

Annexes



Switching Test Box

- Short circuit protection, sleep mode, silent mode
- 2500mAH battery capacity with mobile power function

P.N-02



Analog Test Box

- Analog current, voltage and switching modes selectable
- Measurement accuracy up to 0.4%
- 4000mAH high-capacity battery, long battery life, can be used as a rechargeable battery

P.N-03



Connecting Cable

- The fastened mechanical connection guarantees the product's seismic performance
- Some products support IO-Link/Ethercat/Profibus Bus standard
- Can be customized anti-slag, oil-proof, IP69K, with LED lights, Shielding etc.

P.N-05



NPN-PNP Signal Conversion Cable

- Small size, easy wiring
- NPN to PNP, PNP to NPN are available
- Support NO and NC output

P.N-12

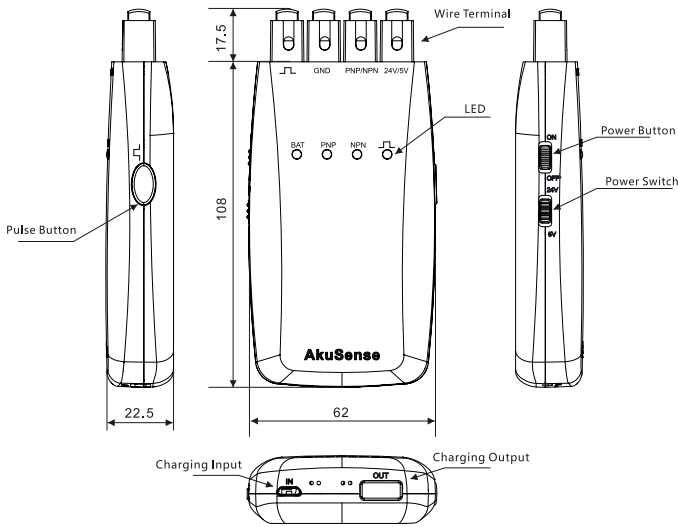


Appearance		
Detection type	NPN/PNP	Auto recognition
Output voltage	4.8~5.2V 19.0~24.0V	5V Output 24V Output
Output current	≤0.4A ≤0.15A	5V Output 24V Output
Battery capacity	2500mAH	
Theoretical working time	10h	24V Output 15mA
Charging time	6h	
Output voltage for charging external device	4.8~5.2V	Portable Power Bank
Operating temperature	-10°C~+45°C	
Weight	145g	
Size	125*62*23mm	
Others functions	Mute Mode, Sleep Mode, Output Short-circuit Protection	
Model No.	WT-2	

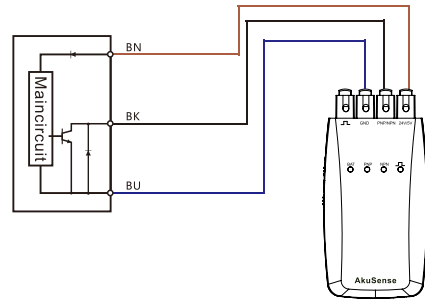
Dimensions

Circuit diagram

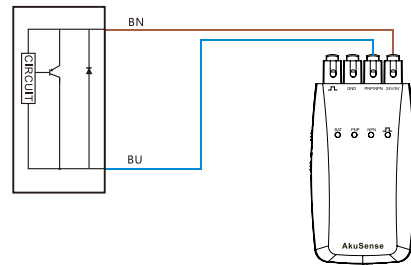
Unit: mm



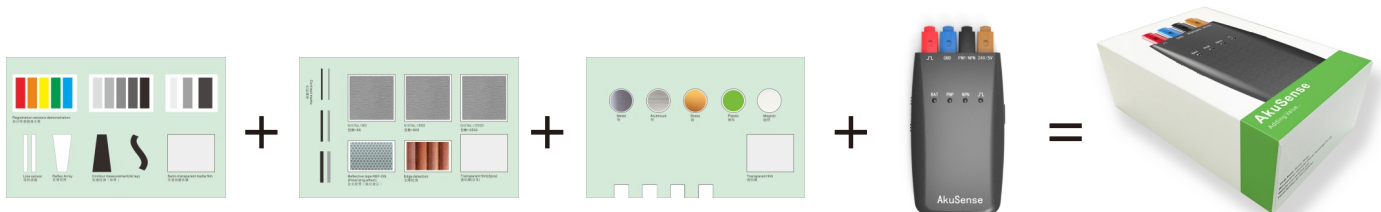
3-wire:



