Innovation in alarm & signal

CATALOGUE 2018.02

Vessels and Heavy-Duty & Equipment/ Explosion Proof

Qlight

Qlight Gives You a Brighter Future!

Qlight has been a world-leading provider of visual and audible status indicating systems and solutions for the last three decades. We pride ourselves in developing products which help our customer's improve productivity, safety, and quality control in the industrial automation and commercial industries. Our strong dedication to innovative products, quality assurance, well-established supply chain, customizable manufacturing and strong customer relationships have helped us earn the top market share in Korea and China. These core values have also been fundamental to our continued growth into new markets. Qlight's products are certified by the International Quality Management System (ISO14001), IECEx, ATEX, UL, NEPSI, CE, Lloyd, KIMM, and KOSHA which display our dedication to stringent quality control and product development based on safety-pursuing industry standards.

Our assembly lines in Busan, South Korea and Shanghai, China presently provide a variety of more than 450 of products to more than 40 countries, based on sales offices in South Korea (Seoul, Busan) China (Shanghai, Shenzhen, Shenyang, Tianzhen, Tianjin, Wenzhou), and the U.S. (Silicon Valley). The Qlight brand reflects 30 years of research and development, certification, and manufacturing experience.

We will continue to establish ourselves as a industry-leading provider by pushing the boundaries of technology in order to enhance our customer's efficiency and safety in every industry and region of the world.

Qlight Global Networks

Country	Company name	Address	Phone
Korea	Qlight Co., Ltd.	HQ	A-412, 579, Gyeongin-ro, Guro-gu, Seoul, Korea	+82-80-328-2222
		Factory |185-25, Mukbang-Ro, Sangdong-Myeon, Gimhae-si, Gyeongsangnamdo, Korea	+82-80-328-1111
USA	Qlight USA, Inc.	#341, 3003 North First St., San Jose, CA 95134 USA	+1-408-519-5740
China	SHANGHAI Qlight Electronics Co.,Ltd	#19, Nanda Road, Baoshan Area, Shanghai, China	+86-21-6651-7100

Qlight Clients Heavy industry / Ship building / Automotive / Steel / Machinery / Petrochemical / Power plants / Electronics / Semiconductor / Emergency Vehicles

Company History

Qlight has been striving to accomplish our mission to provide visual and audible status indicating systems and solutions to enhance our customer's work safety and efficiency for the last three decades.

1986-1992	1993-2005	2006-2010	2011 to Present	- Future
Business foundation and consolidation	Growing as a signal transmission device specialist	A great leap forward & business reconstruction	New engines for growth	The 2nd growth and globalization

Year	Month	Event
2017	08	ISO 14001 : 2015 certificate aquired
	02	Obtained ICAO certification for SAOL1
2016	11	Obtained the patent for "multi-functional modular signal tower light" (Patent # : 10-1676863)
	09	Obtained the patent for "Emergency Vehicle Lightbar" (Patent # : 10-1662283)
	07	Obtained UL certificate for LED signal lights Q series
		Obtained the patent for "Bar style LED work lights" (Patent # : 10-1598123)
2015	09	The second headquarter factory built
	06	Limit switch models (3 items including SW2TS) acquired certificates from RMRS
	03	LED work lights (QML150/250, QMFL 500/600) UL listed
2014	10	Established the Qlight USA, Inc. in San Jose, CA.
		Horn which that emits light patented (Patent # : 10-1452447)
		Fan/ tilt type bracket patented (Patent # : 10-1452445)
	09	LED strobe light with multi-lens patented (Patent # : 10-1444391)
	08	Explosion proof product family including SNE, SNES, SESA, SEA, SPNA acquired IECEx certificates
	06	Selected as a promising export company by Small & Medium Business Admin., Korea
	01	Non-sparking explosion proof tower lights including ST45ML and STB45ML acquired KGS and NEPSI certificates
2013	01	Portable warning lights for agricultural machine applications patented (Patent # : 10-1226959)
2012	12	Explosion proof warning lights (SNE, SNES) acquired CCS certificates
		LED work light with cylindrical lens attached patented (Patent # : 10-1219020)
	09	Explosion proof warning lights (SESA, SEA, SPNA) and heavy-duty warning lights (SH1, SED, SEWN30) certified by CCS
	01	LED warning light with LED reflector patented (Patent # : 10-1108102)
2011	11	SNE, SNES certified by NEPSI, SNE, SNES, SESA, SEA, SPNA certified by KOSHA
	08	KCC (Korea Communications Commission) certificate acquired
	07	Light equipment applying prism system patented (Patent # : 10-1051056)
2010	05	QEB certified by KIMM
		LED warning light, bulb revolving warning light patented (Patent # : 10-0961472)
	03	Research and development center established
2009	12	SSEL certified by KIMM
		LED tower lights compliant with the RoHS directive
2008	04	Motor drive system patented (Patent # : 20-0439536)
	03	LED revolving type lens patent acquired (patent # :10-0808669)
2007	11	Explosion proof electric horn (SPNA) acquired NEPSI certificates
	05	Tower light models including ST45, ST56,ST80) UL listed
2005	07	Heavy-duty products for vessel applications acquired Lloyd's (UK's Maritime Classification Society) certificates
	04	ABS certificates acquired for 18 products including SH1
2004	06	ISO 9001:2000 certificates acquired
2001	02	Established Shanghai Qlight Electronic Co.,Ltd. in China
2000	07	Established Qlight Limited
1993	11	Nominated for developing domestic explosion proof warning lights by Korean Ministry of Science & Technology
1988	03	Developed limit switches for vessel applications
1986	07	Established Qlight

Signaling Products for Vessels and Heavy Industry Applications
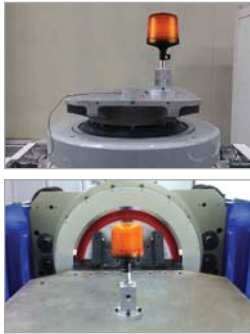
INNOVATION IN ALARM & SIGNAL

