Explosion Proof LED Signal/ Warning Light and Electric Sounder Combination

QNE/ QNES

Ex | IP66 | -40~+60℃ | -40~+50℃ | -40~+45℃ | RoHS2
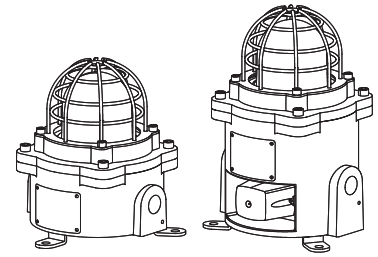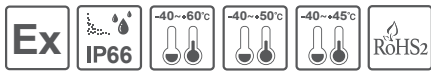
Thank you for purchasing Qlight's products. Please read this user manual carefully prior to installation and operation to ensure safe and correct use.

⚠ Safety Precautions for Explosion Proof Products

Please follow the instruction below to ensure safe and correct use of explosion proof products.

1. Explosion proof products should be managed according to explosion-proof regulations. Do not disassemble, assemble, alter or repair the product arbitrarily.
2. The temperature rating of the product is the temperature the product will experience at the applied rated voltage and ambient temperature indicated.
3. Use cable glands that satisfy the product's explosion proof grade and temperature grade.
4. Unused cable entries must be filled with material that meets the explosion proof grade and temperature rating.
5. Before installing the product, please make sure all cautions indicated on the labels, packaging, and operation manual of the product are fully understood.
6. Installation, maintenance and repair of the product must be performed by experts in the explosion proof field, or persons who have received relevant training.
7. For safety, the product should be installed and operated in environments that avoid high temperature and high pressure.
8. Please follow general safety precautions and avoid installing the product in locations that may generate excessive heat.
9. When installing the product in places where chemicals are located, please make sure that the environment does not have two or more incompatible chemicals mixed. For safety, please read the instruction manual carefully and be mindful of the chemical compositions where the product is used.
10. This product requires grounding.

⚠ Precaution for Safety

Failure to follow the instructions below may cause a loss of life or serious physical injury.

1. During wiring or maintenance, please completely turn off the power of the product. (Failure to follow this may lead to an electric shock.)
2. Do not install the product in locations that subjects it to excessive dust or water other than the conditions designated by the IP protection ratings indicated for each product. (Failure to follow these instructions may cause a fire to the product, electric shock, physical injury, malfunction or damage to the product.)
3. Do not alter or repair this product. If maintenance or repair service is required, please contact your local Qlight contact point. (Failure to follow these instructions may lead to fire, electric shock, or product damage.)
4. Please apply the correct voltage to the product. (Failure to follow these instructions may lead to fire, electric shock, or product damage.)
5. When the product is applied to a condition that may impact lives or property, please make sure to have a double safety device. (Failure to follow this may cause damage to property, fire, electric shock and loss of life.)

⚠ Precautions for Correct Use

Failure to follow the proper instructions may cause damage to property, the product, or malfunction of the product that would void the warranty.

1. Please remove any objects that can interrupt ventilation around the product.
2. Please turn off the power of the product immediately if it fails to operate properly.
3. Carefully wire the product according to each product's specification.
4. Please be careful in preventing chemicals such as thinner, benzene, etc. in contact with the surface of the product.
5. Do not apply excessive force/impact to the product.
6. Failure to follow any of the instructions above may cause malfunction or damage to the product, fire, and electric shock.

Please scan the QR code for more detailed product information.

www.qlight.com

Ordering Specifications

• QNE

QNE	-	110/230	-	R	-	SUS
[Model number]		[Voltage]		[Color]		[Housing material]

• QNE

Voltage	Color	Housing material
• 12/24 -DC12V-24V • 110/230 -AC110V-230V	R-Red A-Amber G-Green B-Blue	• (Blank) - Al • SUS - STS

• QNES

QNES	-	WS	-	110/230	-	R	-	SUS
[Model number]		[Sound]		[Voltage]		[Color]		[Housing material]

• QNES

| Sound	Voltage	Color	Housing material
• WS -Warning sounds • WP -Special warning sounds • WM-Melodies • WA-Alarms • WV -Customizable sounds	• 12/24 -DC12V-24V • 110/230 -AC110V-230V	R-Red A-Amber G-Green B-Blue	• (Blank) - Al • SUS - STS