2-wire:



Accessories



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- Cables
- Tester

Guidance

Sensor tester kit
Sensor tester kit

Connecting Cable
M8
M12
Other

Signal conversion Cable
Signal conversion Cable

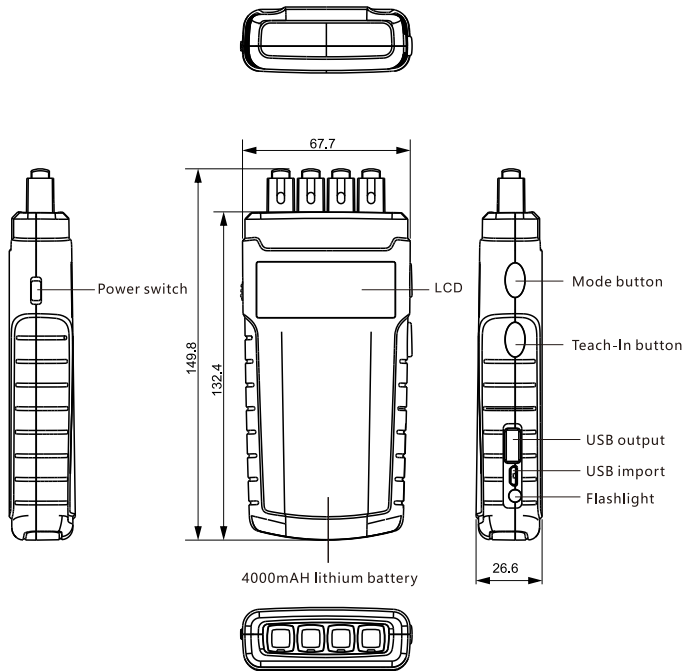
Analog Type



Appearance		
Detection type	NPN/PNP	Auto recognition
Measuring range	0~10V 0~20mA	Voltage mode Current mode
Measurement accuracy	≤0.04V (Full range) ≤0.04mA (Full range)	Voltage mode Current mode
Scan cycle	22ms 140ms 140ms	Digital mode Current mode Voltage mode
Output voltage	19V~24V 4.8V~5V	Brown Terminal Output USB Output
Output current	≤160mA ≤500mA	Brown Terminal Output USB Output
ADC accuracy	15-bit	
Battery capacity	4000mAH	
Charging time	9h	
Other functions	Power over current protection, sleep function, mute function, flashlight	
Working temperature	-10℃~+45℃	
Weight	200g	
Model No.	WD-1	

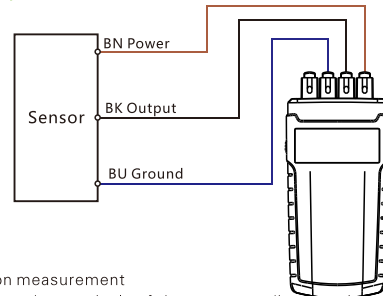
Dimensions

Unit: mm



Circuit diagram

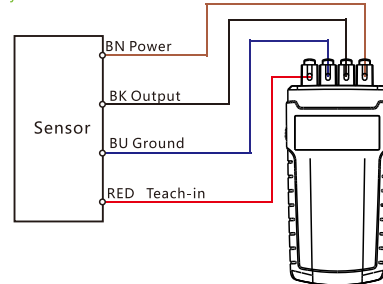
3-wire system:



Common measurement

- 1 Connect the terminals of the corresponding functions and turn on the power.
2. Select the corresponding measurement mode (voltage, current, digital).
3. The measurement results are displayed on the screen.

