
IRIS

One-stop sourcing base



IRIS PRODUCT CATALOG

INCLINOMETER/TILT SWITCH/DIGITAL INCLINOMETER/3D COMPASS/ACCELEROMETER/GYROSCOPE/GYRO
NORTH FINDER/ATTITUDE AND HEADING REFERENCE SYSTEM

R&D

IRIS has advantageous technology testing environment, actively introduced advanced testing instruments from all over the world, established independent environment testing laboratory, product aging laboratory, 2D&3D posture calibration room, and shock & impact laboratory, which is especially applied in product research and factory acceptance.

IRIS also have all kinds of advanced testing instruments and devices, such as TEMP& HUMI testing machine, salt spray corrosion test chamber, high precision automatic computer turntable, high precision marble platform, digital temperature-constant drying oven, electrostatic discharge tester, 360 degree mechanical turntable, which made IRIS has obvious advantages compared with other company.

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IRIS has excellent hardware platform and also focus on soft ware research and development. There are more than 15 sets software developed by our company to ensure every product has professional testing software. They include multi-sensor network monitoring software, sensor remote monitoring software, 3D dynamic graphics synchronously tracing demo software, tilt switch warning and debugging software and all sensor gorge setting demo software, which can serve for all the operating system, such as XP, Win7, WinCE, and the latest Android operating system. These professional control software is created by professional technician team, can provide professional solution and service. It is our eternal mission to offer high quality product and reliable service.

The various R&D talents and powerful R&D section of make IRIS products reliable in quality and advanced in technology, make IRIS products increase clients' value, and offer a solid guarantee to produce more competitive products.

Besides powerful technology research strength, R&D section of IRIS also insist on the concept of both technical guidance and market orientation, and take the customer need as the highest mission.

At present, IRIS has owned most perfect product line and most professional technology and solutions in the industry.

Product Advantage

ANTI-SHAKE

Working at one meter underwater with the high water-proof IP68, adopting water-proof air-plug, sealing and reinforcing structure make it work well.

GOOD SCALABILITY

Products have good scalability and multiple interfaces offered. Powerful function and firm contour perfect union, been offered to every customers

WIDE Temperature

The fan-less design with low energy and cooling shell case , can work the excellent temperature , in a wide temperature range of -40~+80°degrees enviroment.

MINI SIZE

Customized by customers' requirements. With the perfect appearance and unique design.

WATER PROOF

The protection function for smog, fungus, Moisture can be suitable for variety of harsh enviroment.

IMPACT-RESISTANT

Through the test of impact resistant, with dropped freely from 90cm and no damage, can bear strongly shock, as the most reliable choice in harsh enviroment.



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TILT SWITCH ----

HCA131A---- 4-AXIS LEVEL CONTROL TILT SWITCH



Description:

High Accuracy 4 directions Control Switch(Switch Output)

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.4.16

General Description:

HCA131A is a full temperature high accuracy 4-Axis level control tilt switch which developed by IRIS company, the appearance design integrated high precision level bubble, professional application in level security alarm and platform leveling testing related industry, the switch using the transistor output circuit. The user can set the alarm angle valve value by himself, and may refer to high precision level bubble set factory measurement datum, solve the problem on without reference standard calibration after the equipment out of factory, the sensor will output switch signal(output voltage = power supply voltage) when it detect exceed the security angle value, drive electromagnetic valve shut off the hydraulic system, also can drive buzzer and alarm lamp, automatically warning the operator for safety construction. This product is mainly used for control various kinds of engineering machinery or equipment platform level, real-time automatic monitoring platform in front, back, left and right four directions tilt status . This

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product with design precision, again to compensate the temperature and linearity, integrated short-circuit, high-voltage transient, polarity and surge etc. full protection functions, suitable for a variety of harsh industrial environments operating. Using the industrial grade MCU, three-anti PCB, import cable, wide temperature metal enclosure and other measures etc. to improve the industry level on products reliability and stability.

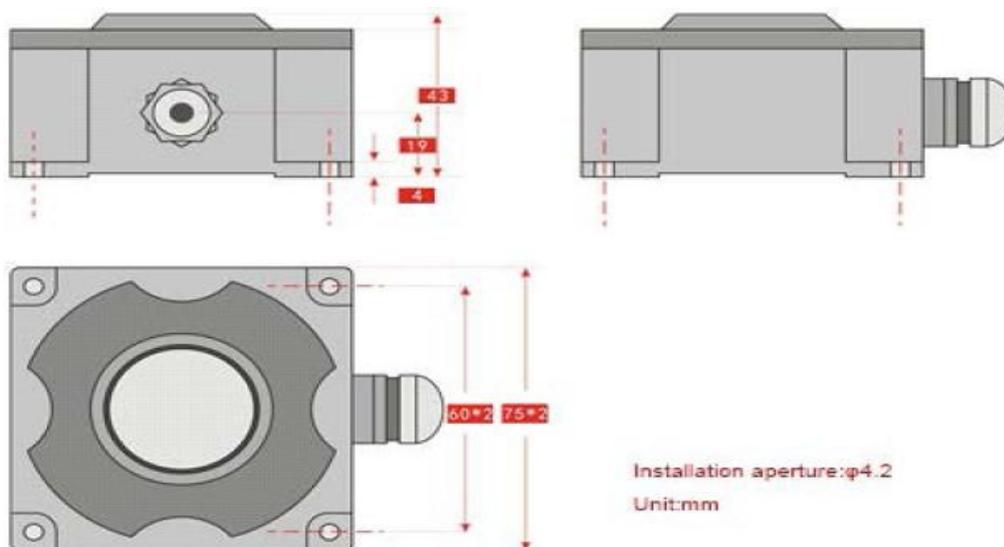
Features

- Dual-axis with 4-Axis level control
- Accuracy: please refer to the technical data
- RS232 series output
- Switch output (high-low level)
- Resolution : 0.01°
- Wide temperature working: -40~+85°C
- IP67 protection class
- Highly anti-vibration performance>2000g
- Power light hint
- Customer can set alarm angle value by himself
- Can refer to the level bubble Setting 0° function
- Positive/negative direction output is optional
- DC 9~36V wide voltage input
- Air-plug or direct lead cable optional (Default direct Lead cable 1M)

Application:

- Engineering mechanical vehicles
- Rail-mobile monitoring
- Various engineering mechanical measurement of dip angle
- oil-well drilling equipment
- Radar detection of vehicle platform
- Underground drill posture navigation
- Gun Barrel angle measurement in early shooting
- Based on the angle direction measurement
- Satellite communications vehicle posture detection
- Shield pipe jacking application
- Ship's navigation posture measurement
- Geological equipment inclined monitoring
- The intelligent excavator / crane / cranes / pile driver / drill machine / special vehicles / mine car / track car / fire truck / aerial vehicles / bridge machine

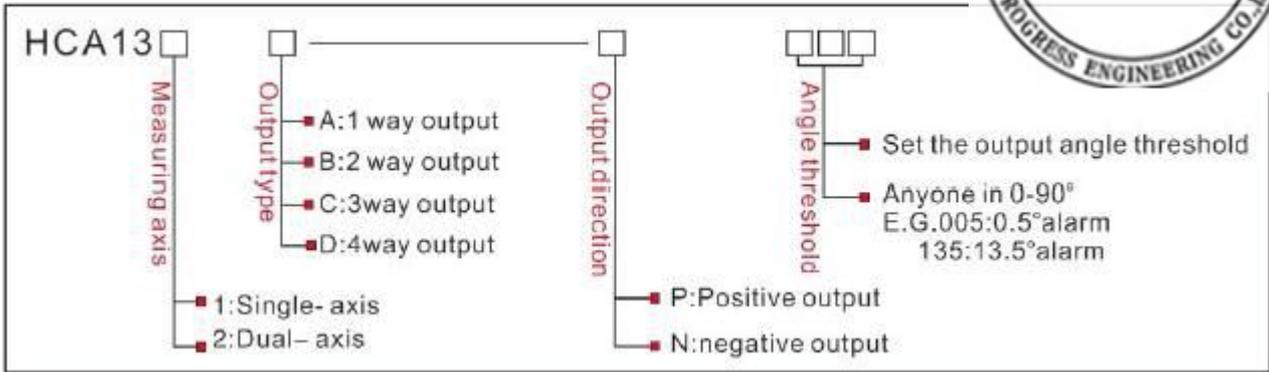
Dimension:



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Order Information:



E.g: HCA131A-P005: Single-axis/1 way/ positive direction output /0.5deg alarm

Technical Data:

Parameters	Conditions	HCA131A-P015	
Unit			
Measuring rang		±15	°
Measuring axis		X,Y	
Resolution		0.01	°
Absolute accuracy		0.02	°
Long term stability		0.01	
Zero temperature coefficient		-40~85° ±0.002	°/°C
Sensitivity temperature coefficient		-40~85° ≤100	ppm/°C
Power on time		0.1	S
Response time		0.2	s
EMC		According to EN61000 and GBT17626	
MTBF		≥50000 hours/times	
Insulation Resistance		≥100M	
Shockproof		100g@11ms、3Times/Axis(half sinusoid)	
Anti-vibration		10grms、10~1000Hz	
Protection glass		Direct lead cable IP67; Air-plug IP65	
Cables		Standard 1M length、wearproof、grease proofing、wide temperature、Shielded cables 4*0.4mm2	
Weight		130g(without cable)	

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Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12, 24	36	V
Alarm output current				500	mA
Working current	No-load		40		mA
Working temperature		-40		+85	°C
Store temperature		-55		+125	°C

HCA141A---- 4-AXIS LEVEL CONTROL TILT SWITCH



Description:

High Accuracy 4 directions Control Switch(Switch Output)

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.4.16



General Description:

HCA141A is a full temperature high accuracy four directions level control tilt switch which developed by IRIS company, the appearance design integrated high precision level bubble, professional application in level security alarm and platform leveling testing related industry, the switch using the transistor output Circuit. The user can set the alarm angle valve value by himself, and may refer to high precision level bubble set factory measurement datum, solve the problem on without reference standard calibration after the equipment out of factory, the sensor will output a no contact relay signals (drive current 1A) when it detect exceed the security angle value, open the electronic valve to control the corresponding hydraulic leg leveling. This product with design precision, again to compensate the temperature and linearity, integrated short-circuit, high-voltage transient, polarity and surge etc. full protection functions, suitable for a variety of harsh industrial environments operating. Using the industrial grade MCU,

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three-anti PCB, import cable, wide temperature metal enclosure and other measures etc. to improve the industry level on products reliability and stability.

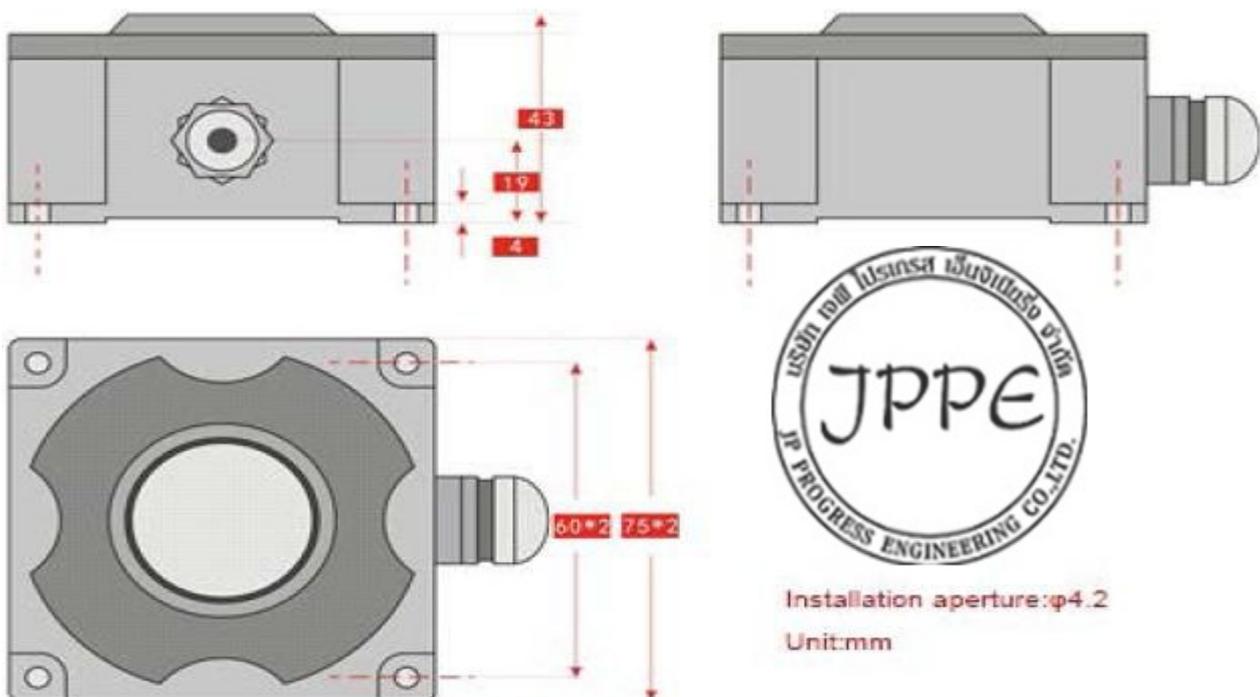
Features

- Dual-axis with 4 directions level control ●Accuracy: please refer to the technical data
- RS232 series output ●Relay output (normally open & normally closed)
- Resolution : 0.01° ●Wide temperature working: -40~+85°C
- IP67 protection class ●Highly anti-vibration performance>2000g
- Power light hint ●Customer can set alarm angle value by himself
- Can refer to the level bubble Setting 0° function ● Positive/negative direction output is optional
- DC 9~36V wide voltage input
- Air-plug or direct lead cable optional (Default direct Lead cable 1M)

Application:

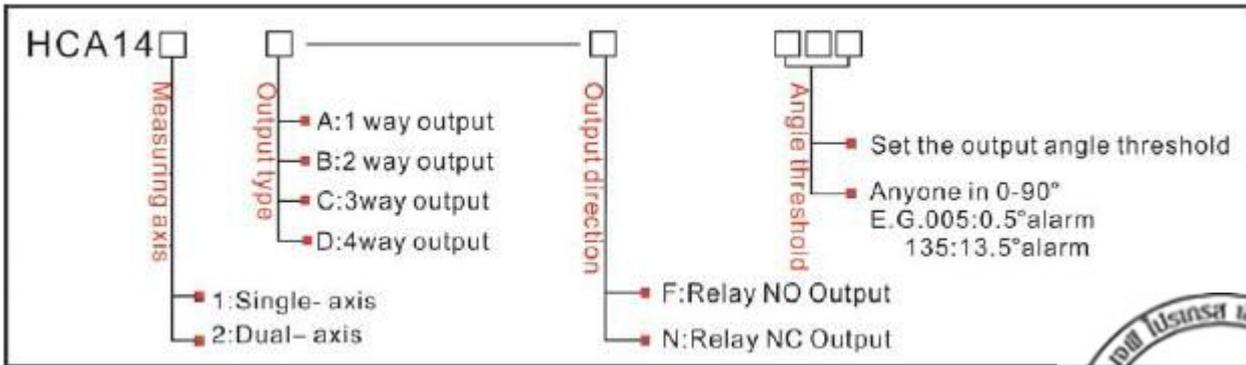
- Engineering mechanical vehicles ●Rail-mobile monitoring
- Various engineering mechanical measurement of dip angle ●oil-well drilling equipment
- Radar detection of vehicle platform ●Underground drill posture navigation
- Gun Barrel angle measurement in early shooting ●Based on the angle direction measurement
- Satellite communications vehicle posture detection ●Shield pipe jacking application
- Ship's navigation posture measurement ●Geological equipment inclined monitoring
- The intelligent excavator / crane / cranes / pile driver / drill machine / special vehicles / mine car / track car / fire truck / aerial vehicles / bridge machine

