ACA Series

Inclinomètre biaxe durci haute précision | ±5 à ±90° | Sortie analogique ou numérique

- inclinomètre MEMS durci 1 ou 2 axes
- étendues de mesure: ±5, ±10, ±15, ±30, ±60 ou ±90° (autres étendues en option)
- Précision : 0.03% de la pleine échelle
- Signal de sortie: 0-5V, 4-20mA, RS-232, RS-485, TTL, CANopen - Protocole série : ASCII ou Modbus
- résolution: 0.0005 à 0.001° selon version
- Boîtier Inox IP67
- Tension d'alimentation : 9-36 VDC
- Température de fonctionnement: -40°C à + 85°C
- Limite de choc: 2000g
- Connectique : Connecteur M12 + Câble

Caractéristiques

Les inclinomètres de la série ACA sont conçus pour la mesure de l'inclinaison en environnement sévère sur un ou deux axes et avec une très grande précision. Les caractéristiques principales:

- **Haute précision et stabilité thermique** : Équipé d'un convertisseur A/N 24 bits et d'un algorithme de filtrage avancé, la série ACA est compensée en température, assurant ainsi une excellente stabilité et répétabilité de la mesure, y compris dans des conditions thermiques extrêmes
- **Nombreuses options de sortie** : La série ACA offre plusieurs options de sortie analogiques ou numériques, dont RS485, RS232, Modbus et CANopen, facilitant son intégration dans divers systèmes industriels et garantissant une transmission fiable des données.
- **Robustesse et résistance aux perturbations** : Conçu pour des environnements industriels rigoureux, l'ACA616T/ACA626T offre une forte résistance aux interférences électromagnétiques, aux chocs et aux vibrations, ce qui en fait un choix optimal pour les applications nécessitant robustesse et fiabilité.

Applications

- Surveillance de grue
- Engins de construction
- Tunneliers
- Maritime
- Contrôle d'assiette
- Réglage du niveau de machines outils

Spécifications

Version 4-20mA

ACA618T/628T-N		Conditions	Parameters				Unit
Measure range			±10	±30	±60	±90	°
Measure axis			X / XY	X / XY	X / XY	X / XY	axis
Zero output		0° output	12	12	12	12	mA
Resolution			0.0007	0.0007	0.0007	0.0007	°
Measure accuracy	MAXE	Room temp.	0.003	0.01	0.02	0.03	°
	RMSE	Room temp.	0.003	0.003	0.005	0.008	°
Zero Temp. coefficient		-40 ~ 85℃	0.0005	0.0005	0.0005	0.0005	°/℃
Sensitivity temp-coefficient		-40 ~ 85℃	≤50	≤50	≤50	≤50	ppm/℃
Power on time			0.5	0.5	0.5	0.5	S
Response frequency		20Hz					
EMC		According to EN61000 and GBT17626					
MTBF		≥98000 hours/times					
Insulation Resistance		≥100MΩ					
Shockproof		100g@11ms、3 axial direction (half sinusoid)					
Anti-vibration		10grms、10 ~ 1000Hz					
Protection grade		IP67					
Cables		Standard 7 P * 6.8 mm aviation connector, 2m long, wear-resistant, wide temperature, shielded cable, cable weight ≤ 200 G					
Weight		≤260g(without cable)					

Version CanOPEN

ACA2200T CANOPEN	CONDITIONS	PARAMETERS			UNIT
Measuring range		±05	±10	±15	°
Measuring axis		X,Y	X,Y	X ,Y	
Resolution		0.0005	0.0005	0.0005	°
Absolute accuracy	@25℃	0.003	0.005	0.006	°
Long term stability		0.002	0.003	0.005	°
Zero Temp. coefficient	-40 ~ 85°	±0.0002	±0.0002	±0.0002	°/℃
Sensitivity temp coefficient	-40 ~ 85°	≤100	≤100	≤100	ppm/℃
Power on time		0.5	0.5	0.5	S
Response time		0.02	0.02	0.02	S
Output rate	5Hz、15Hz、35Hz、50Hz can be setting				
Interface type	CAN OPEN				
EMC	According to EN61000 and GBT17626				
MTBF	≥50000 hours/times				
Insulation Resistance	≥100MΩ				
Shockproof	100g@11ms、Triaxial (half sine wave)				
Anti-vibration	10grms、10 ~ 1000Hz				
Protection grade	IP67				
Cables	Standard configuration: 2m length, wear-resistant, wide temperature, shielded cable 5P * 5.7mm aviation connector				
Weight	386g(without cable)				

* The parameters table only specify values for ± 10 °, ± 30 °, ± 60 °, + 90, Any other range within ±180° (single axis), ±90° (dual axis) is available as well.