Product Specifications

■ Explosion Proof Specifications

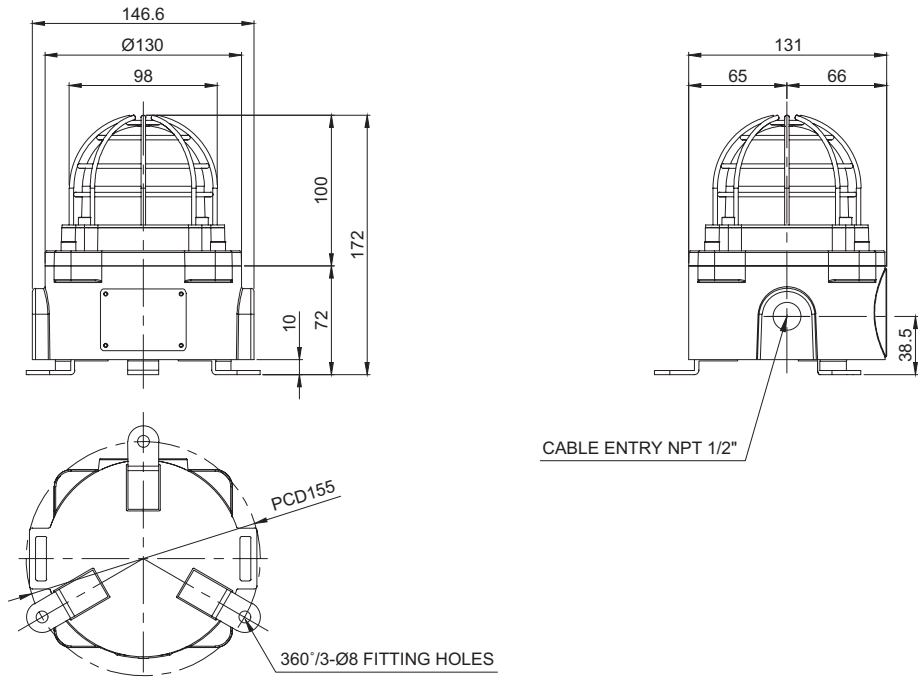| Model number	QNE(Al/ STS) QNES(Al/ STS)
Range of operating voltage	DC 12V or 24V AC 120V or 230V
Ex mark	IECEX - Ex db IIC T5/T6 Gb ATEX - ⟨Ex⟩II2G Ex db IIC T5/T6 Gb KCs - Ex db IIC T5/T6
Ambient operating temperature	QNE −40°C ≤ Ta ≤ 60°C (T5) −40°C ≤ Ta ≤ 50°C (T6) QNES −40°C ≤ Ta ≤ 60°C (T5) −40°C ≤ Ta ≤ 45°C (T6)
Explosion proof Zone	Zone1, Zone2
Material	ALDC12.1, STS316L
Protection rating	IP66