4-wire system:



Teach-in button

- 1 Connect the corresponding function terminals and turn on the power
- 2 Press the Teach-in button, the screen Teach-in area displays ON, then the red terminal will output high level, release the Teach-in button, the screen Teach-in area displays OFF, then the red terminal will output low level
- 3 Select the corresponding measurement mode (voltage V, current I, switch D)
- 4 The measurement result is displayed on the screen

1 Mode switching

Press the MODE button shortly to switch the test box in three modes: current (I), voltage (V), and switch (D). The customer can select the correct mode and connection according to the sensor type, the test result will be displayed on the screen, and the test box will store the current test mode, and will restore the previous state when it is restarted.

2. Battery

Battery status will be displayed on the upper right corner. The number of grids represents the remaining power. Grids flashing indicates that the power is insufficient and needs to be charged. The flashing during charging indicates the charging progress, when the charging is done, the whole grids will flash.

3. Sleep mode

If the test box does not operate for more than 10 minutes, the test box automatically enters the sleep state, the 24V power supply and the screen will be turned off, press the Mode button or the Teach-IN button, and the test box returns to the operable state.

4. Powerbank mode

Press the mode button in the off state, turn on the power button, the buzzer will sound twice, the test box sleep function will be invalid, the function has no memory, and the sleep function is enabled by default when it is turned on again.

5. Mute mode

Press and hold Teach-in for more than 6s, the buzzer will sound once, and the test box has entered silent mode. In the same operation, the buzzer will sound twice to indicate that the mute mode has been exited, and the test box will store the state, and will remain in the last state when it is turned on again.

6. Teach-in function

Press the teach button, the Teach-in (red) terminal will output a high level voltage, and the voltage logic will match the brown terminal voltage. When the button is released, the Teach-in (red) terminal will output a low level voltage, and the LCD will display the current Teach-in logic state.

7. Flashlight function

Press and hold the mode button for more than 2s, the light will light up, and the same operation can turn off the light.

8. Short circuit protection

When the output current is too high, short circuit protection will be inspired, and the screen will display 'SCP' during short circuit protection. After the short circuit condition is withdrawn, the test box will automatically return to normal state.

Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Vibration
Temperature
Cables
Tester

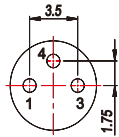
Guidance

Sensor tester kit
Sensor tester kit

M8 Cables

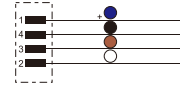
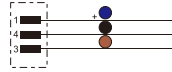
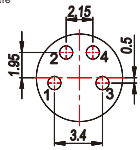
3 Pin

Female



4 Pin

Female



Type

Female, straight

PVC
PUR

3 Pin

2m cable	5m cable
CA08-S3F2C	CA08-S3F5C
CA08-S3F2R	CA08-S3F5R

4 Pin

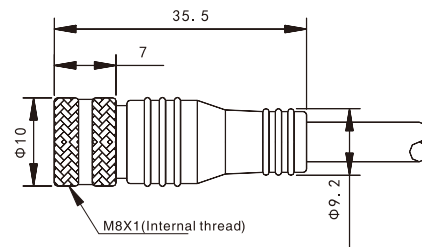
2m cable	5m cable
CA08-S4F2C	CA08-S4F5C
CA08-S4F2R	CA08-S4F5R

Specifications

Type	M8 straight cable
Coding type	A coding
Rated voltage	60V(3Pin)/30V(4Pin)
Rated current	3A
Pin Material	Gold-plated phosphor copper
Coupling screw	Nickel plated brass

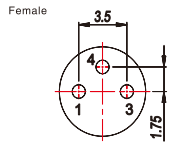
Insulation resistance	≥100MΩ
Cable Material	PVC/PUR
Cable length	Standard 2 or 5 m,customizable
Cores	0.25mm ²
Degree of protection	IP67/68
Operating temperature	-25~+85°C

Dimensions(Unit:mm)

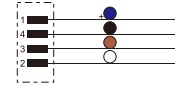
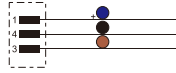
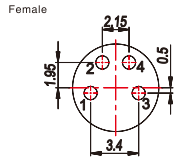


- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- Cables
- Tester
- Guidance
- Sensor tester kit
- Sensor tester kit

3 Pin



4 Pin



Type

Female , Right angle

PVC
PUR

3 Pin

2m cable

CA08-R3F2C
CA08-R3F2R

5m cable

CA08-R3F5C
CA08-R3F5R

4 Pin

2m cable

CA08-R4F2C
CA08-R4F2R

5m cable

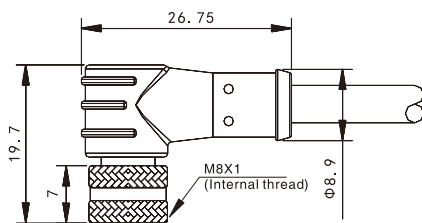
CA08-R4F5C
CA08-R4F5R

Specifications

Type	M8 Right angle Cable
Coding type	A coding
Rated voltage	60V(3Pin)/30V(4Pin)
Rated current	3A
Pin Material	Gold-plated phosphor copper
Coupling screw	Nickel plated brass

Insulation resistance	$\geq 100M\Omega$
Cable Material	PVC/PUR
Cable length	Standard 2 or 5 m, customizable
Cores	0.25mm ²
Degree of protection	IP67/68
Operating temperature	-25 ~ +85°C

Dimensions(Unit:mm)



- Fiber Optic
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Guidance

- Sensor tester kit
- Sensor tester kit

Connecting Cable

- M8
- M12
- Other

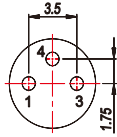
Signal conversion Cable

- Signal conversion Cable

M8 Cables

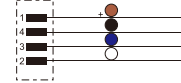
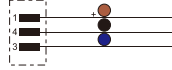
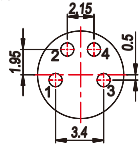
3 Pin

Female



4 Pin

Female



Type

Female , Right angle, LED, PNP

PVC
PUR

3 Pin

2m cable

CA08-R3F2C-LP
CA08-R3F2R-LP

5m cable

CA08-R3F5C-LP
CA08-R3F5R-LP

4 Pin

2m cable

CA08-R4F2C-LP
CA08-R4F2R-LP

5m cable

CA08-R4F5C-LP
CA08-R4F5R-LP

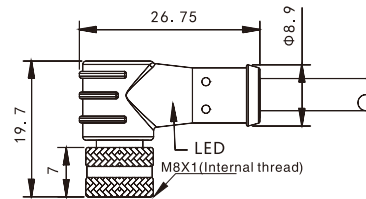
Specifications

Type	Cable with LED
Coding type	A coding
Rated voltage	60V(3Pin)/30V(4Pin)
Rated current	3A
Pin Material	Gold-plated phosphor copper
Coupling screw	Nickel plated brass

Insulation resistance	≥100MΩ
Cable Material	PVC/PUR
Cable length	Standard 2 or 5 m, customizable
Cores	0.25mm ²
Degree of protection	IP67/68
Operating temperature	-25~+85°C

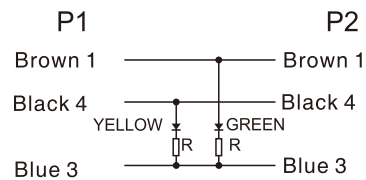
Dimensions(Unit:mm)

Female , Right angle, LED, PNP



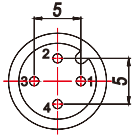
PNP

WIRE LIST



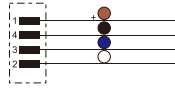
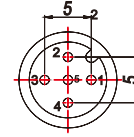
4 Pin

Female

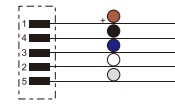


5 Pin

Female



4 Pin



5 Pin

Type

Female, Straight, Shielded	
PVC	
PUR	
Female, Straight	
PVC	
PUR	

2m cable	5m cable
CA12-S4F2C-S	CA12-S4F5C-S
CA12-S4F2R-S	CA12-S4F5R-S
2m cable	5m cable
CA12-S4F2C	CA12-S4F5C
CA12-S4F2R	CA12-S4F5R

