

V1.3

FULL TEMP COMPENSATION MODBUS 1/2-AXIS INCLINOMETER
RION ACA816T/ACA826T

Technical Manual



PRODUCTION IMPLEMENTATION STANDARD REFERENCE

- Enterprise Quality System Standards: ISO9001: 2015 Standard (Certification No. : 128101)
- Intellectual Property Management System Conforms To The Standard: GB / T 29490-2013 (Certificate No.: 18117lp1529R0S)
- High-tech enterprise (certificate number: GR201844204379)
- CE Certification:AT011611743E FCC Certification:AT011611744E
- China National Intellectual Property Appearance Patent (Patent No. : ZL 201830752872.2)
- Inclination sensor production standard: SJ 20873-2003 General specification for inclinometer and level
- Gyro acceleration test standard: QJ 2318-92 gyro accelerometer test method
- Software development reference standard: GJB 2786A-2009
- Product environmental testing standard: GJB150
- Electromagnetic immunity test standard: GB / T 17626
- Revision date: 2020-03-18

Note: Product functions, parameters, appearance, etc. will be adjusted as the technology upgrades.
Please contact our pre-sales business to confirm when purchasing.



Temperature
ompensation
全温补高精度系列



► GENERAL DESCRIPTION

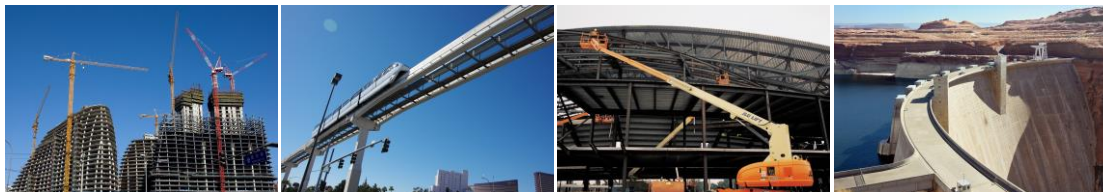
ACA816T / ACA826T is a full-temperature compensated high-precision single / dual-axis MODBUS output inclinometer professionally developed by Ruifen Technology for high-precision level measurement and leveling. The high-resolution 0.0005 ° can completely replace the traditional high-precision level. . Digital signal transmission, supporting professional computer software, accurate data measurement and recording, output interface RS232, RS485, RS422, TTL optional. The characteristics of non-contact installation make the ACA816T / ACA826T have super strong system integration, easy installation, just fix the sensor on the surface of the measured object with screws, the horizontal angle of the object can be automatically calculated, simple to use. It has strong resistance to external electromagnetic interference and strong ability to withstand shock and vibration. It has a great competitive advantage among domestic counterparts.

► FEATURES

- ★ Single /Dual-Axis Inclinometer
- ★ Size:L92xW48xH36mm
- ★ Wide Temperature Working: -40~+85°C
- ★ Resolution: 0.0005°
- ★ Highly Anti-Vibration Performance >2000g
- ★ Output Mode RS232/RS485/RS422/TTL Are Optional
- ★ Measuring Range :±1~±30° Optional
- ★ Wide Voltage Input: 9~36V
- ★ IP67 Protection Grade
- ★ Water-Proof Air-Plug

► APPLICATION

- ★ Engineering vehicles automatic leveling
- ★ Laser equipment position
- ★ Underground drill posture navigation
- ★ Precise machine tool level control
- ★ Bridge & dam detection
- ★ Medical facilities angle control
- ★ Railway gauging rule , gauge equipment leveling
- ★ Geological equipment inclined monitoring