Dimension:

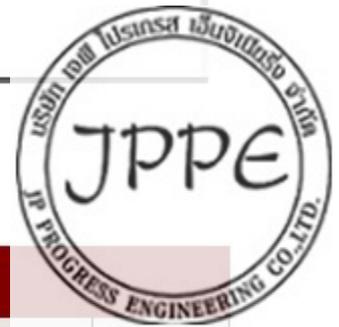


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Order Information:



E.g: HCA141A-P005: Single-axis/1 way/ relay normally open output /0.5deg alarm



Technical Data:

Parameters	Conditions	HCA141A-P015	
Measuring rang		±15	°
Measuring axis		X,Y	
Resolution		0.01	°
Absolute accuracy		0.02	°
Long term stability		0.01	
Zero temperature coefficient		-40~85° ±0.002	°/C
Sensitivity temperature coefficient		-40~85° ≤100	ppm/°C
Power on time		0.1	S
Response time		0.2	s
EMC	According to EN61000 and GBT17626		
MTBF	≥50000 hours/times		
Insulation Resistance	≥100M		
Shockproof	100g@11ms、3Times/Axis(half sinusoid)		
Anti-vibration	10grms、10~1000Hz		
Protection glass	Direct lead cable IP67; Air-plug IP65		
Cables	Standard 1M length、wearproof、grease proofing、wide temperature、Shielded cables 4*0.4mm2		
Weight	130g(without cable)		

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Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12, 24	36	V
Alarm output current				1000	mA
Working current	No-load		40		mA
Working temperature		-40		+85	℃
Store temperature		-55		+125	℃



LCA331A---- **LOW-COST TILT SWITCH SERIES**



Description:

Reply / Switch Tilt Switch

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.9.9

General Description:

LCA331A series a low cost tilt switch developed by IRIS for application like level safety alarming and platform level monitor and alarm. Alarm threshold value is pre-setable. when the inclination exceed set alarm value, it will output switch output signal(output voltage=input voltage), or output replay output signal to drive the solenoid valve hydraulic system or drive buzzer or alarming light for the safety of platform. Its main function is to monitor and alarm the(dual axis or single axis) inclination of platform automatically. LCA3 series tilt switch has high accuracy bubble for zero reference, LED alarming function.

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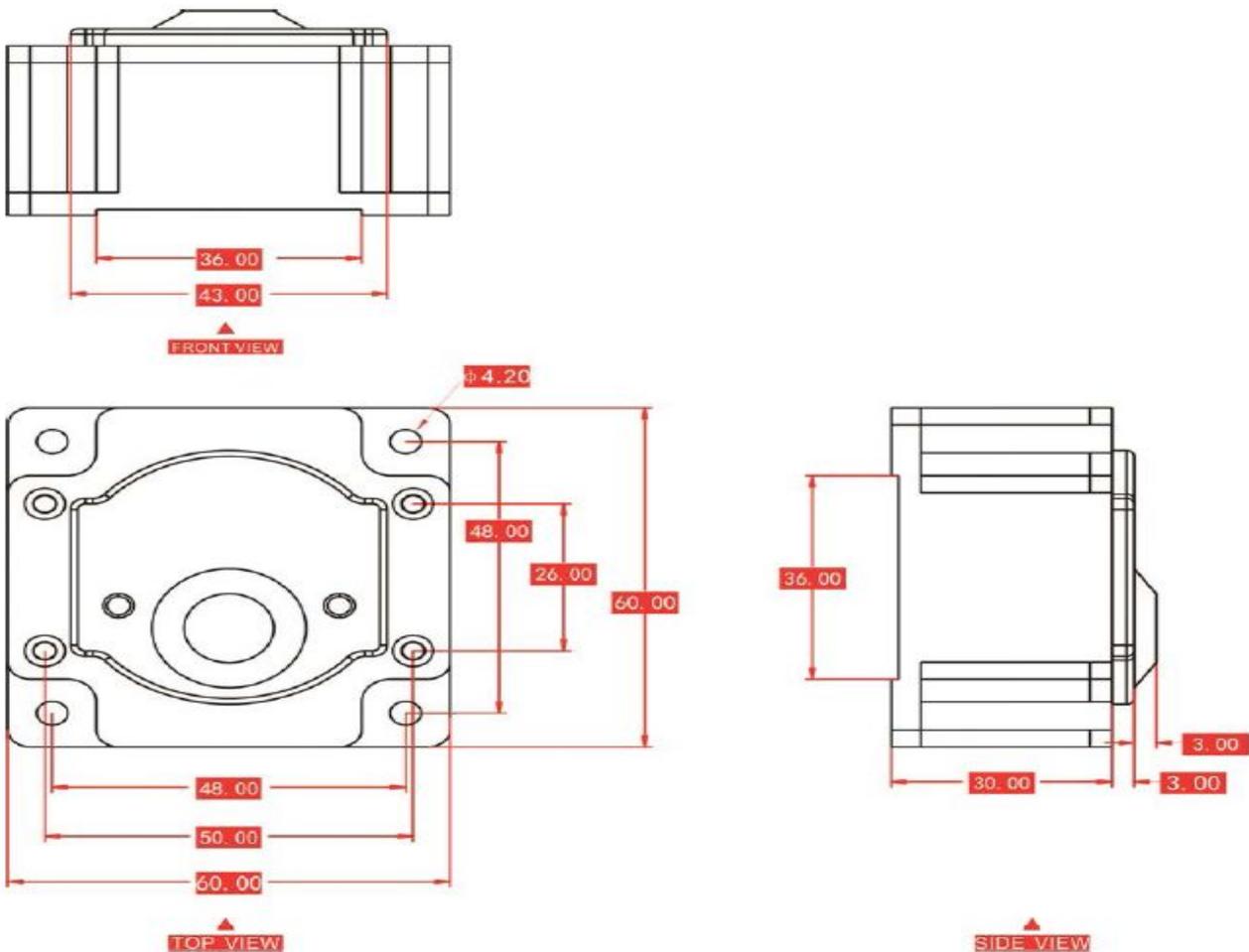
Features

- Single/dual axis ● accuracy: refer to parameter ● RS232 set alarm angle
- Switch/replay output ● wide working temp.: -40~+85°C ● resolution: 0.01°
- IP67 ● high anti-vibration >2000g ● direct lead cable
- Adjustable alarm value ● zero set function ● positive/negative output
- DC 9~36v input

Application:

- Engineering vehicles automatic leveling
- Bridge & dam detection
- Aerial platform vehicle, lifter safety & protection
- Medical facilities angle control
- Underground drill posture navigation
- Shield pipe jacking application
- The intelligent excavator / crane / cranes / pile driver / drill machine / special vehicles / mine car / track car / fire truck / aerial vehicles / bridge machine

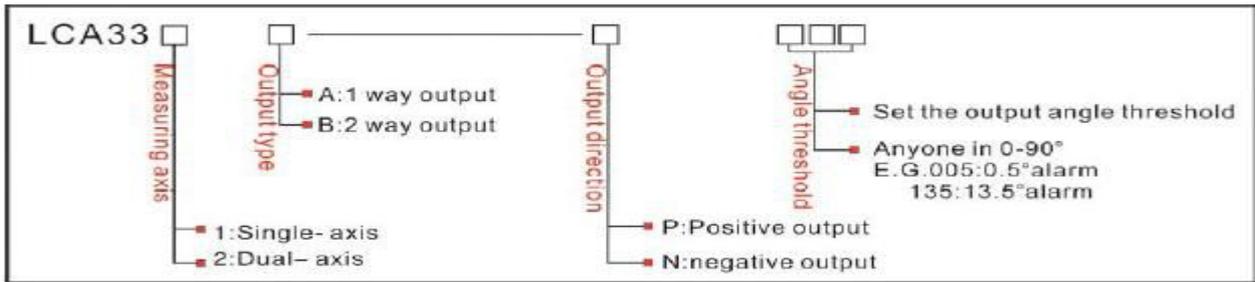
Dimension:



unit: L60XW60XH36mm

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Order Information:



E.g: HCA141A-P005: Single-axis/1 way/ relay normally open output /0.5deg alarm

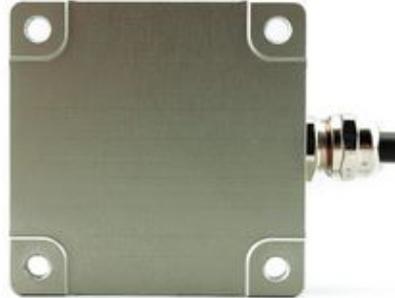
Technical Data:

parameter	LCA331A-N015	unit
Measuring range	±15	°
Measuring axis	X,Y	
Resolution	0.05	°
Absolute accuracy	0.1	°
Long-term stability	0.05	
Zero temp. coefficient	-40~85° ±0.006	°/°C
Temp. Sensitivity coefficient	-40~85° ≤100	ppm/°C
Power on time	0.1	S
Response time	0.2	s
Electromagnetic compatibility	Per EN61000 and GBT17626	
MTBF	≥50000hours/time	
IR	≥100mge	
Impact resistance	100g@11ms、 3 times/axis(half sinusoid)	
Anti-shock	10grms、 10~1000Hz	
waterproof	IP67	
cable	1m, durable, grease proof, wide temperature, shield cable, 4 x 0.4 mm2	
weight	150g(exlude cable)	

Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12、 24	36	V
Alarm output current				1000	mA
Working current	No-load		40		mA
Working temperature		-40		+85	°C
Store temperature		-55		+125	°C

LCA341A---- **LOW-COST TILT SWITCH SERIES**



Description:

Reply Tilt Switch

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.10.31

General Description:

LCA341A series a low cost tilt switch developed by IRIS for application like level safety alarming and platform level monitor and alarm. There is relay output circuit inside. Alarm threshold value is pre-stable. when the inclination exceed set alarm value, it will output relay output signal(drive current 1A) to drive the solenoid valve hydraulic system or drive buzzer or alarming light for the safety of platform. Its main function is to monitor and alarm the(dual axis or single axis) inclination of platform automatically. It is well-designed, the temperature and linearity are compensated. It has short-circuit, high voltage, surge protection etc. And all its components meet the requirement of industry application.

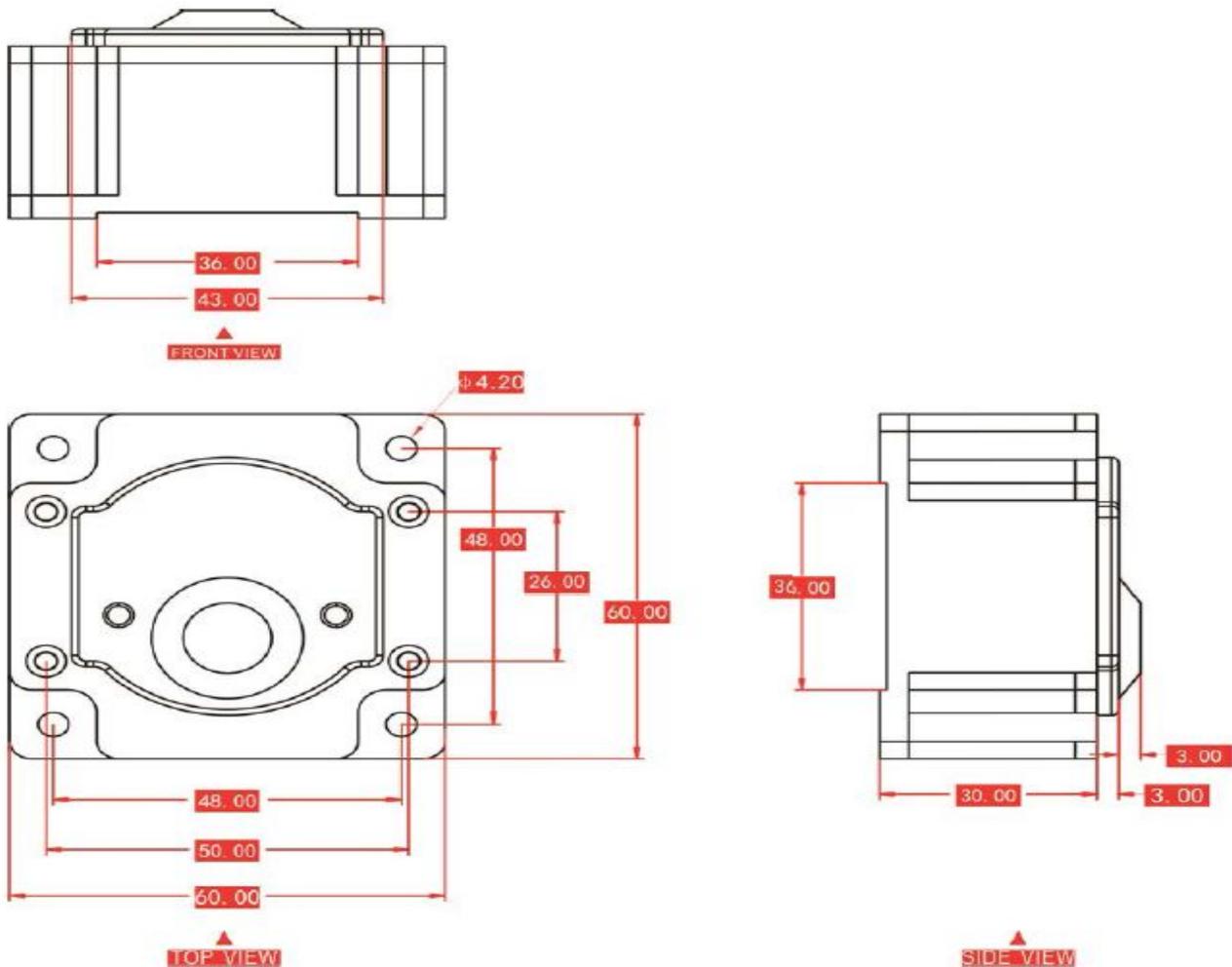
Features

- Single/dual axis ● accuracy: refer to parameter ● RS232 set alarm angle
- Switch/replay output ● wide working temp.: -40~+85°C ● resolution: 0.01°
- IP67 ● high anti-vibration >2000g ● direct lead cable
- Adjustable alarm value ● zero set function ● positive/negative output ● DC 9~36v input

Application:

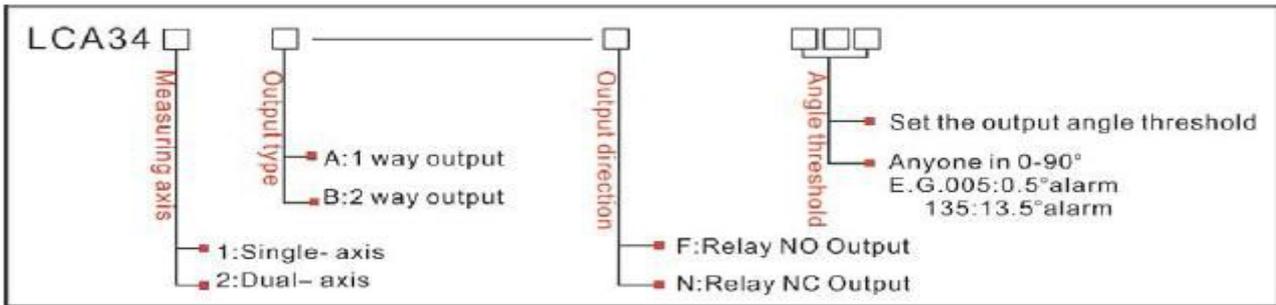
- Engineering vehicles automatic leveling
- Bridge & dam detection
- Aerial platform vehicle, lifter safety & protection
- Medical facilities angle control
- Underground drill posture navigation
- Shield pipe jacking application
- The intelligent excavator / crane / cranes / pile driver / drill machine / special vehicles / mine car / track car / fire truck / aerial vehicles / bridge machine