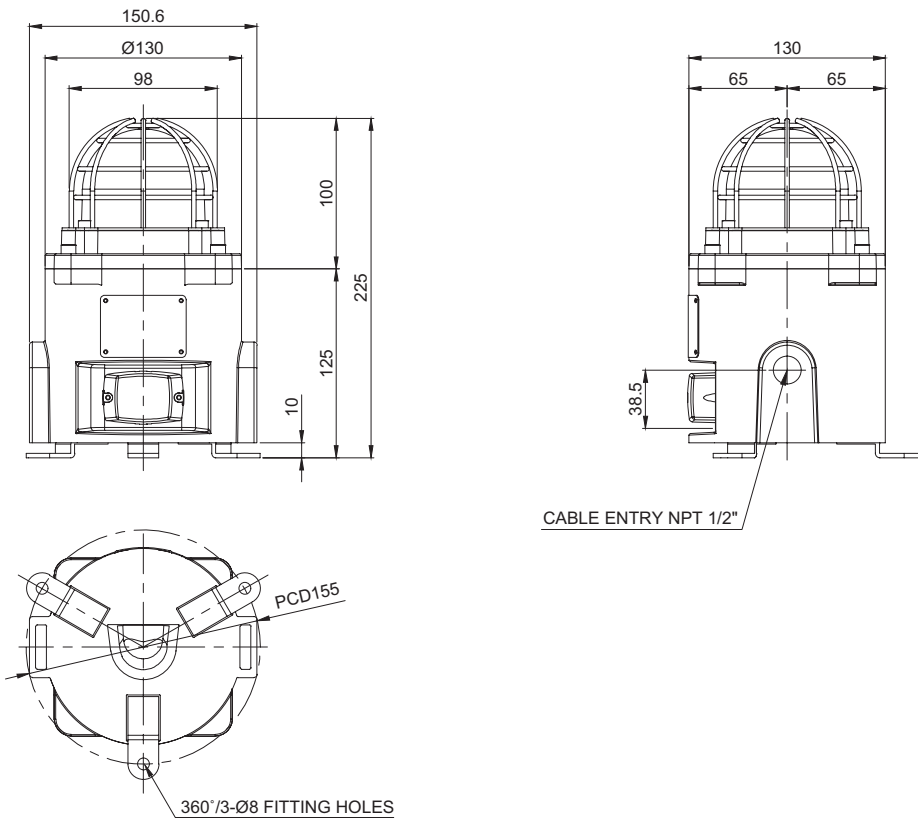| Zone definitions(Gas)	Zone 1	High risk gas/vapour(Gas)
	Zone 2	Medium risk gas/vapour(Gas)
Group definitions(Gas)	GROUP II A	Acetone, Petrol, Methanol, Propane, Toluene
	GROUP II B	Ethylene, City gas
	GROUP II C	Hydrogen, Acetylene, Carbon sulphide
Maximum surface temperature of electrical equipment	T1	450°C
	T2	300°C
	T3	200°C
Zone definitions(Dust)	T4	135°C
	T5	100°C
Group definitions(Dust)	T6	85°C
	Zone 21	High risk powder/dust(Dust)
	Zone 22	Medium risk powder/dust(Dust)
Group definitions(Dust)	GROUP II A	Ignitible fibers/flyings(more than 0.5mm)
	GROUP II B	Non-conductive dusts
	GROUP II C	Conductive dusts

■ General Product Specifications

Model number	Voltage	Power consumption	Current	Certificates	Weight	Color
QNE	DC12-24V	Max. 7W	Max. 0.558A	IECEx ⟨Ex⟩ ATEX KCs	2.05kg	R-Red A-Amber G-Green B-Blue
	AC110-230V	Max. 20W	Max. 0.136A			
QNE-SUS	DC12-24V	Max. 7W	Max. 0.558A		4.65kg	
	AC110-230V	Max. 20W	Max. 0.136A			

Model number	Voltage	Power consumption	Current	Sound pattern and volume	Certificates	Weight	Color
QNES	DC12-24V	Max. 23W	Max. 1.872A	• WS-5 Warning sounds : Max.110dB • WP-5 Special warning sounds : Max.110dB • WM-5 Melodies : Max.105dB • WA-5 Alarms : Max.105dB • WV-5 Customizable voices : Max.103dB	IECEx ⟨Ex⟩ ATEX KCs	3.15kg	R-Red A-Amber G-Green B-Blue
	AC110-230V	Max. 43W	Max. 0.301A				
QNES-SUS	DC12-24V	Max. 23W	Max. 1.872A			7.60kg	
	AC110-230V	Max. 43W	Max. 0.301A				

QNE/ QNE-SUS

146.6
Ø130
98
100
172
10
72

PCD155

360°/3-Ø8 FITTING HOLES

131
65
66
38.5

CABLE ENTRY NPT 1/2"

QNES/ QNES-SUS

150.6
Ø130
98
100
225
125
10
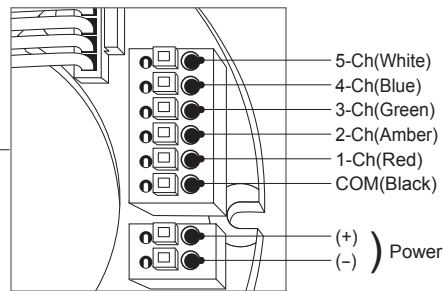
PCD155

360°/3-Ø8 FITTING HOLES

130
65
65
38.5

CABLE ENTRY NPT 1/2"
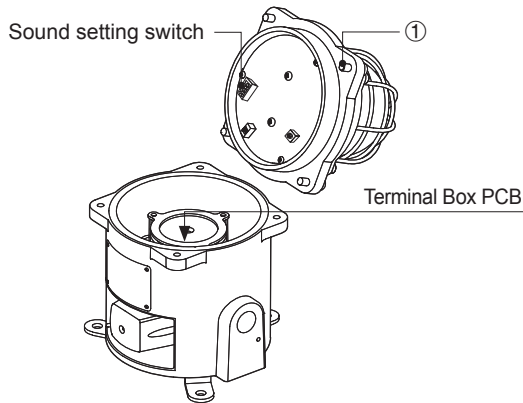
## Terminal Block Instructions