2m cable	5m cable
CA12-S5F2C-5-S	CA12-S5F5C-5-S
CA12-S5F2R-5-S	CA12-S5F5R-5-S
2m cable	5m cable
CA12-S5F2C-5	CA12-S5F5C-5
CA12-S5F2R-5	CA12-S5F5R-5

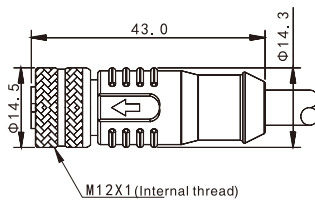
Specifications

Type	M12 Straight Cable
Coding type	A coding
Rated voltage	250V
Rated current	4A
Pin Material	Gold-plated phosphor copper
Coupling screw	Nickel plated brass

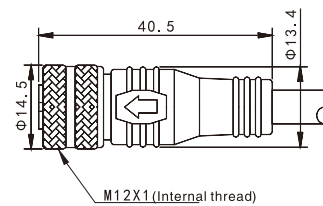
Insulation resistance	≥ 100MΩ
Cable Material	PVC/PUR
Cable length	Standard 2 or 5 m, customizable
Cores	0.34mm ²
Degree of protection	IP67/68
Operating temperature	-25 ~ +85°C

Dimensions(Unit:mm)

M12 Female, Straight, Shielded



M12 Female, Straight



- Fiber Optic
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- Tester

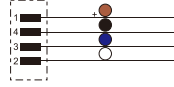
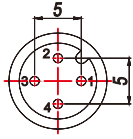
Guidance

Sensor tester kit
Sensor tester kit

M12 Cables

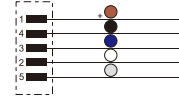
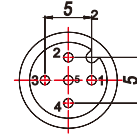
4 Pin

Female



5 Pin

Female



Type

Female, Right angle

PVC

PUR

4 Pin

2m cable

CA12-R4F2C

CA12-R4F2R

5m cable

CA12-R4F5C

CA12-R4F5R

5 Pin

2m cable

CA12-R5F2C-5

CA12-R5F2R-5

5m cable

CA12-R5F5C-5

CA12-R5F5R-5

Specifications

Type M12 Straight, Shielded

Coding type A coding

Rated voltage 250V

Rated current 4A

Pin Material Gold-plated phosphor copper

Coupling screw Nickel plated brass

Insulation resistance $\geq 100M\Omega$

Cable Material PVC/PUR

Cable length Standard 2 or 5 m, customizable

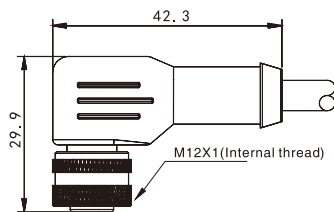
Cores 0.34mm²

Degree of protection IP67/68

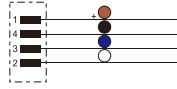
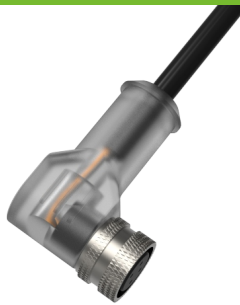
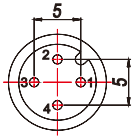
Operating temperature -25~+85°C

Dimensions(Unit:mm)

