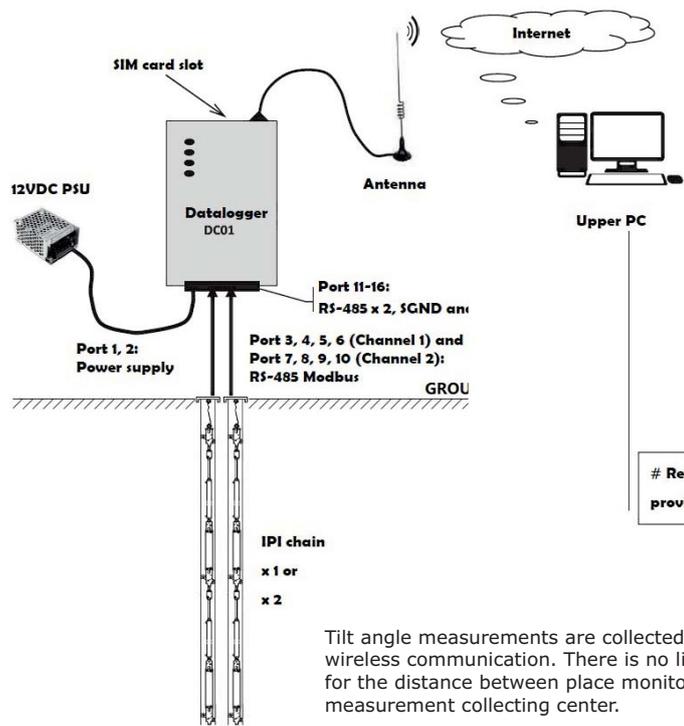
CX-CASING
 CX-CASING-CONN



CX-M14-xm



In-Place clinometer Data Logger - DPF-CX-100



Product Model :	DPF-CX100-DC01
Output :	RS485
Power :	Voltage(10~15V)
Input :	2 X RS485
Application :	Geotechnical
IP Degree :	IP65
Temperature :	-40°C ~ +85°C
Shell Size :	150 * 110 * 10 mm
Other Parameter :	8G MicroSD

The collector has two independent RS-485 acquisition channels, and expands the external pluggable SD card for data storage and backup. The output supports two communication modes of RS-232 and RS-485, which can be either wired or remote data transmission module, and automatically collect and access data with PC software.

Power Supply 10-15V DC, working current: 55mA@12V in standby state, 150mA@12V in communication state and 30mA@12V in single probe. The power supply with sufficient load capacity should be selected according to the number of probes. It is suggested that the power supply with load current over 1A should be used.

Two RS-485 input channels, each supporting up to 30 fixed sensors
 1 RS-232/RS-485 output channel, supporting up to 32 collector wired networking
 Optional 2G/3G/4G remote data transmission

Tilt angle measurements are collected by wireless communication. There is no limitation for the distance between place monitored and measurement collecting center.

DIGITAL INCLINOMETER CALIBRATION CERTIFICATE

Calibration Report No: MM-2019-11-00062ZCT-CX100-S215
 Calibration Performed for:
 Digital Inclinator Sensor Serial Number: 1711150101~10 Model Number: ZCT-CX300
 Date of Calibration: 12-Dec-19
 Calibrated by: Chen Rong

Table Angle(°)	-15	-13.5	-12	-6	0	6	12	13.5	15		
X axis	Angle(°)	-14.999	-13.493	-11.990	-5.996	0.002	5.992	11.993	13.488	14.988	No. 1129GD4017
	Hex read	100E6309	100D3103	100B6300	10056306	00000002	00056302	000B6303	000D3008	000E6208	
Y axis	Angle(°)	-15.015	-13.509	-12.003	-6.001	-0.002	6.01	12.016	13.515	15.015	MODBUS ID : 03
	Hex read	100F0105	100D3209	100C0003	10060001	10000002	00060100	000C0106	000D3305	000F0105	

Test Temp	Test range	Required Zero output	Required accuracy (absolute $\leq ?^\circ$)	
20°C	-15~-15°	$\leq 0.2^\circ$	$\leq \pm 12^\circ$	$\leq \pm 15^\circ$
			0.02	0.05

Real value		Zero output 1	Zero output 2	Zero output	Accuracy ($\leq \pm 12^\circ$)	Accuracy ($\leq \pm 15^\circ$)
X axis	Angle(°)	-0.001	0.037	0.018	0.010	0.012
	Hex read	10000001	00000307			
Y axis	Angle(°)	0.172	0.184	0.178	0.016	0.015
	Hex read	00001102	00001204			

This instrument has been calibrated in accordance with the Manufacturer's proprietary procedures and the result is OK.

The standard and instrument used in this calibration is calibrated at scheduled interval to maintain the required accuracy level and are traceable to the Shanghai Institute of Measurement and Testing Technology (SIMT), China.