SH1

SEWN30T

SHD

QA70HLS
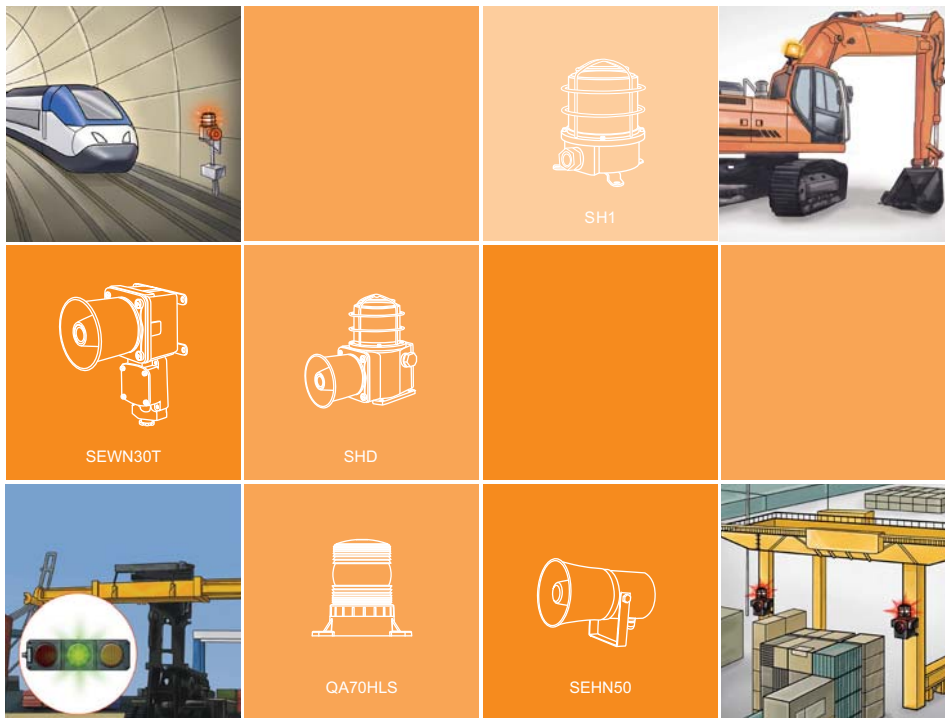
SEHN50

Technical Data of Heavy-Duty Products

Vibration and Shock of Heavy-Duty Products

Heavy-duty products must be tested by strict standards to withstand heavy vibration and shock environments.

Vibration Standard

- Test is conducted in 3 directions X, Y, Z, at 15g acceleration, frequency band 10Hz-200Hz (1.0 octave/ min), and 10mm maximum amplitude for four hours in Z direction and two hours in the X, Y direction. The test should be conducted for a total 8 hours.
There should be no cracks on the exterior of the product or breakage, separation of components after the test, and should operate normally for two hours at its rated voltage.

Shock Standard

- Test is conducted in 3 directions X, Y, Z, at 100g impact acceleration for a 11ms duration.
There should be no cracks on the exterior of the product or breakage, separation of components after the test, and should operate normally for two hours at its rated voltage.

Material Characteristics

Vessels and heavy-duty products require vibration, shock and corrosion resistant materials

The characteristics of the materials that are mainly used in Qlight products

Material	Abbreviation	Characteristics
ABS resin	ABS	Has opaque gloss on the surface and has excellent shock resistance mainly used on exterior parts use of electrical and electronic components
Polycarbonate	PC	Has a high-strength and high-tensile chemical structure, with great electrical insulation and transparency, Mainly used on components that need impact resistance For example, transparent covers for car parts that requires transparency, and small electrical and electronic components, etc.
Acrylic	PMMA	Has a light transmittance over 90% with a high transparency, and has excellent chemical resistance to the external environment Mainly used for lens covers of interior lighting, and used for the replacement of glass in automobiles, aircraft, and ships
Aluminum	Al	Lightweight and durable, widely used throughout industry for its oxidation resistance Low density, low cost, and corrosion resistance- widely used in aerospace, transportation, architecture, cryogenic, and harsh environments
Bronze	BRASS	Bronze is an alloy of copper and tin. It has greater castability and abrasion resistance Mainly used in arts and crafts, valves, ship plates, statues, springs that require elasticity, parts of machinery, bearing materials, electrical, semiconductor materials
steel use stainless	SUS	The price is expensive compared to ordinary steel but has better corrosion resistance and there is no need for additional surface treatment Mainly used as external parts
Silicon rubber	Q(silicon)	For its cold resistance, heat-resistant, oil resistant, non-toxic, chemical resistance. It is mainly used in defense and aerospace industries, automotive, food containers, etc.
Nitrile rubber	NBR	Excellent resistance to high temperature and lubricant used mainly in oil sealing, gaskets, and oil hoses