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ACA Series

Inclinomètre biaxe durci haute précision | ±5 à ±90° | Sortie analogique ou numérique

Spécifications

Version RS-232/485

ACA616T&ACA626T	condition	Parameters				Unit
Measuring range		±10	±30	±60	±90	°
Measuring axis		X/XY	X/XY	X/XY	X/XY	
Resolution		0.001	0.001	0.001	0.001	°
Absolute accuracy	@25℃	0.003	0.01	0.02	0.03	°
Long term stability		0.01	0.02	0.03	0.04	°
Zero temperature coefficient	-40～85°	±0.0004	±0.0004	±0.0004	±0.0004	°/℃
Sensitivity temperature coefficient	-40～85°	≤50	≤50	≤50	≤100	ppm/℃
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 set					
Output signal response Frequence	RS232/RS485/RS422/TTL/CAN					
Electromagnetic compatibility	According to EN61000 和 GBT17626					
MTBF	≥50000 hours / times					
Insulation Resistance	≥100Megohm					
Shockproof	100g@11ms、Triaxial (half sine wave)					
Anti-vibration	10grms、10～1000Hz					
Protection glass	IP67					
Cables	Standard 2m length, wear-resistant, wide temperature, shielded cable 5P * 5.7mm aviation connector					
Weight	235g(without cable)					

This performance parameter only lists ± 10 °, ± 30 °, ± 60 °, ± 90 ° series as a reference, for other measurement ranges, please refer to the nearest neighbor parameter.

Version RS-232/485 haute précision

ACA2400T	CONDITIONS	PARAMETERS			UNIT
Measuring range		±05	±10	±15	°
Measuring axis		X,Y	X,Y	X,Y	
Resolution		0.0005	0.0005	0.0005	°
Absolute accuracy	@25℃	0.003	0.005	0.006	°
Long term stability		0.002	0.003	0.005	°
Zero Temp. coefficient	-40～85°	±0.0002	±0.0002	±0.0002	°/℃
Sensitivity temp coefficient	-40～85°	≤50	≤50	≤50	ppm/℃
Power on time		0.5	0.5	0.5	S
Response time		0.005	0.005	0.005	S
Output rate	5Hz、15Hz、35Hz、50Hz can be setting				
Interface type	RS232/RS485/RS422/TTL				
EMC	According to EN61000 and GBT17626				
MTBF	≥50000 hours/times				
Insulation Resistance	≥100MΩ				
Shockproof	100g@11ms、Triaxial (half sine wave)				
Anti-vibration	10grms、10～1000Hz				
Protection grade	IP67				
Cables	Standard configuration: 2m length, wear-resistant, wide temperature, shielded cable 5P * 5.7mm aviation connector				
Weight	386g(without cable)				

* The parameters table only specify values for ± 10 °, ± 30 °, ± 60 °, + 90, Any other range within ±180° (single axis), ±90° (dual axis) is available as well.

Spécifications électriques

parameter	condition	Min	Standard	Max	Unit
Power supply	Standard	9	12、24	36	V
	customized		Other voltage		V
	12V		40		mA
	24V		22		mA
Working current		-40		+85	℃
Working temperature		-55		+100	℃

Key words ：

Resolution：Refers to the sensor in measuring range to detect and identify the smallest changed value.

Absolute accuracy：Refers to in the normal temperature circumstances,the sensor absolute linearity, repeatability, hysteresis, zero deviation, and transverse error comprehensive error.

Long term stability : Refers to the sensors in normal temperature conditions, the deviation between the maximum and minimum values after a year's long time work.

Response time：Refers to the sensor in an angle change, the sensor output value reached the standard time required.

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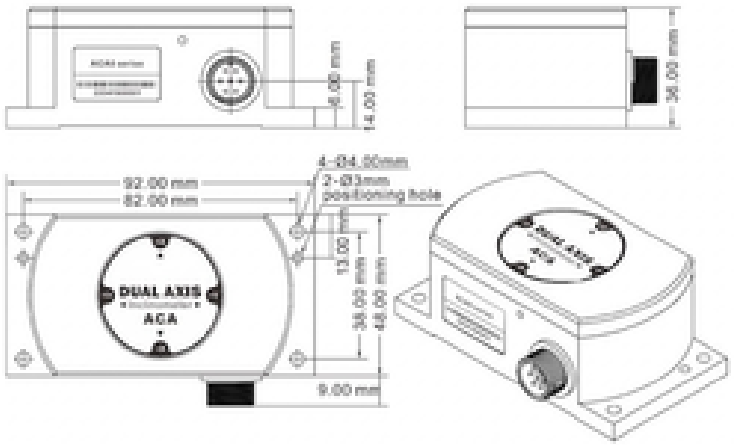
ACA Series