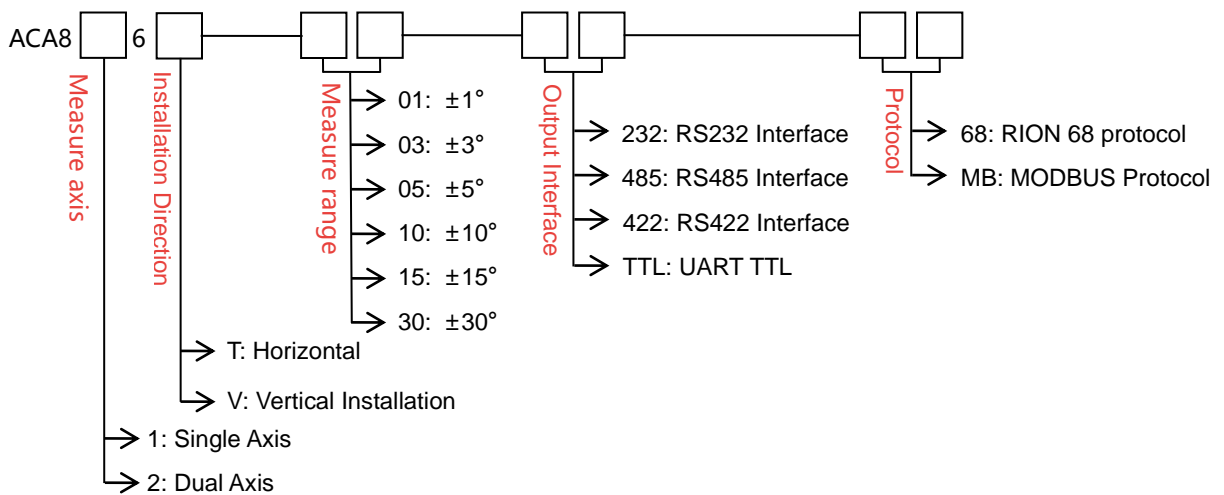


FULL TEMP COMPENSATION MODBUS 1/2-AXIS INCLINOMETER

► **TECHNICAL DATA**

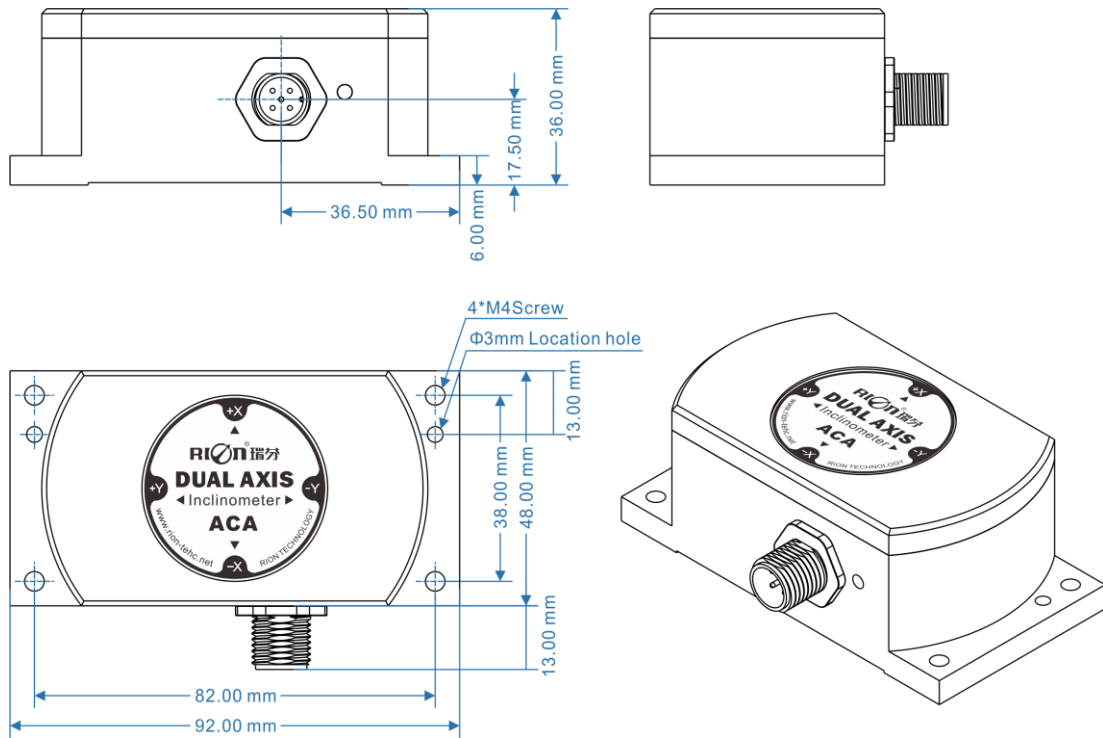
ACA826T	CONDITIONS	PARAMETERS				UNIT
Measure range		±03	±10	±15	±30	°
Measure axis		X/XY	X/XY	X/XY	X/XY	axis
Resolution		0.0005	0.0005	0.0005	0.0005	°
Measure accuracy	@25°C	0.002	0.003	0.005	0.01	°
Long term stability		0.01	0.01	0.02	0.02	
Zero temp coefficient	-40~85°	±0.0002	±0.0002	±0.0002	±0.0002	°/°C
Sensitivity temp coefficient	-40~85°	≤50	≤50	≤50	≤50	ppm/°C
Power on time		0.5	0.5	0.5	0.5	S
Response time		0.02	0.02	0.02	0.02	S
Output rate	5Hz、15Hz、35Hz、50Hz Can be setting					
Output signal	RS232/RS485/RS422/TTL					
EMC	According to EN61000 and GBT17626					
MTBF	≥50000hours/times					
Insulation Resistance	≥100M					
Shockproof	100g@11ms、Times/Axis(half sinusoid)					
Anti-vibration	10grms、10~1000Hz					
Protection grade	IP67					
Cables	Standard 1M length、wearproof、wide temperature、 Shielded cables4*0.4mm2 air-plug connector					
Weight	235g(without cable)					