Examples of Everyday Noise

In order to transmit sound effectively in noisy environments, products require a sound signaling device with a high volume.
The volume of the signaling devices compared with the noise of everyday life is shown below.
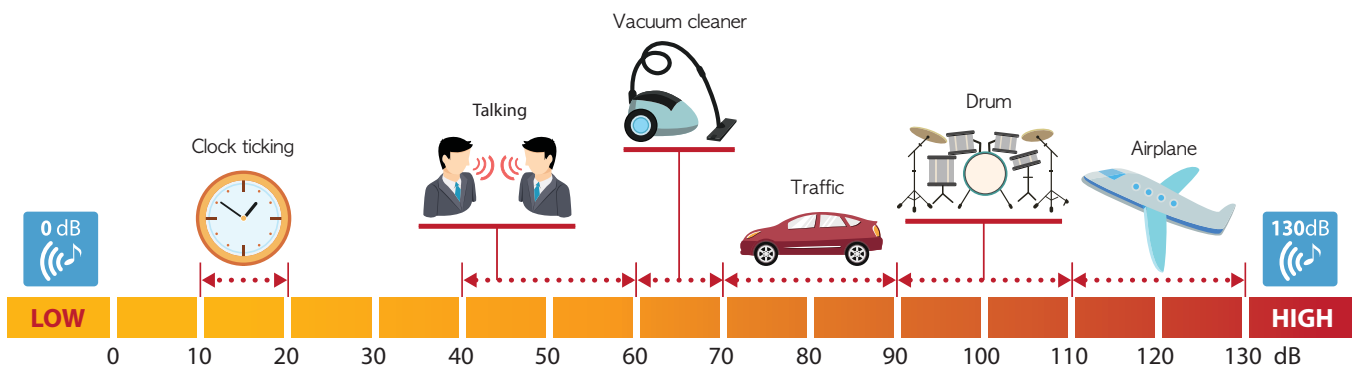
Model number(Series)		QA70HLS	QA100HLS	QA115HLS	QA115HLSP	QA125HLS	QA125HLSP
	Voltage	DC12V-24V	DC12V-24V	DC12V-24V	DC12V-24V	DC12V-24V	DC12V-24V
Dimension (mm)	Diameter	Ø72	Ø101	Ø107(Lens) Ø150(Housing)	Ø117	Ø123	Ø123
	Height	108	113	112	270	125	321
	Depth						
	Materials	Lens-PC Housing-ABS+GF	Lens-PC Housing-ABS	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving						
	LED Revolving						
	LED Steady/Flashing						
	LED Strobe	●	●	●	●	●	●
	LED Simulated revolving xenon Strobe						
	Mounting structure	Self stand	Self stand	Self stand	Pole mount	Self stand	Pole mount
	Cable entry						
	Protection rating	IP66	IP66	IP66	IP66	IP66	IP66
	Certificates	-	CE	-	-	-	-
	Customization						
	Page	P10	P10	P11	P11	P12	P12

Model number(Series)		QA140HLSP	SH1	SH1P	SH1T	SH1TP
	Voltage	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø140	Ø119(Lens)	Ø135(Cage)	Ø119(Lens)	Ø135(Cage)
	Height	325	168	178	168	178
	Depth	-	-	-	234(Length)	234(Length)
	Materials	Lens-PC Housing-PC	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing					
	Bulb Revolving		●	●	●	●
	LED Revolving		●	●	●	●
	LED Steady/Flashing		●	●	●	●
	LED Strobe	●				
	LED Simulated revolving xenon Strobe		●	●	●	●
	Mounting structure	Pole mount	Self stand	Self stand	Self stand	Self stand
	Cable entry	-	1/2"PF	1/2"PF	1/2"PF	1/2"PF
	Protection rating	IP66	IP66	IP66	IP66	IP66
	Certificates	CE, E11	KIMM, ABS, CCS, CE	KIMM, ABS, CCS, CE	CE	CE
	Customization	-	Built-in cable gland, Cable entry : 3/4"PF	Built-in cable gland, Cable entry : 3/4"PF	Built-in cable gland, 2 ways terminal box, cable entry : 3/4"PF	Built-in cable gland, 2 ways terminal box, cable entry : 3/4"PF
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Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications

Model number(Series)		SH2	SH2P	SH2T	SH2TP	SSLW	SSLM
	Voltage	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø138(Lens)	Ø158(Cage)	Ø138(Lens)	Ø158(Cage)	Ø93	Ø93
	Height	198	212	198	212	180-615	180-615
	Depth	-	-	250(Length)	250(Length)	43	43
	Materials	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving	●	●	●	●		
	LED Revolving	●	●	●	●		
	LED Steady/Flashing	●	●	●	●	●(Steady)	●(Steady)
	LED Strobe						
	LED Simulated revolving						
	xenon Strobe	●	●	●	●		
	Mounting structure	Self stand	Self stand	Self stand	Self stand	Wall mount	Wall mount
	Cable entry	1/2″PF	1/2″PF	1/2″PF	1/2″PF	M12-5PIN connector	M12-5PIN connector
	Protection rating	IP66	IP66	IP66	IP66	IP68	IP68
	Certificates	KIMM, ABS, CE	KIMM, ABS, CE	CE	CE	-	-
	Customization	Built-in cable gland, Cable entry : 3/4″PF, Brass housing	Built-in cable gland, Cable entry : 3/4″PF, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, Brass housing	C10 cable	C10 cable
	Page	P15-21	P15-21	P15-21	P15-21	P37	P37

Model number(Series)		SED	SEDP	SD	SDP	SMD	SMDP
	Voltage	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø119(Lens)	Ø135(Cage)	Ø138(Lens)	Ø158(Cage)	Ø138(Lens)	Ø158(Cage)
	Height	380	390	410	424	462	476
	Depth	175	175	175	175	210	210
	Materials	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving	●	●	●	●	●	●
	LED Revolving	●	●	●	●	●	●
	LED Steady/Flashing	●	●	●	●	●	●
	LED Strobe						
	LED Simulated revolving						
	xenon Strobe	●	●	●	●	●	●
Sound pattern / dB	Hi buzzer						
	15 signal sounds	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 120dB at 1m	Max 120dB at 1m
	Voice signal	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 115dB at 1m	Max 115dB at 1m
	30 signal sounds						
	31 signal sounds						
	MP3						
	Mounting structure	Wall mount	Wall mount	Wall mount	Wall mount	Wall mount	Wall mount
	Cable entry	1/2″PF	1/2″PF	1/2″PF	1/2″PF	1/2″PF	1/2″PF
	Protection rating	IP66	IP66	IP66	IP66	IP66	IP66
	Certificates	CE, KIMM, KR, CCS, ABS	CE, KIMM, KR, CCS, ABS	CE, KR, KIMM, LR, ABS	CE, KR, KIMM, LR, ABS	-	-
	Customization	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing
	Transistor	NPN type	NPN type	NPN type	NPN type	NPN type	NPN type
	Page	P31	P11	P32	P32	P33	P33

Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications

Model number(Series)		SCDF	SCDW	SHD	SHDP	SHD2	SHD2P
	Voltage	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø140(Cage)	Ø140(Cage)	Ø119(Lens)	Ø135(Cage)	Ø119(Lens)	Ø135(Cage)
	Height	322	313	227	237	227	237
	Depth	167(Length)	177	255(Length)	255(Length)	343(Length)	343(Length)
	Materials	Lens-PC Housing-PC+GF	Lens-PC Housing-PC+GF	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving	●	●	●	●	●	●
	LED Revolving	●	●	●	●	●	●
	LED Steady/Flashing	●	●	●	●	●	●
	LED Strobe						
	LED Simulated revolving						
	xenon Strobe	●	●	●	●	●	●
Sound pattern / dB	Hi buzzer						
	15 signal sounds	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 118dB×2 at 1m	Max 118dB×2 at 1m
	Voice signal	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 113dB×2 at 1m	Max 113dB×2 at 1m
	30 signal sounds						
	31 signal sounds						
	MP3						
Mounting structure		Self mount	Wall mount	Self mount	Self mount	Self mount	Self mount
Cable entry		1/2″PF	1/2″PF	1/2″PF	1/2″PF	1/2″PF	1/2″PF
Protection rating		IP66	IP66	IP66	IP66	IP66	IP66
Certificates		KIMM, KR, CE	KIMM, KR, CE	KIMM, ABS, CE	KIMM, ABS, CE	KIMM, ABS	KIMM, ABS
Customization		Built-in cable gland, Cable entry : 3/4″PF, External signal sound line	Built-in cable gland, Cable entry : 3/4″PF, External signal sound line	Built-in cable gland, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4″PF, External signal sound line, Brass housing
Transistor		NPN Type	NPN Type	NPN Type	NPN Type	NPN Type	NPN Type
Page		P26-28	P26-28	P22-25	P22-25	P22-25	P22-25

Model number(Series)		QWCD35	QWCD50
	Voltage	DC12V-DC24V AC110V-220V	DC12V, DC24V AC110V-220V
Dimension (mm)	Diameter	136×179	168×222
	Height		
	Depth	126	163
	Materials	Horn-PC Housing-PC+ABS	Horn-PC Housing-PC+ABS
Light source & Operation	Bulb Steady/Flashing		
	Bulb Revolving		
	LED Revolving		
	LED Steady/Flashing		
	LED Strobe	●	●
	LED Simulated revolving		
	xenon Strobe		
Sound pattern / dB	Hi buzzer		
	15 signal sounds		
	Voice signal		
	30 signal sounds		
	31 signal sounds	Max 115dB at 1m	Max 123dB at 1m
	MP3	Max 113dB at 1m	Max 118dB at 1m
Mounting structure		Wall Mount	Wall Mount
Cable entry		Ø21	Ø21
Protection rating		IP66	IP66
Certificates		CE, UL	CE, UL
Customization		External signal sound line	External signal sound line
Transistor		NPN Type	NPN Type
Page		P39	P40

Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications

Model number(Series)		QWH35	QWH50	SN	SEHN25	SEHN50	SEWN30E
	Voltage	DC12V-DC24V AC110V-220V	DC12V, DC24V AC110V-220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	136×179	168×222	Ø119(Horn)	Ø158(Horn)	Ø167(Horn)	Ø120(Horn)
	Height						
	Depth	126	163	167(Length)	238(Length)	242(Length)	175
	Materials	Horn-PC Housing-PC +ABS	Horn-PC Housing-PC +ABS	Housing-Steel	Housing-Steel	Housing-Steel	Housing-Al Horn Housing-PC
Sound pattern / dB	15 signal sounds			Max 105dB at 1m	Max 115dB at 1m	Max 120dB at 1m	Max 118dB at 1m
	Voice signal			Max 95dB at 1m	Max 108dB at 1m	Max 115dB at 1m	Max 113dB at 1m
	30 signal sounds						
	31 signal sounds	Max 115dB at 1m	Max 123dB at 1m				
	MP3	Max 113dB at 1m	Max 118dB at 1m				
	Mounting structure	Wall mount	Wall mount	Self stand	Self stand	Self stand	Wall mount
	Cable entry	Ø21	Ø21	Ø10	Ø21	Ø21	1/2"PF
	Protection rating	IP66	IP66	IP55	IP55	IP55	IP56
	Certificates	CE	CE	KIMM	KIMM	KIMM	KIMM, ABS, CCS, CE
	Customization	-	-	External signal sound line	External signal sound line	External signal sound line	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing
	Transistor	NPN type	NPN type	NPN type	NPN type	NPN type	NPN type
	Page	P41-42	P41-42	P43	P43	P44	P46

Model number(Series)		SEWN30L	SEWN30T	SEWN50E	SEWN50L	SEWN50T	SHDN30
	Voltage	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø120(Horn)	Ø120(Horn)	Ø172(Horn)	Ø172(Horn)	Ø172(Horn)	Ø120(Horn)
	Height	-	223	-	-	272	134
	Depth	170(Length)	175	208	203(Length)	208	335(Length)
	Materials	Housing-Al Horn Housing-PC	Housing-Al Horn Housing-PC	Housing-Al Horn Housing-SUS316L	Housing-Al Horn Housing-SUS316L	Housing-Al Horn Housing-SUS316L	Housing-Al Horn Housing-PC
Sound pattern / dB	15 signal sounds	Max 118dB at 1m	Max 118dB at 1m	Max 120dB at 1m	Max 120dB at 1m	Max 120dB at 1m	Max 118dB at 1m×2
	Voice signal	Max 113dB at 1m	Max 113dB at 1m	Max 115dB at 1m	Max 115dB at 1m	Max 115dB at 1m	Max 113dB at 1m×2
	30 signal sounds						
	31 signal sounds						
	MP3						
	Mounting structure	Self stand	Wall mount	Wall mount	Self stand	Wall mount	Self stand
	Cable entry	1/2"PF	1/2"PF	1/2"PF	1/2"PF	1/2"PF	1/2"PF
	Protection rating	IP56	IP56	IP56	IP56	IP56	IP56
	Certificates	CE	CE	CE, KIMM, ABS	CE	CE	-
	Customization	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4"PF, External signal sound line, Brass housing	External signal sound line, Cable entry : 3/4"PF
	Transistor	NPN Type	NPN Type	NPN Type	NPN Type	NPN Type	NPN Type
	Page	P46	P46	P47	P47	P47	P49