Inclinomètre biaxe durci haute précision | ±5 à ±90° | Sortie analogique ou numérique

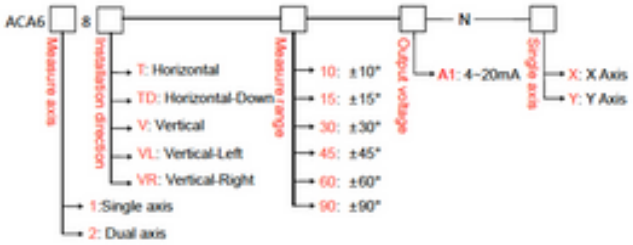
Dimensions



Shell size：L92×W48×H36mm
Installation size：L82×W38×H6mm
Installation screws：4 M4 screws/2 M3 dowel pins

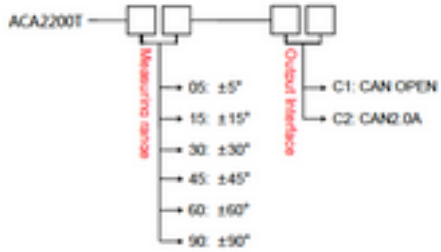
Configuration, options

Version 4-20 mA



E.g ACA618T-10-A1-N-X:Single axis/Horizontal installation /±10°Measure range/4~20mA output current/X Axis.

Version CAN ou CANopen



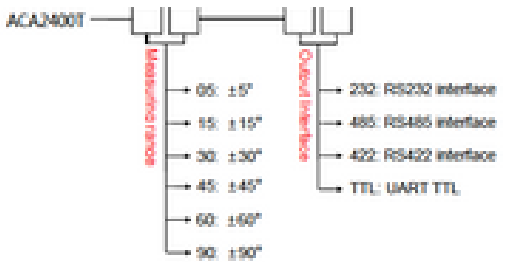
E.g : ACA2200T-05-C1 : ± 5 ° Measuring range / CANOPEN interface output.

Version RS-232/485 - standard

Example product code:	ACA	6	2	6	T	02	422	MB	-NC

Model	**ACA**
Series	
6	
Number of axes	
1	= Single Axis
2	= Dual Axis
Output	
6	= Digital
Orientation	
V	=Vertical
T	=Horizontal
Range	
02, 03 ,05, 10, 15, 30 (other ranges by request)	
Output	
232	=RS232
485	=RS485
TTL	=UART TTL
CAN	=CANOPEN/CAN2.0
Protocol	
MB	=MODBUS protocol
68	=68 (Handshake) Protocol
Connector	
NC	=5 pin Male M12 connector (Standard)

Version RS-232/485 - haute précision



E.g : ACA2400T-05-232 : Dual axis / ± 5 ° Measuring range / RS232 interface output.

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ACA Series

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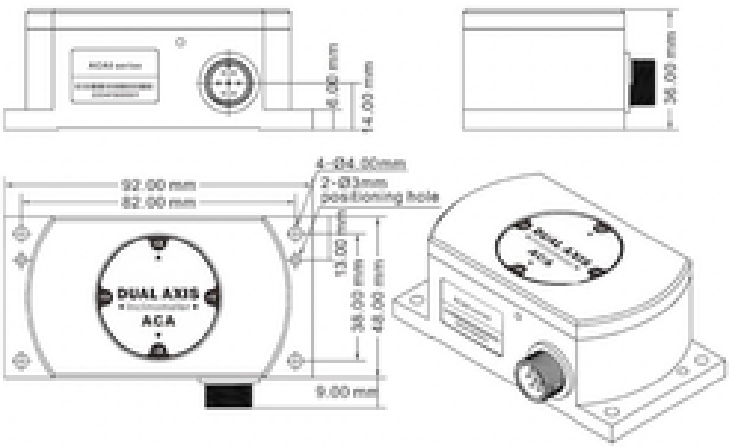
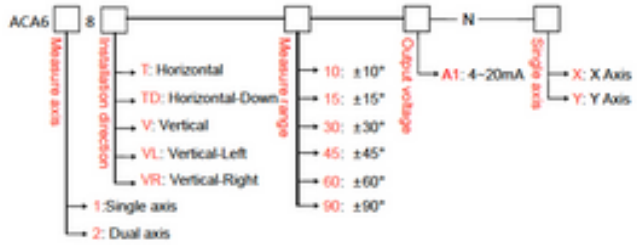
Dimensions