• Disassemble the cover assembly set.
  ①Loosen four M6 bolts.
• For detailed wiring instructions, please refer to Terminal Box PCB image below. Please assemble the cover set in reverse order of disassembly.

Sound setting switch ———— ①

Terminal Box PCB

- 5-Ch(White)
- 4-Ch(Blue)
- 3-Ch(Green)
- 2-Ch(Amber)
- 1-Ch(Red)
- COM(Black)
- (+) ⎫
- (−) ⎬ Power

※ Please be careful of signal line jams during reassembly of the cover set.

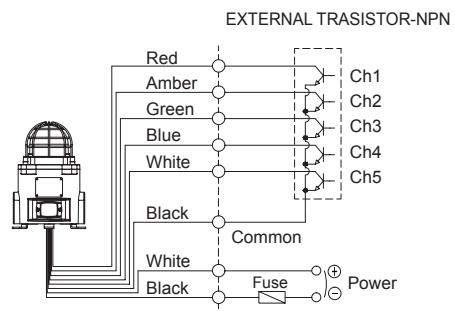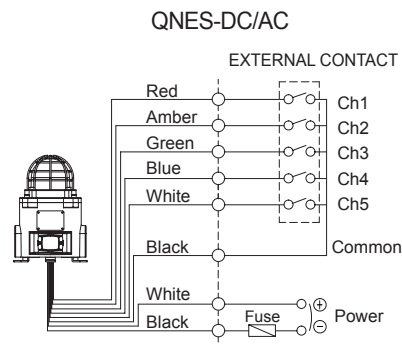## Sound Setting - Select using the switch inside of the unit(QNES only).

ON
1 2 3 4 5
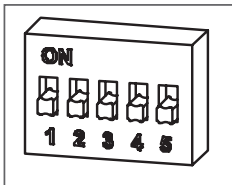
• Standard unit has 5 built-in sound tones.
  Select different built-in sounds using the sound setting switch.

■ Sound Type by Group

| Category	Sound pattern	Channel	Sound Tone	volume (Max.)
WS	5 Warning sounds	Ch1	Fire.A-ANG	110dB
		Ch2	Emergency WA-U	
		Ch3	Ambulance PI-PO	
		Ch4	Machinery Fault	
		Ch5	High Expansion	
WP	5 Special Warning sounds	Ch1	Fire.A-ANG	110dB
		Ch2	Abandon Alarm	
		Ch3	Machinery Fault	
		Ch4	High Expansion	
		Ch5	7 Short Pl. / 1 Long	
WM	5 Melodies	Ch1	Sweet Home	105dB
		Ch2	For Elise	
		Ch3	Cuckoo's Waltz	
		Ch4	Piano Sonata	
		Ch5	Turkish March	
WA	5 Alarms	Ch1	Beep Intermittent	105dB
		Ch2	Door Chime	
		Ch3	Phone Ring	
		Ch4	PI.PI.PI Short	
		Ch5	Tripping Beat	
WV	5 Customizable sounds	Ch1	Available upon request (customized voice type)	103dB
		Ch2		
		Ch3		
		Ch4		
		Ch5		

Sound Setting - Select using External contact(LC)(QNES only).