Model number(Series)		SM30	SM40	SM200	SM400	SAB130	SAB200
	Voltage	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø77	Ø128	Ø143	Ø165	Ø130(Bell)	Ø200(Bell)
	Height	-	-	-	-	238	269
	Depth	82(Length)	162(Length)	231(Length)	284(Length)	107	107
	Materials	Housing-Steel	Housing-ABS	Housing-Steel	Housing-Steel	Bell-Steel Housing-ABS	Bell-Steel Housing-ABS
	Volume	Max 110dB at 1m	Max 116dB at 1m	Max 120dB at 1m	Max 123dB at 1m	Max 95dB at 1m	Max 95dB at 1m
	Mounting structure	Self stand	Self stand	Self stand	Self stand	Wall mount	Wall mount
	Cable entry	Ø22	Ø22	Ø9	Ø22	Ø26	Ø26
	Protection rating	IP44	IP44	IP44	IP44	IP56	IP56
	Certificates	-	-	CE	-	-	-
	Customization	-	-	-	-	2 ways cable entries	2 ways cable entries
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# Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications

Model number(Series)		**SC1**	**SC2**	**SC3**		
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V		
Dimension (mm)	Diameter	150(Width)	174(Width)	244(Width)		
	Height	287	312	381		
	Depth	200	232	292		
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-PC Housing-Al		
Light source & Operation	Bulb Steady/Flashing	●	●	●		
	Bulb Revolving	●	●	●		
	LED Revolving	●	●	●		
	LED Steady/Flashing	●	●	●		
	LED Strobe	●	●	●		
	LED Simulated revolving	●	●	●		
	xenon Strobe	●	●	●		
Sound pattern / dB	Hi buzzer					
	15 signal sounds	Max 108dB at 1m	Max 115dB at 1m	Max 120dB at 1m		
	Voice signal	Max 98dB at 1m	Max 108dB at 1m	Max 115dB at 1m		
	30 signal sounds					
	31 signal sounds					
	MP3					
Mounting structure		Wall mount	Wall mount	Wall mount		
Cable entry		-	-	1/2"PF		
Protection rating		IP44	IP44	IP56		
Certificates						
Customization						
Page		P35	P35	P36		

Model number(Series)		**SANA200**	**SANA400**	**SANA700**	**QEB**	
Voltage		DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	
Dimension (mm)	Diameter	Ø146(Horn)	Ø110(Horn)	Ø101(Horn)	120×120	
	Height	222	222	222	-	
	Depth	333	193	144	119	
Materials		Horn-PC Solenoid Box-ABS	Horn-PC Solenoid Box-ABS	Horn-PC Solenoid Box-ABS	Housing, Cover-Al	
Volume		Max 130dB at 1m	Max 130dB at 1m	Max 130dB at 1m	-	
Mounting structure		Wall mount	Wall mount	Wall mount	Wall mount	
Cable entry		20C, 10C nipple(Air)	20C, 10C nipple(Air)	20C, 10C nipple(Air)	1/2"NPT, 10C nipple(Air)	
Protection rating		IP56	IP56	IP56	IP66	
Certificates		KIMM	KIMM	KIMM	KIMM	
Customization		Separate design between horn and solenoid box, Non return valve, Built-in Y filter	Separate design between horn and solenoid box, Non return valve, Built-in Y filter	Separate design between horn and solenoid box, Non return valve, Built-in Y filter	Built-in Ex-Proof cable gland, 2 ways entries, Cable entry : 3/4"NPT	
Page		P53	P53	P54	P54	

QA70HLS/ QA100HLS

LED Strobe Warning Lights for Heavy-Duty Equipment

Qlight

IP66 -30~+50℃
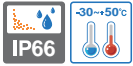
QA70HLS-Ø70mm
QA100HLS-Ø100mm

QA70HLS

QA100HLS

Common Specifications(QA70HLS/ QA100HLS)

- Uses Qlight's original high brightness LED diffusion system that allows for operation outdoors in intense sunlight conditions
- Excellent vibration and shock resistant structure for superior durability
- Fully enclosed structure that can withstand storm and severe dust environments (IP66)
- Materials : Lens-PC, Housing-ABS+GF(for QA70HLS)/ ABS(for QA100HLS)
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP66
- Vibration resistant and shock-proof : can withstand 15g of vibration and 100g of shock

QA70HLS LED Strobe Warning Light

- Mountable with two bolts on the main structure of the warning light for convenient assembly
- Suitable for small agricultural machines
- Flashing rate : 45-55 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA70HLS	DC12V-24V	Max 0.620A	-	0.23kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