M12 Female, Right angle



4 Pin
Female



Type

	4 Pin		
	2m cable	5m cable	
Female, Right angle, LED	CA12-R4F2C-LP	CA12-R4F5C-LP	
PNP	CA12-R4F2C-LN	CA12-R4F5C-LN	
NPN			

Specifications

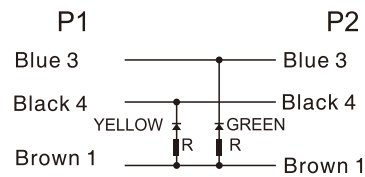
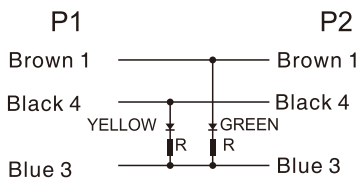
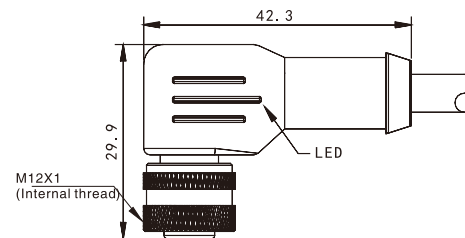
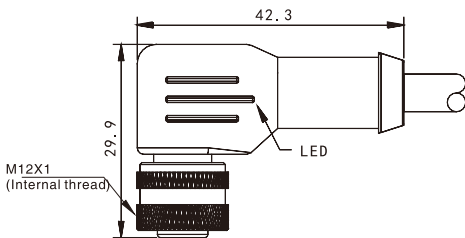
Type	M12 Female, Right angle, LED	Insulation resistance	≥100MΩ
Coding type	A coding	Cable Material	PVC/PUR
Rated voltage	250V	Cable length	Standard 2 or 5 m, customizable
Rated current	4A	Cores	0.34mm ²
Pin Material	Gold-plated phosphor copper	Degree of protection	IP67/68
Coupling screw	Nickel plated brass	Operating temperature	-25°C~+85°C

Dimensions (Unit: mm)



M12 Female, Right angle, LED, PNP

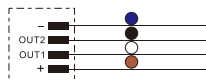
M12 Female, Right angle, LED, NPN



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
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- Tester

Guidance

Sensor tester kit
Sensor tester kit



Type

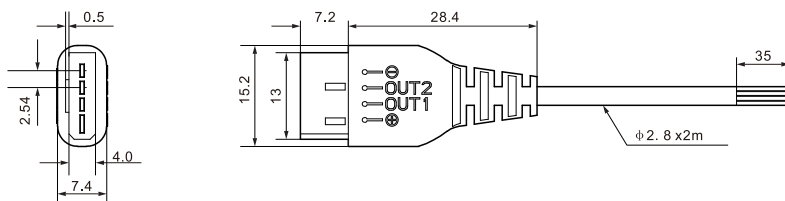
ME-1007

Specifications

Insertion force	<18N
Pull-out force(cover retention)	25N
Cover material	PVC
Contact point	Phosphor bronze

Dimensions(Unit:mm)

ME-1007





Type

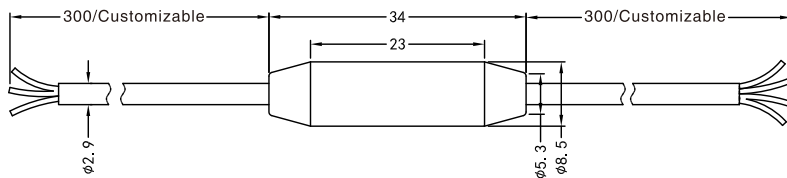
NPN converting to PNP	CTC-N2P
PNP converting to NPN	CTC-P2N

Specifications

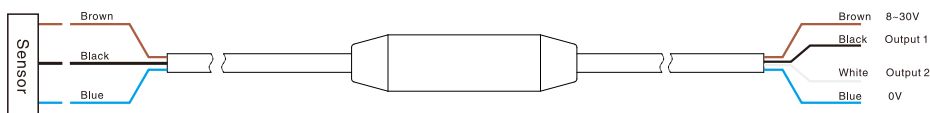
Protective circuit	Reverse polarity protection
Operating temperature	-20°C~+60°C
Storage temperature	-40°C~+85°C
Input voltage	8-30V

Load current	≤150mA
Voltage drop	≤1V
Switch output	≤5KHz

Dimensions(Unit:mm)



Wiring diagram



Sensor's output state before converting	Corresponding output state after converting
NO	Black: NO White: NC
NC	Black: NC White: NO

- Fiber Optic
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Guidance

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