• Customized wiring available to select the sound tone via external contact or transistor wiring type (Model number : -LC)

QNES-DC/AC

EXTERNAL CONTACT

Red — Ch1
Amber — Ch2
Green — Ch3
Blue — Ch4
White — Ch5
Black — Common
White / Black — Fuse — ⊕ / ⊖ Power

EXTERNAL TRASISTOR-NPN

Red — Ch1
Amber — Ch2
Green — Ch3
Blue — Ch4
White — Ch5
Black — Common
White / Black — Fuse — ⊕ / ⊖ Power

• External power line - UL1015 AWG18(0.75sq) x 2C 400mm
• External signal line - UL1007 AWG22(0.3sq) 400mm

Volume Adjustment(QNES only)

Volume Dial

MAX.   MIN.
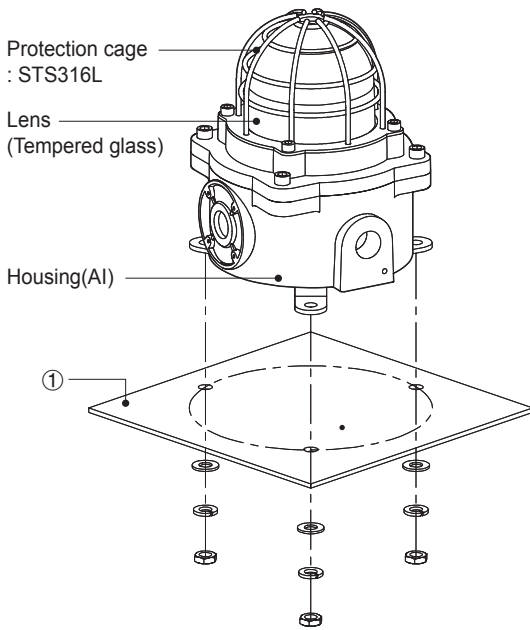
VOL.
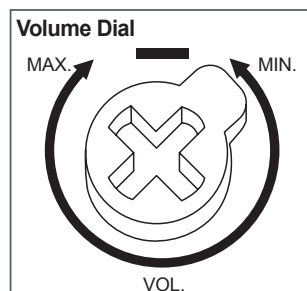
• The volume output of this product is adjustable.
• Turn the volume dial clockwise to increase the volume, and turn counter clockwise to decrease the volume.
• There will be no sound when the dial is put at MIN.

## Parts Definition/ Installation/ Light Function Selection

■ Parts Definition/ Installation

Protection cage
: STS316L

Lens
(Tempered glass)

Housing(Al)

①

- First, machine taps or holes on the mounting surface ①.
- The mounting hole of this product is 8mm in diameter.
- When machining taps, fasten the bolt through the mounting hole of the product.
- When machining holes, insert the bolt through the hole of the product, and tighten the nut from the opposite side of the mounting surface.

■ Light Function Selection

- Please refer to the chart below to use light function selection switch located inside the product.

Light function
selection switch
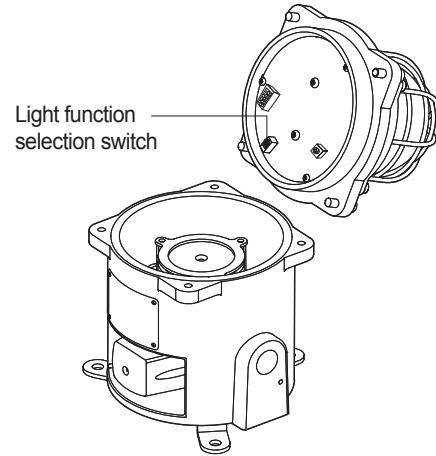
ON(1) OFF(0)	1	2	Light function
No.	1	2	Operation
0	0	0	Steady LED
1	0	1	Flashing LED
2	1	0	Strobe LED
3	1	1	Simulated revolving/ flashing LED

- Default function is set at steady LED. Select the desired function for your application during installation.
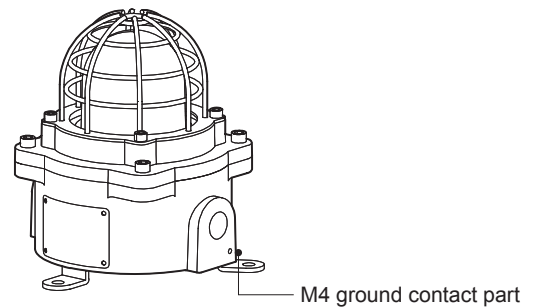
Mounting Hole Specifications/ Grounding Instructions

■ Mounting Hole Specifications

- Machine holes on the mounting surface referring to the diagram below.