Dimension:



unit: L60XW60XH36mm

Order Information:



E.g: LCA341A-F005, single axis/single output way/replay output normal on/0.5deg alarm

Technical Data:

parameter	LCA341A-N015	unit
Measuring range	±15	°
Measuring axis	X,Y	
Resolution	0.05	°
Absolute accuracy	0.1	°
Long-term stability	0.05	
Zero temp. coefficient	-40~85° ±0.006	°/°C
Temp. Sensitivity coefficient	-40~85° ≤100	ppm/°C
Power on time	0.1	S
Response time	0.2	s
Electromagnetic compatibility	Per EN61000 and GBT17626	
MTBF	≥50000hours/time	
IR	≥100mge	
Impact resistance	100g@11ms、3 times/axis(half sinusoid)	
Anti-shock	10grms、10~1000Hz	
waterproof	IP67	
cable	1m, durable, grease proof, wide temperature, shield cable, 4 x 0.4 mm2	
weight	120g(exclude cable)	

Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12、24	36	V
Alarm output current				1000	mA
Working current	No-load		40		mA
Working temperature		-40		+85	°C
Store temperature		-55		+125	°C

SCA131A---- DUAL AXIS TILT SWITCH SERIES



Description:

Switch Output Type Tilt Switch

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.4.25

General Description:

SCA131A is a digital type dual-axis tilt switch developed by IRIS company who integrated import control core unit , and based on level security alarm and platform leveling detection related industries application , using the transistor output circuit.

Users can set alarm angle value by themselves, it will output the switch signal (output voltage = supply voltage) when exceeds the safety angle value, the drive solenoid valve will cut off the hydraulic system, also can drive the buzzer and warning lights, automatically warn the worker to operate safely .The products are mainly used to control a variety of construction machinery or equipment platform leveling, real-time automatic monitoring on platform tilt in four directions left, right, front and back status.

This product with design precision, again to compensate the temperature and linearity, integrated

short-circuit, high-voltage transient, polarity and surge etc. full protection functions, suitable for a variety of harsh industrial environments operating. Using the industrial grade MCU, three-anti PCB, import cable, wide temperature metal enclosure and other measures etc. to improve the industry level on products reliability and stability.

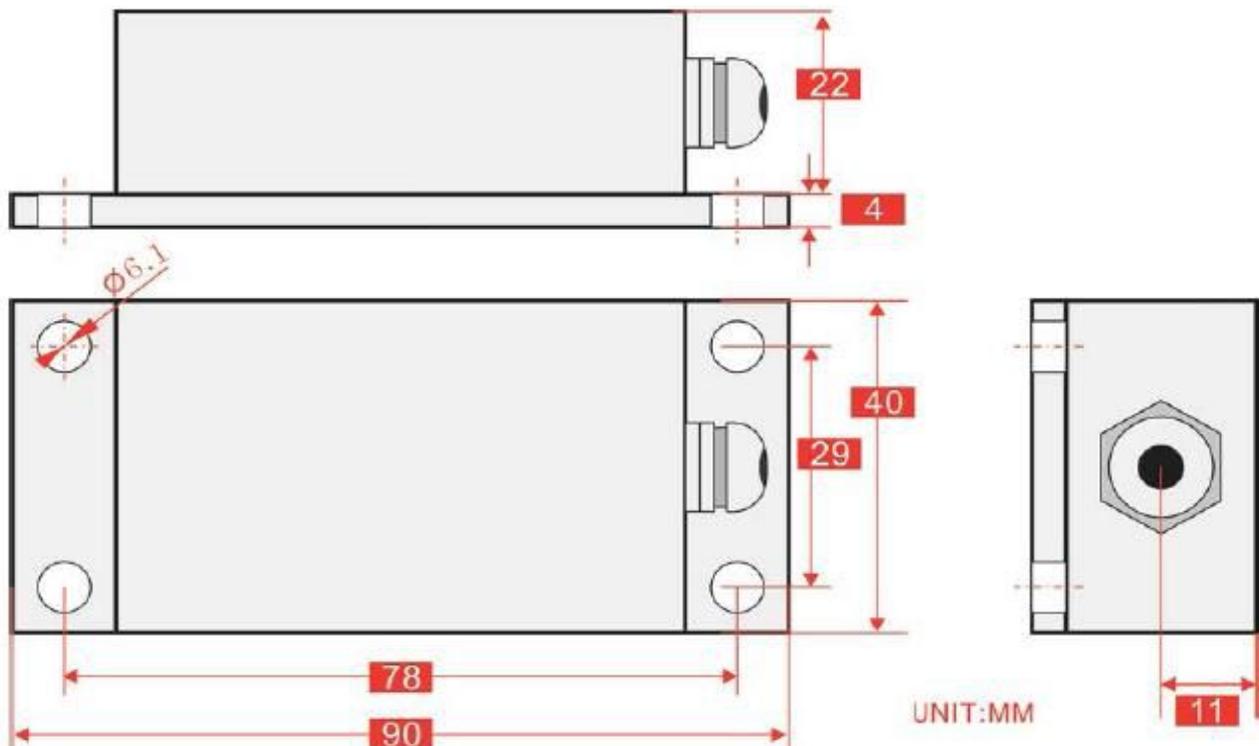
Features

- Dual-axis tilt switch ●Accuracy: please refer to the technical data
- RS232 series output ● Switch output (high-low level) ●Resolution : 0.01°
- Wide temperature working: -40~+85℃ ●IP67 protection class
- Highly anti-vibration performance>2000g ●Direct lead cable interface
- Customer can set alarm angle value by himself ● With Setting 0° function
- Positive/negative direction output is optional ●DC 9~36V wide voltage input

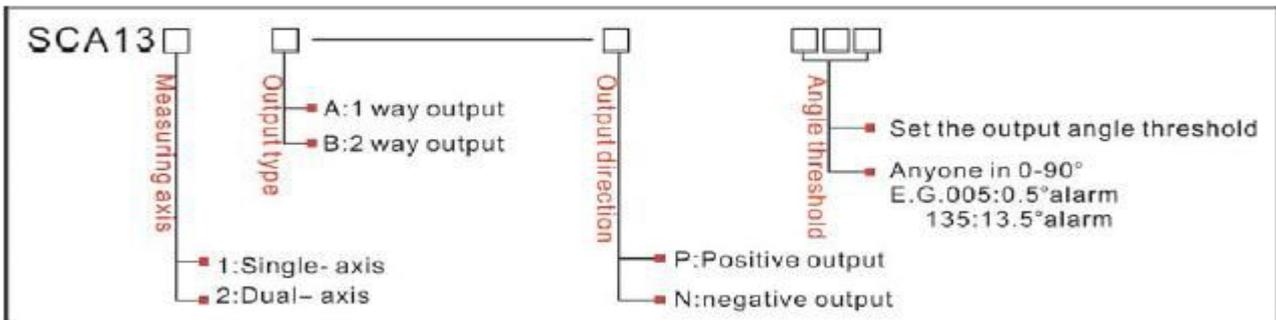
Application:

- Engineering mechanical vehicles ●Rail-mobile monitoring
- Various engineering mechanical measurement of dip angle ●oil-well drilling equipment
- Radar detection of vehicle platform ●Underground drill posture navigation
- Gun Barrel angle measurement in early shooting ●Based on the angle direction measurement
- Satellite communications vehicle posture detection ●Shield pipe jacking application
- Ship's navigation posture measurement ●Geological equipment inclined monitoring
- The intelligent excavator / crane / cranes / pile driver / drill machine / special vehicles / mine car / track car / fire truck / aerial vehicles / bridge machine

Dimension:



Order Information:



E.g: SCA131A-P005: Single-axis/1 way/ positive direction output /0.5deg alarm

Technical Data:

Parameters	Conditions	SCA131A-P015	Unit
Measuring rang		±15	°
Measuring axis		X,Y	
Resolution		0.01	°
Absolute accuracy		0.05	°
Long term stability		0.05	
Zero temperature coefficient	-40~85°	±0.006	°/°C
Sensitivity temperature coefficient	-40~85°	≤100	ppm/°C
Power on time		0.1	S
Response time		0.2	s
EMC	According to EN61000 and GBT17626		
MTBF	≥50000 hours/times		
Insulation Resistance	≥100M		
Shockproof	100g@11ms、3Times/Axis(half sinusoid)		
Anti-vibration	10gms、10~1000Hz		
Protection glass	IP67		
Cables	Standard 1M length、wearproof、grease proofing、wide temperature、Shielded cables 4*0.4mm2		
Weight	120g(without cable)		

Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12、24	36	V
Alarm output current				500	mA
Working current	No-load		40		mA
Working temperature		-40		+85	°C
Store temperature		-55		+125	°C

SCA131Z---- DUAL AXIS TILT SWITCH SERIES



Description:

The Switch Output Type Multidirectional Tilt Switch (Z-Axis Measurement)

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.4.25

General Description:

SCA131Z is a digital dual-axis tilt switch developed by IRIS company to the Z–Axis measurement application, level security alarm and platform level detection related industry application. In industrial applications, it is unpredictable the measured object inclination towards X or Y direction, which means that the 360-degree horizontal posture may tilt to any one direction, under this application if you use single-axis X or dual-axis XY unable to accurately measure, the Z-axis tilt can meet customer demand, integrated operation of the X-axis and Y-axis data, get the Z-axis tilt angle.

Users can set alarm angle value by themselves, it will output the switch signal when exceeds the safety angle value, will cut off the hydraulic system, also can drive the alarm to warn the worker to operate safely .This product with design precision, again to compensate the temperature and linearity, integrated short-circuit, transformer, and surge etc. full protection functions, suitable for a variety of harsh industrial

environments operating.

Using the industrial grade MCU, three-anti PCB, import cable, wide temperature metal enclosure and other measures etc. to improve the industry level on products reliability and stability.

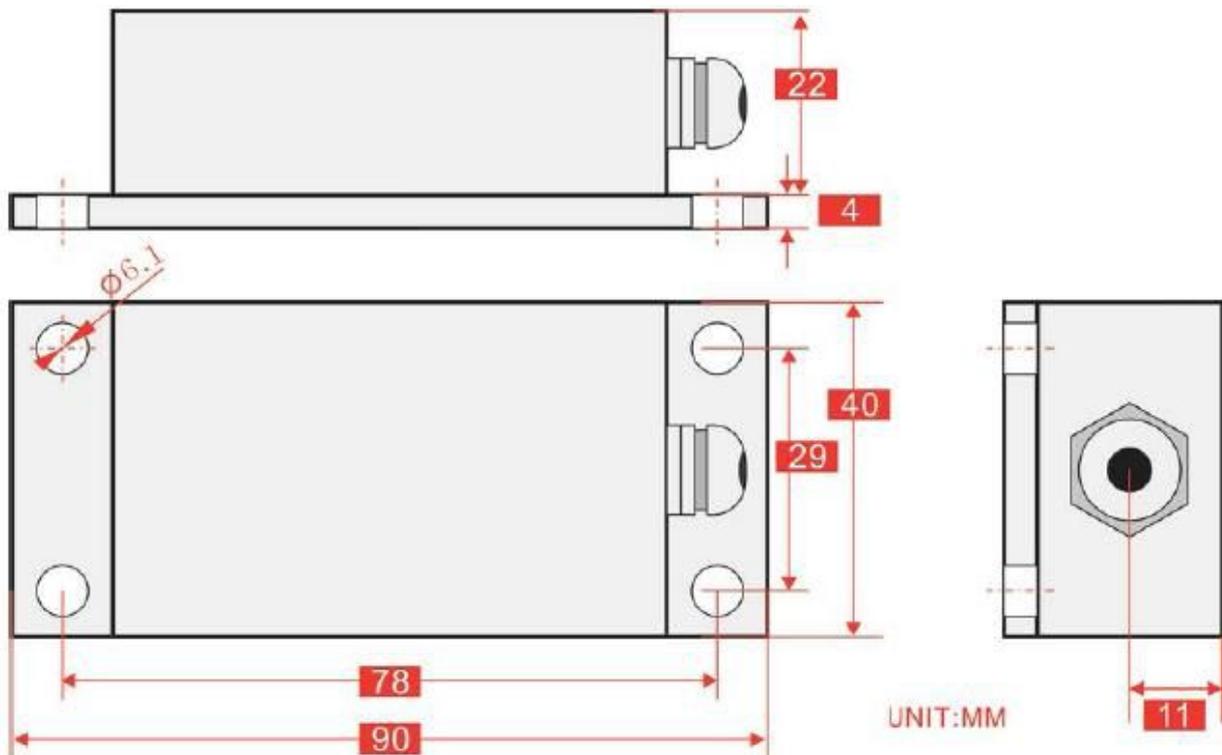
Features

- Z-axis tilt measurement ●Accuracy: please refer to the technical data
- RS232 series output ● Switch output (high-low level) ●Resolution : 0.01°
- Wide temperature working: -40~+85℃ ●IP67 protection class
- Highly anti-vibration performance>2000g ●Direct lead cable interface
- Customer can set alarm angle value by himself ● With Setting 0° function
- Positive/negative direction output is optional ●DC 9~36V wide voltage input

Application:

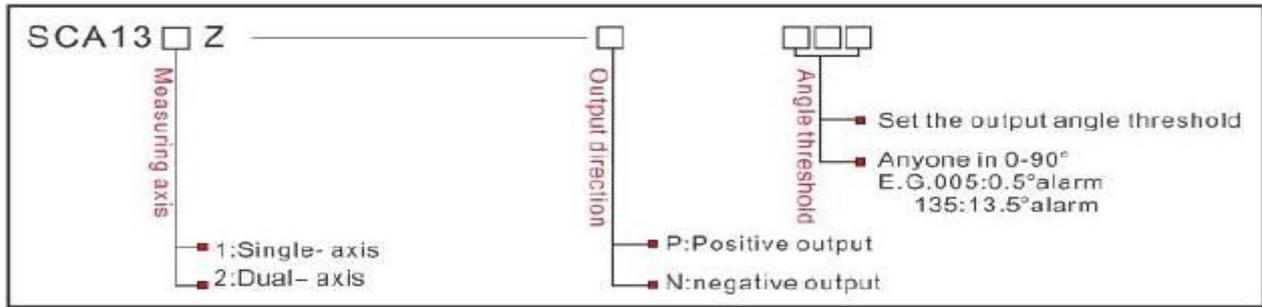
- Engineering mechanical vehicle ●Rail-mobile monitoring ●oil-well drilling equipment
- Engineering mechanical measurement of dip angle ●Underground drill posture navigation
- Satellite communications vehicle posture detection ●Pier posture measuring
- Gun Barrel angle measurement in early shooting ●Rubber hose flexural measuring

Dimension:



Size: L90×W40×H26mm

Order Information:



E.g: SCA131Z -P005:Single-axis/1 way/ positive direction output /0.5deg alarm

Technical Data:

Parameters	Conditions	SCA131Z-P015	Unit
Measuring rang		±15	°
Measuring axis		Z Axis	
Resolution		0.01	°
Absolute accuracy		0.05	°
Long term stability		0.05	
Zero temperature coefficient	0-40~85°	±0.006	°/°C
Sensitivity temperature coefficient	-40~85°	≤100	ppm/°C
Power on time		0.1	S
Response time		0.2	s
EMC	According to EN61000 and GBT17626		
MTBF	≥50000 hours/times		
Insulation Resistance	≥100M		
Shockproof	100g@11ms、3Times/Axis(half sinusoid))		
Anti-vibration	10grms、10~1000Hz		
Protection glass	IP67		
Cables	Standard 1M length、wearproof、grease proofing、wide temperature、Shielded cables 4*0.4mm2		
Weight	120g(without cable)		

Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12、24	36	V
Alarm output current				500	mA
Working current	No-load		40		mA
Working temperature		-40		+85	°C
Store temperature		-55		+125	°C

SCA141A---- **DUAL AXIS TILT SWITCH SERIES**



Description:

SCA141A Reply Output Type Tilt Switch

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.4.25

General Description:

SCA141A is a digital type dual-axis tilt switch developed by IRIS company who integrated Finland control core unit, and based on level security alarm and platform leveling detection related industries application, built-in relay output circuit. \Users can set alarm angle value by themselves, it will output a no contact relay signals (drive current 1A)when exceeds the safety angle value, Open the electronic valve to control the corresponding hydraulic leg leveling .This product with design precision, again to compensate the temperature and linearity, integrated short-circuit, high-voltage transient, polarity and surge etc. full protection functions, suitable for a variety of harsh industrial environments operating. Using the industrial grade MCU, three-anti PCB, import cable, wide temperature metal enclosure and other measures etc. to improve the industry level on products reliability and stability.

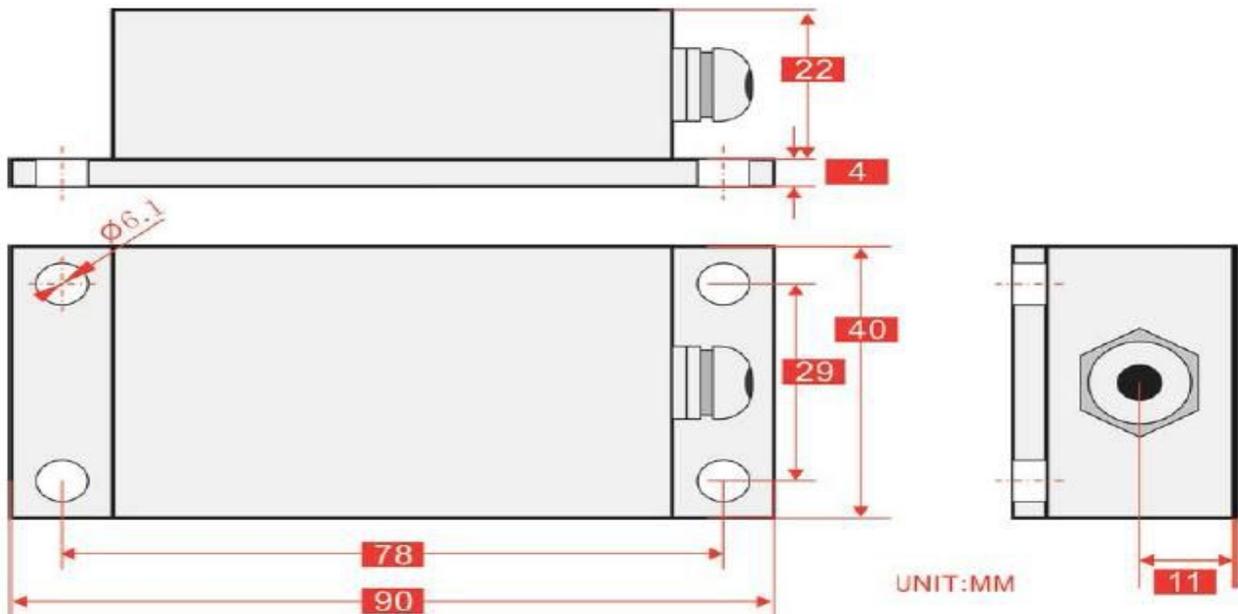
Features

- Dual-axis tilt switch
- Accuracy: please refer to the technical data
- DC 9~36V wide voltage input
- RS232 series output
- Switch output (high-low level)
- Resolution : 0.01°
- Wide temperature working: -40~+85°C
- Positive/negative direction output is optional
- Highly anti-vibration performance>2000g
- Direct lead cable interface
- IP67 protection class
- Customer can set alarm angle value by himself
- With Setting 0° function

Application:

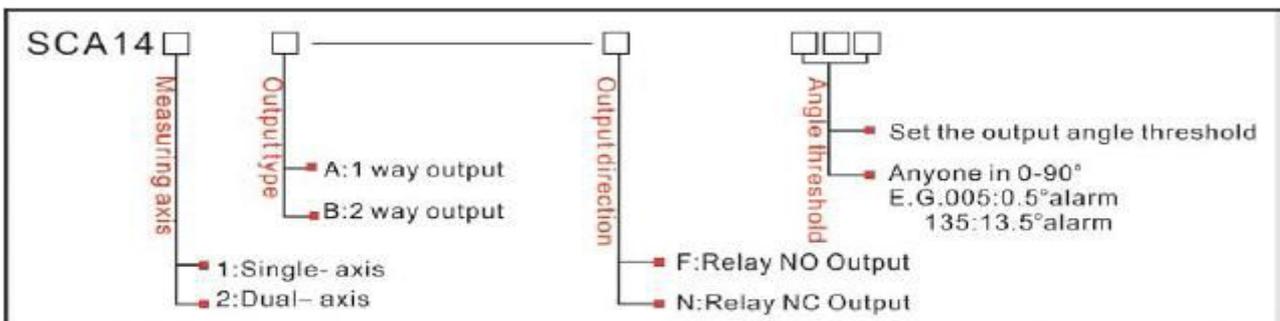
- Engineering mechanical vehicles
- Rail-mobile monitoring
- Radar detection of vehicle platform
- Underground drill posture navigation
- Based on the angle direction measurement
- Shield pipe jacking application
- Ship's navigation posture measurement
- Geological equipment inclined monitoring
- Various engineering mechanical measurement of dip angle
- The intelligent excavator / crane / cranes / pile driver / drill machine / special vehicles / mine car / track car / fire truck / aerial vehicles / bridge machine

Dimension:



SIZE:90mm×40mm×26

Order Information:



E.g: SCA141A-F005 : Single-axis/1 way/ Relay normal open output /0.5° alarm

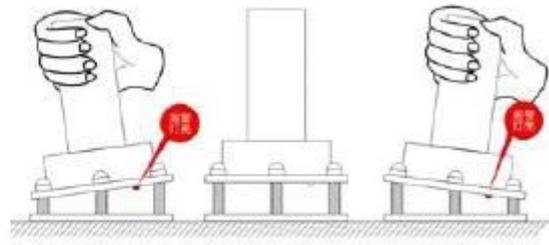
Technical Data:

Parameters	Conditions	SCA141A-N015		UNIT
單位 Measuring rang		±15		°
Measuring axis		X,Y		
Resolution		0.01		°
Absolute accuracy		0.05		°
Long term stability		0.05		
Zero temperature coefficient		-40~85°	±0.006	°/°C
Sensitivity temperature coefficient		-40~85°	≤100	ppm/°C
Power on time		0.1		S
Response time		0.2		s
EMC	According to EN61000 and GBT17626			
MTBF	≥50000 hours/times			
Insulation Resistance	≥100M			
Shockproof	100g@11ms、3Times/Axis(half sinusoid)			
Anti-vibration	10grms、10~1000Hz			
Protection glass	IP67			
Cables	Standard 1M length、wearproof、grease proofing、wide temperature、Shielded cables 4*0.4mm2			
Weight	120g(without cable)			

Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12、24	36	V
Alarm output current				1000	mA
Working current	No-load		40		mA
Working temperature		-40		+85	°C
Store temperature		-55		+125	°C

SCA161A---- DUAL AXIS TILT SWITCH SERIES



SCA161A 宝塔双轴四向倾角开关
摇一摇 就警报

Description:

Hand-operated Switch Type Dual-axis Tilt Switch

Production implementation standard reference:

- Enterprise quality system standards: ISO9001: 2008 standard (certification number: 128101)
- Tilt sensor production standards: GB / T 191 SJ 20873-2003 inclinometer general specification of Level
- The Academy of metrology and quality inspection Calibrated in accordance to: JJF1119-2004 Electronic Level calibration Specification
- Gyro accelerometer test standard: QJ 2318-92 Gyro accelerometer test methods
- Software development reference standard: GJB 2786A-2009 military software development General requirements
- Product environmental testing standards: GJB150
- Electromagnetic anti-interference test standards: GB / T 17626
- Version: Ver.05
- Date:2014.4.30

General Description:

SCA161A is a human nature hand-operated tilt switch which developed by Rion Company to the engineering machinery & special vehicles fields, when the device platform level exceeds the initial set alarm angle(the user can set the alarm value by himself), the instrument will output a relay signal (drive current 1A), open the electronic valve to control the corresponding circuits, and the LED light of the tilt switch can flashing alarm to remind. The product also integrated the humane nature hand-operated alarm function, the operator can shake the tilt switch by his hand before the equipment running, it also will drive the LED light of the tilt switch for flashing alarm to warn the operator that the instrument in normal working status, double insurance to further reduce the accident caused by the equipment failure . This product with precision design, again to compensate the temperature and linearity, integrated

short-circuit, high-voltage transient, polarity and surge etc. full protection functions, suitable for a variety of harsh industrial environments operating. Using the industrial grade MCU, three-anti PCB, import cable, wide temperature metal enclosure and other measures etc. to improve the industry level on products reliability and stability. Professionally be used for aerial working mobile platform, cranes, semi-automatic elevator and engineering platform level control, etc.

Features

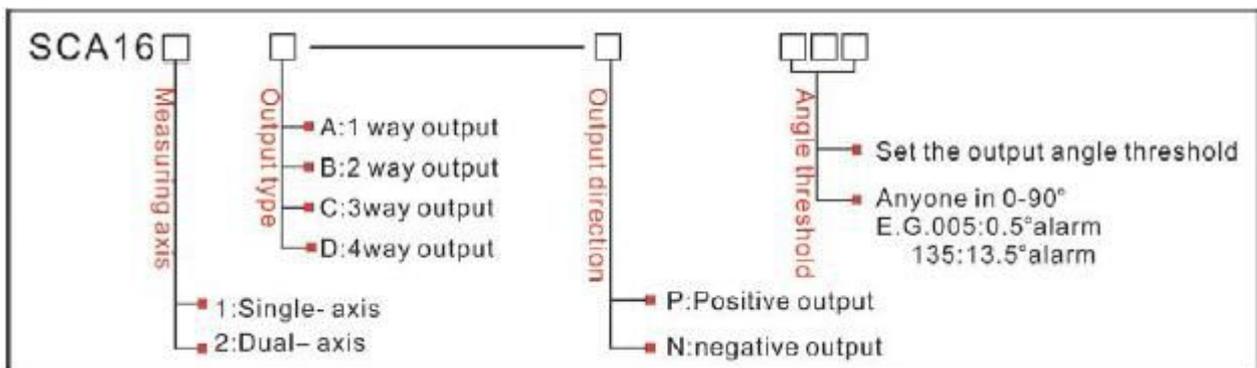
- Dual-axis with 4 directions tilt measurement ● Measuring range $\pm 1 \sim \pm 90^\circ$ optional
- Resolution : 0.01° ● Switch output (High and low-level)
- Wide temperature working : $-40 \sim +85^\circ\text{C}$ ● Hand-operated alarm function
- IP67 protection class ● Highly anti-vibration performance $>2000g$
- Direct lead cable interface ● Customer can set alarm angle value by himself
- With Setting relative 0° function ● Positive/negative direction output is optional
- Size: $110 \times 90 \times 73\text{mm}$ ● DC $9 \sim 36\text{V}$ wide voltage input
- RS232 computer connection ● The upper level bubble horizontal installation reference
- LED warning function ● Switch output can customized



Application:

- Engineering machinery vehicles ● Aerial working mobile platform ● Semi-automatic elevator
- Intelligent excavator ● Crane ● Special vehicles leveling
- Bridge erection equipment ● Aerial working fire engines ● Coal mechanical vehicles

Order Information:



E.g: SCA161A-P005: Single axis/1 way/Positive direction output/ 0.5° alarm

Technical Data:

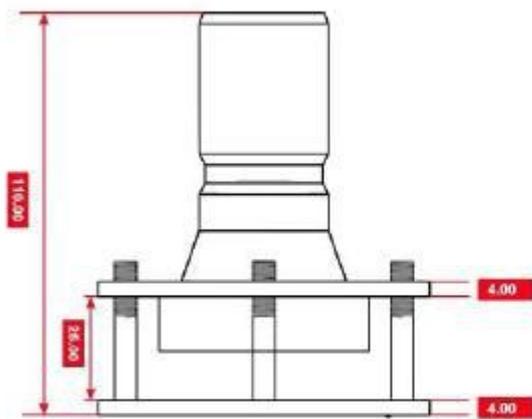
Parameters	Conditions	SCA161A-N015	
UNIT			
Measuring rang		±15	°
Measuring axis		X	
Resolution		0.01	°
Absolute accuracy		0.05	°
Long term stability		0.05	
Zero temperature coefficient	-40~85°	±0.006	°/°C
Sensitivity temperature coefficient	-40~85°	≤100	ppm/°C
Power on time		0.1	S
Response time		0.2	s
EMC	According to EN61000 和 GBT17626		
MTBF	≥50000 hours/times		
Insulation Resistance	≥100M		
Shockproof	100g@11ms、3Times/Axis(half sinusoid)		
Anti-vibration	10grms、10~1000Hz		
Protection glass	IP67		
Cables	standard 1M length、wearproof、grease proofing、wide temperature、Shielded cables 4*0.4mm2		
Weight	120g(without cables)		



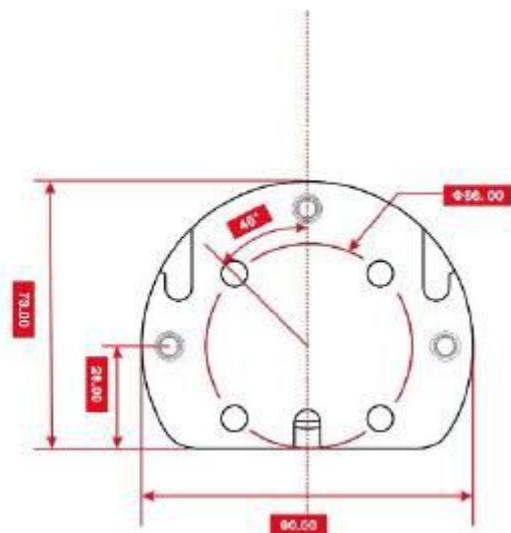
Electronic Characteristics:

Parameters	Conditions	Min	Standard	Max	Unit
Power supply	Standard	9	12、24	36	V
Alarm output current				1000	MA
Working current	No-load		40		MA
Working temperature		-40		+85	℃
Store temperature		-55		+125	℃

Dimension:



Front view



Bottom view

Unit:mm

SIZE:H110.00×L90.00×W73.00