Shell size：L92×W48×H36mm
Installation size：L82×W38×H6mm
Installation screws：4 M4 screws/2 M3 dowel pins

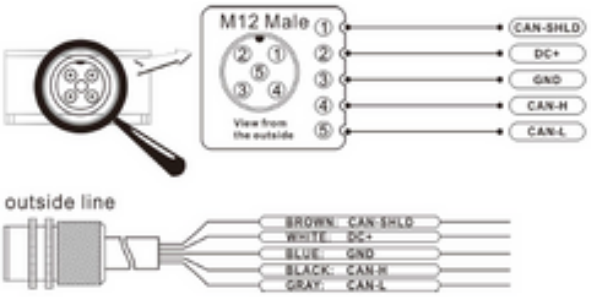
Câblage

Version 4-20 mA



E.g ACA618T-10-A1-N-X:Single axis/Horizontal installation /±10°Measure range/4~20mA output current/X Axis.

Version CAN ou CANopen



Version RS-232

1 : RS232 cable wire information

Line Color information	BLACK	WHITE	BLUE	BROWN	GRAY
	GND Power negative	RS232(RXD)	RS232(TXD)	DC9~36V Power supply positive	FACTORY Using

Version RS-485

2 : RS485 cable wire information

Line color information	BLACK	WHITE	BLUE	BROWN	GRAY
	GND Power negative	RS485(D+)	RS485(D-)	DC9~36V Power supply positive	FACTORY Using only

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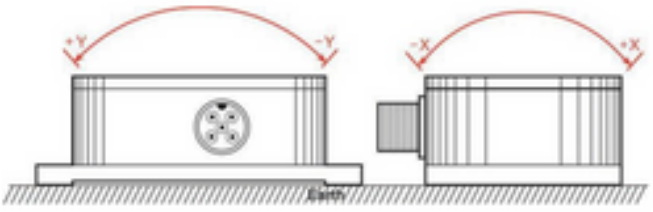
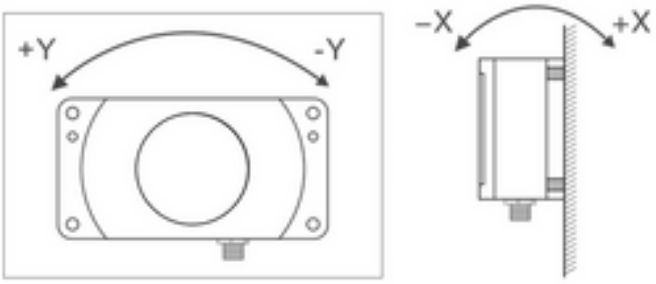
ACA Series

Inclinomètre biaxe durci haute précision | ±5 à ±90° | Sortie analogique ou numérique

Installation



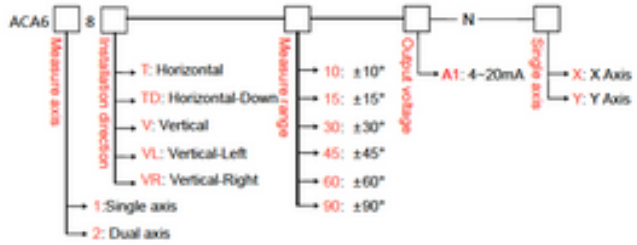
Horizontal mounting (ACA6XXT-)



Vertical mounting (ACA6XXV-)

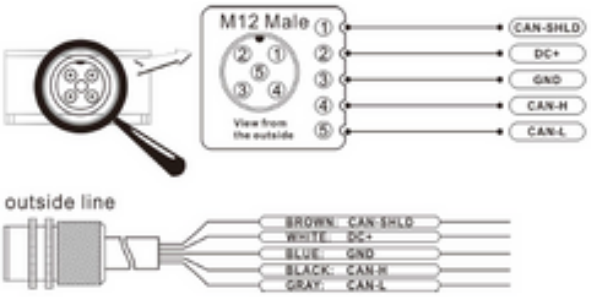
Câblage

Version 4-20 mA



E.g ACA618T-10-A1-N-X:Single axis/Horizontal installation /±10°Measure range/4~20mA output current/X Axis.

Version CAN ou CANopen



Version RS-232

1 : RS232 cable wire information

Line Color information	BLACK	WHITE	BLUE	BROWN	GRAY
	GND Power negative	RS232(RXD)	RS232(TXD)	DC9~36V Power supply positive	FACTORY Using

Version RS-485

2 : RS485 cable wire information

Line color information	BLACK	WHITE	BLUE	BROWN	GRAY
	GND Power negative	RS485(D+)	RS485(D-)	DC9~36V Power supply positive	FACTORY Using only

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