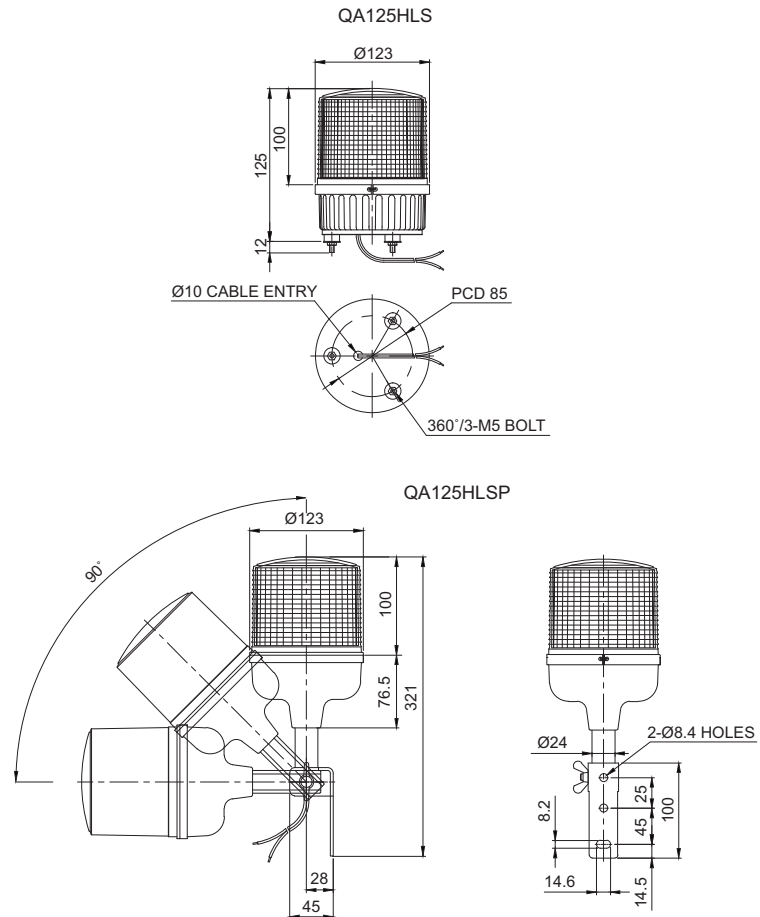### QA100HLS LED Strobe Warning Light

- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA100HLS	DC12V-24V	Max 1.200A	CE	0.39kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

Technical Diagram
(Units : mm)

QA70HLS

Ø72
108
86
22
93
Ø9 CABLE ENTRY

QA100HLS

Ø101
113
92
15
14
Ø101

2-Ø6.5 HOLES (Slot hole)
24.5
PCD 91~95
112

8.5
6.5
FITTING HOLES

360°/3-M4 BOLT
PCD 60
Ø10
CABLE ENTRY
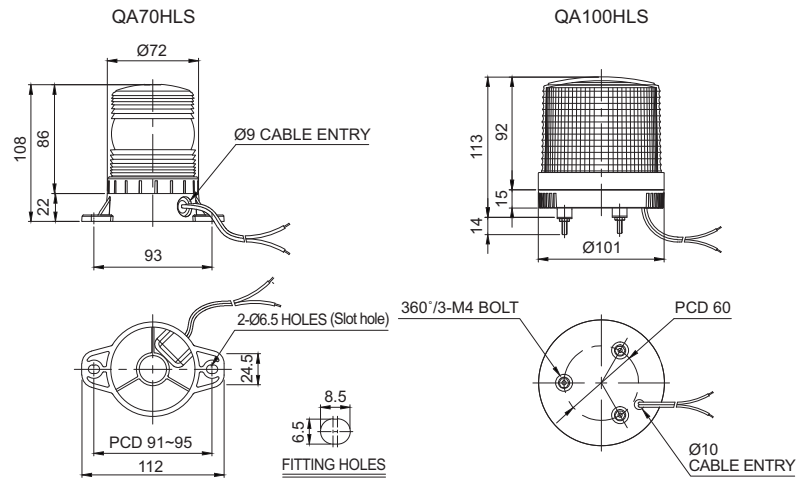
Wiring Instructions

- QA70HLS Model : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
- QA100HLS Model : External power line standard KSC3304 (0.85sq)×2C 400mm
- Both models can be wired regardless of polarity

Ordering Specification

QA100HLS	-	12/24	-	R
[Model number]		[Voltage]		[Color]
• QA70HLS • QA100HLS		• 12/24-DC12V-24V		● R-Red ● A-Amber

QA115HLS series

LED Strobe Warning Lights for Heavy-Duty Equipment

IP66 | -30~+50℃
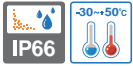
QA115HLS-Ø115mm
QA115HLSP-Ø115mm

Applies Qlight's exclusive patented light diffusion system

QA115HLS

QA115HLSP

ⓘ Common Specifications(QA115HLS/ QA125HLS)

LED Strobe warning lights for heavy-duty equipment applications, featuring superior luminous efficiency with Qlight's exclusive light diffusion system

- Ability to compensate for signal attenuation phenomenon that occurs during daytime operation with a powerful xenon lamp.
- Can select between pole mount and direct mount type to fit your application needs
- Materials : Lens-PC, Housing-PC
- Ambient operation temperature : -30℃ to +50℃
- Protection rating : IP66
- Vibration resistant and shock-proof : Can withstand 15g of vibration and 100g of shock

💡 QA115HLS/ QA115HLSP LED Strobe Warning Lights

- Pole mount type model consists of a shock-proof rubber body; this feature provides excellent durability to vibration and shock
- Flashing rate : 45-55 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA115HLS	DC12V-24V	Max 0.730A	-	1.06kg	● R-Red
QA115HLSP				1.22kg	● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

📐 Technical Diagram　　　　　　　　　　(Units : mm)