3-Ø9 HOLES

PCD 155

QNE/ QNES

■ Grounding Instructions

M4 ground contact part
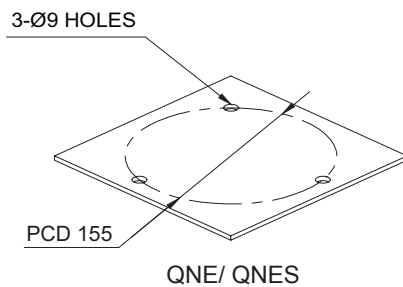
- Please use an M4 bolt at the location marked in the diagram above to ground the product.
- When connecting the grounding cable, please use a ring terminal.
- Please use a ring terminal made of C5212 material as it has the same electrical properties of the conductor.
- Please use a grounding cable with a diameter greater than 4mm.

Installation Environment and Protection Rating

- This product is designed for use with protection rating of IP66.
- If the product is installed in locations that subject it to excessive dust or water other than the designated IP protection rating indicated(IP66), it may cause malfunction or damage to the product.
- For further information, please visit our website (www.qlight.com).

Technical Certification

• Qlight products are designed to meet strict quality and technical standards. Thus, the Qlight brand is widely recognized for its high quality and technical innovations from leading institutions around the world.

ISO International Organization for Standardization

Qlight quality assurance systems have been certified by ISO by applying the ISO 9001:2008, KS Q ISO 9001:2009 regulation.

IECEx International Explosion Proof Certification (IECEx)

Certified that Qlight's products are being manufactured and manage according to international standards.

ATEX The European Regulatory Framework or Manufacture, Installation and Use of Equipment in Explosive Atmospheres

Qlight's explosion proof products comply with ATEX Directives 94/9/EC.

NEPSI National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation

Qlight's design and manufacturing system meets the People's Republic of China National explosion proof Standard.
(Chinese Standard-GB3836/GB12476)

KCs Explosion Proof Device Safety Certification System

The safety performance of machines and equipment subject to safety certification and Technical capability and production system have been certified safety certification standards.

TIIS Japan Explosion-proof Certification

TIIS is a Japanes explosion proof test and certification system accordance with the Ministry of Health, Labour and Welfare Notice and the explosion proof guidelines for factory electrical equipment. Qlight's explosion proof products hasve been tested and certified by TIIS.

ABS American Bureau of Shipping

Qlight's design and quality assurance system has been certified by the American Bureau of Shipping.

RMRS Russian Maritime Register of Shipping

Qlight's design and quality assurance system has been certified from Russian Maritime Register of Shipping.

CCS China Classification Society

Qlight's design and quality assurance system has been certified by the China Classification Society.

KR Korean Register of Shipping

Qlight's design and quality assurance system has been certified by the Korean Register of Shipping.

LR Lloyd's Register

Qlight's design and quality assurance system has been certified from Lloyd's Register.

E-mark Commission Directive Regarding Vehicle Industry

Qlight has obtained EU mark for approved vehicles and vehicle components sold into the EU(EEA : European Economic Area)

KC Korea Safety Certification

Qlight's products are certified by KC for preventing accident caused by fire.

KCC Conformity Assessment of Broadcasting Communication Equipment

Qlight has been certified to protect the electromagnetic environment that causes unwanted electromagnetic waves from the device, communication failure due to other devices or external radio waves, and malfunction of the device.

CCC China Compulsory Certificate

Qlight's has obtained CCC which guarantees safety, protection against fraud, environment, etc.

CCCF China Certification Center for Security & Protection

Qlight has passed the rigorous examination process of "Passing Fire Protection Products Centering" In order to sell fire-fighting products such as fire alarm equipment to Chinese market.

UL Underwriters Laboratories

Qlight's design and quality assurance system has been certified from UL to ensure the stability of consumption goods and to protect consumers.

CE European Commission

Qlight has been certified by the European Commission.

ICAO International Civil Aviation Organization
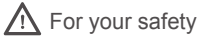
Qlight guarantees our products satisfy the criteria regulated by the International Civil Aviation Organization(ICAO, FAA).

RoHS2 Restriction of Hazardous Substances Directive

Qlight c omplies with the Restriction of Hazardous Substances Directive by limiting its use of hazardous materials.

MEMO

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Innovation in Alarm & Signal

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You can expect prompt service if you have exact information such as model name, symptom, telephone number and address.
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