► **ORDERING INFORMATION**



FULL TEMP COMPENSATION MODBUS 1/2-AXIS INCLINOMETER

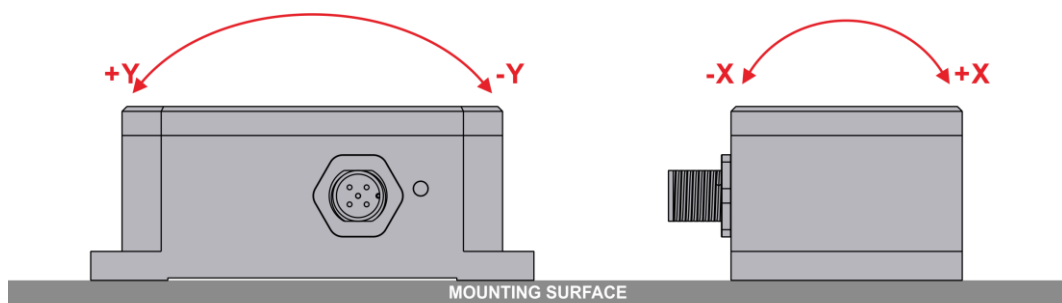
► DIMENSION



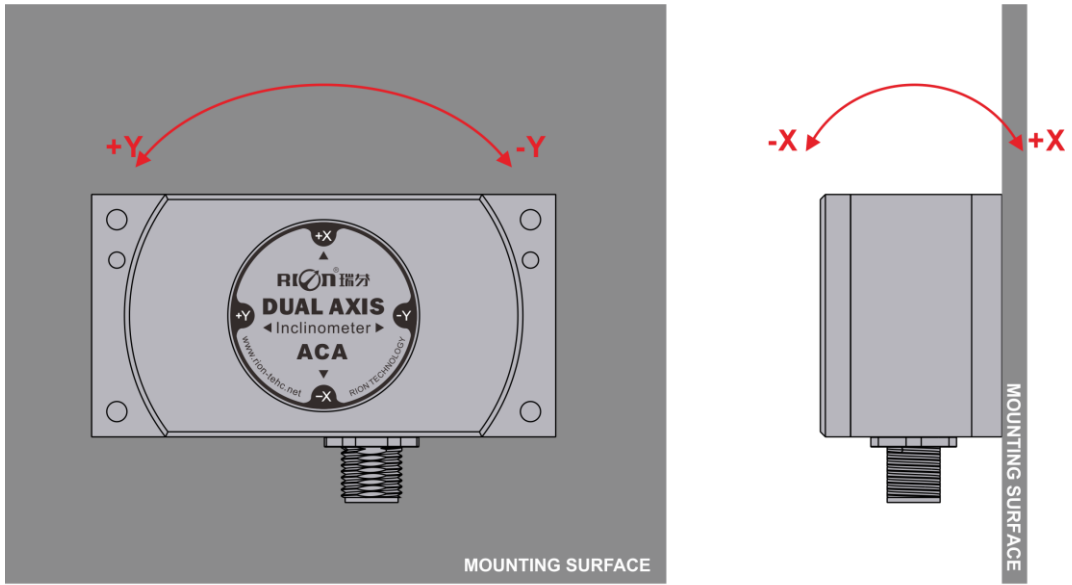
DIMENSION : L92xW48xH36mm

► MEASURING DIRECTIONS

The installation must guarantee the product bottom is parallel to measured face, and reduce the influence of dynamic and acceleration to the sensor. This product can be installed horizontally or mounted vertically (mounted vertically selection must confirm before production), for installation please refer to the following scheme.



Horizontal installation



Vertical installation

ACA816T&ACA826T
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