QA115HLS

Ø150
Ø107
112
30

360°/3-Ø5.4 HOLES
PCD 130
Ø9 CABLE ENTRY

QA115HLS-P

Ø150
Ø133
129
30

360°/3-Ø5.4 HOLES
PCD 130
Ø9 CABLE ENTRY

QA115HLSP

Ø117
77
270
Ø24
110
20
47
9
14.5
46
99
40
16
2-Ø9 HOLES
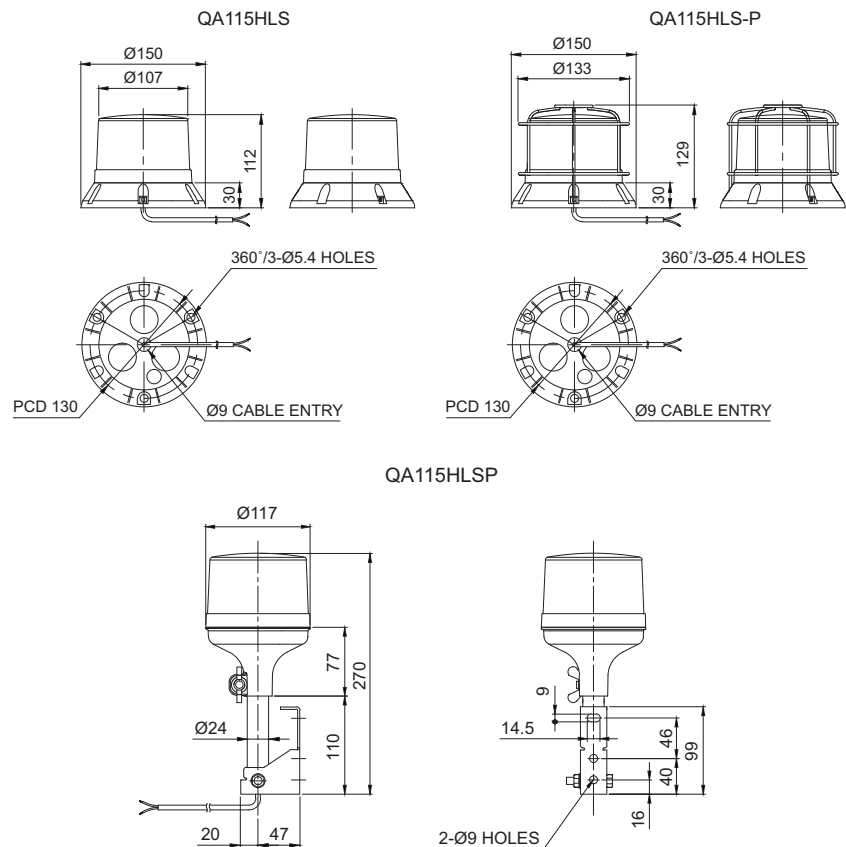
🖱 Ordering Specification

QA115HLSP	-	12/24	-	R
[Model number]		[Voltage]		[Color]

- QA115HLS
- QA115HLSP

- 12/24
-DC12V-24V

- ● R-Red
- ● A-Amber

⌁ Wiring Instructions

- External power line standard : UL2464 18AWG×2C 400mm
- Product can be wired regardless of polarity

✎ Customization

- User selected connector type available upon request
- Built-in protection cage (QA115HLS-P)

QA125HLS series

LED Strobe Warning Lights for Heavy-Duty Equipment

Qlight

IP66 -30~+50℃
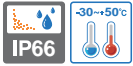
QA125HLS-Ø125mm
QA125HLSP-Ø125mm

QA125HLS

QA125HLSP

QA125HLS LED Strobe Warning Light

• Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA125HLS	DC12V-24V	Max 1.650A	-	0.55kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

QA125HLSP LED Strobe Warning Light

• Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA125HLSP	DC12V-24V	Max 1.650A	-	1.00kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

Technical Diagram (Units : mm)

QA125HLS

Ø123
125
100
12
Ø10 CABLE ENTRY
PCD 85
360°/3-M5 BOLT

QA125HLSP

90°
Ø123
100
76.5
321
28
45
2-Ø8.4 HOLES
Ø24
8.2
45
25
100
14.6
14.5

Wiring Instructions

• External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
• Product can be wired regardless of polarity

Ordering Specification

QA125HLS	-	12/24	-	R
[Model number]		[Voltage]		[Color]
• QA125HLS • QA125HLSP		• 12/24-DC12V-24V		● R-Red ● A-Amber

- **Ø140mm high-intensity LED strobe warning lights for heavy-duty equipment**
- **Applies Qlight's exclusive patented diffusion lens and reflector system to maximize its light output**

QA140HLSP

💡 Common Specifications(QA140HLSP/ QA140DLSP)

- Applies a special built-in filter to compensate for shortcomings of the LED warning light when attenuation to sunlight in bright outdoor environments occur
- Wide angle filter provides excellent visibility from top to bottom
- Vibration resistant and shock-proof : Can withstand 15g of vibration and 100g of shock
- Pole mount type
- Equipped with angel-adjustable bracket
- Flashing rate : 60-80 flashes/min
- Materials : Housing-PC, Diffusion lens-PC, Lens-PC, Reflector-Heat resistant ABS, Bracket-SUS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP66
- Designed for heavy equipment applications
- Certificates : CE Compliant, E11
- Compliant with RoHS directive

Superior light output through the Qlight's exclusive diffusion lens and reflector

The inner ring-shaped diffusion lens is specially designed to help minimize the loss of light output. The inner diffusion lens and reflector structure allows for light to be spread both horizontally and vertically for accurate signal light transmission.

Standard Model   **High Brightness Model**

Ensuring visibility with wide angle light output

To compliment the drawbacks of a typical one directional LED, The patented light emitting structure is designed to secure a wide viewing angel. Thus, eliminating potential disadvantages of mounting a typical LED at a higher position. It's design allows for easy visibility at close ranges and high mounting positions.

QA140HLSP series

LED Strobe Warning Lights for Heavy-Duty Equipment

Qlight

IP66   -30~+50℃   RoHS
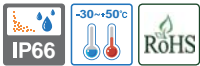
Excellent durability and shockproof by using high hardness PC material for the lens.

Bendable pole structure prevents damage from external impact.

Vibration resistant, shock-proof, dustproof, and waterproof products

Durable and enclosed product structure was produced for direct exposure to the environments of heavy equipment such as vibration and shock, dust and water.

Bendable pole structure prevents damage from external impact

Pole mount product is designed to prevented damage from external impact by bending in the opposite direction when impact occurs.

QA140HLSP LED Strobe Warning Light

Model number	Brightness type	Brightness	Voltage	Current	Certificates	Weight	Color
QA140HLSP	Standard	110Lux	DC12V	0.820A	CE DC24V Only E11	1.16kg	● R-Red ● A-Amber
			DC24V	0.600A			

QA140DLSP LED Strobe Warning Light

Model number	Brightness type	Brightness	Voltage	Current	Certificates	Weight	Color
QA140DLSP	High brightness	170Lux	DC12V	1.640A	-	1.18kg	● R-Red ● A-Amber
			DC24V	1.040A			

Technical Diagram

(Units : mm)

QA140HLSP
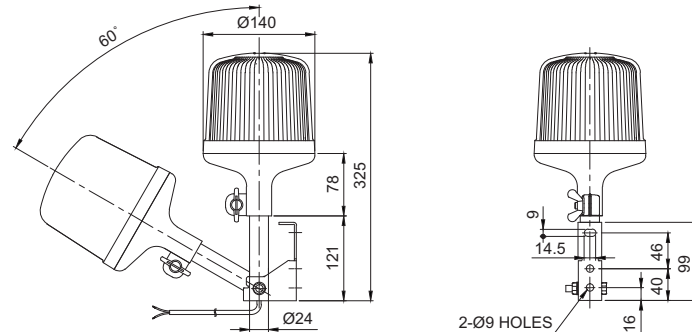
Wiring Instructions

• External power line standard : KSC3304 0.85sq×2C 400mm
• Product can be wired regardless of polarity

Customization

• Connector type wiring products

Ordering Specification

QA140HLSP	-	12	-	R
[Model number]		[Voltage]		[Color]
• QA140HLSP • QA140DLSP		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber

SH1/ SH2 series

Qlight

Superior durability with fully enclosed structure and corrosion resistance, suitable for vessels and heavy industry applications

· **SH1 series-Ø125mm**
· **SH2 series-Ø150mm**

ⓘ Common Specifications

• Aluminum housing and polycarbonate lens material provides excellent impact resistance under seismic conditions
• Excellent hermetic structure that blocks water and dust
• Can select a variety of light sources (Bulb, LED, and xenon) for your application needs and environmental conditions
• Terminals located inside the terminal box or product
• Cable entry : 1/2″PF
• Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector for LED type-PC/ Reflector for bulb type-Heat resistant ABS
• Housing standard color : MUNSELL No. 7.5BG 7/2
• Protection rating : IP66

■ **A Variety of Selectable Light Source and Function Combinations**

You can select from a variety of light sources for your environment, condition, and purpose. Basic specifications are as follows :

• LED revolving type
• LED steady/flashing type
• xenon lamp strobe type
• Bulb revolving type

User-selected LED strobe type and LED simulated revolving type are available upon request.

❶ Lenses

• Utilizes a strong and durable polycarbonate material with excellent shock and vibration resistance
• The lens surface has two types depending on the light source function-Light diffusion type and light transmission type

Light transmission type		LED revolving type Bulb revolving type	SH( )LR SH( )
Light diffusion type		LED steady/flashing type xenon lamp strobe type	SH( )L/LF SH( )S

❷ Protection cage

• The durable protection cage is made of corrosion resistant stainless steel that prevents damage to the lens from external contact
• Materials : SUS316L

❸ Housing

• The special aluminum body housing features superior durability
• The housing is corrosion resistant from a special anodized surface treatment process
• Materials : Al

❹ Fully enclosed structure

• The tightly sealed warning light structure is waterproof and dustproof
• Protection rating : IP66

❺ Terminal box

• Terminal box is located on the side of housing for easy wiring
• Materials : Al

❻ Brackets

• Stainless steel mounting bracket is conveniently attached to the outer surface of the product
• Materials : SUS

SH1/SH2 series Product Categories

Standard model
• Protection cage or terminal box not attached
• Terminals located inside the housing
• Use in environments that has low probability of damage to the lens due to external forces
• SH1/SH2 series is available in this model

Terminal box mounted type
• Equipped with a terminal box for easy wiring
• Terminal box enables easy wiring
• Use in environments that has low probability of damage to the lens due to external forces
• SH1T( )/ SH2T( ) is available in this model

Protection cage mounted type
• Equipped with a Protection cage
• Terminals located inside the housing
• Damage to the lens from external forces can be prevented with protection cage
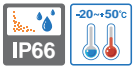• SH1( )P/SH2( )P is available in this model

Terminal box and protection cage mounted type
• Equipped with a protection cage and a terminal box
• Terminal box enables easy wiring
• Damage to the lens from external forces can be prevented with protection cage
• SH1T( )P/ SH2T( )P is available in this model

SH1LR/ SH2LR series

Heavy-Duty LED Revolving Warning Lights for Vessels and Heavy Industry Applications

Qlight

IP66 | -20~+50℃

· SH1LR-Ø125mm
· SH2LR-Ø150mm

SH1LR

SH2LRP

SH1LR/SH2LR models are equipped with flexible connector, and SH1TLR/ SH2TLR models are equipped with 15C nipple at cable entry.
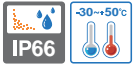
Flexible connector | 15C nipple

ⓘ **Common Specifications(SH1L/ SH2L)**

• Features high visibility in all directions with special concentrated LED light structure and multi side reflector
• Revolving speed : 120-140RPM
• Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector for LED : PC
• Ambient operation temperature : -20°C to +50°C
• Cable entry : 1/2″PF
• Housing standard color : MUNSELL No.7.5BG 7/2
• Protection rating : IP66

SH1LR LED Revolving Warning Light

• Certificates : KIMM, ABS, CCS

Model number	Voltage	Current	Certificates	Color
• SH1LR Standard type • SH1LRP Protection cage type • SH1TLR Terminal box type • SH1TLRP Protection cage and terminal box type	DC12V	0.422A	KIMM ABS CCS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.266A		
	AC110V	0.082A		
	AC220V	0.041A		

SH2LR LED Revolving Warning Light

• Certificates : KIMM, ABS

Model number	Voltage	Current	Certificates	Color
• SH2LR Standard type • SH2LRP Protection cage type • SH2TLR Terminal box type • SH2TLRP Protection cage and terminal box type	DC12V	0.422A	KIMM ABS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.266A		
	AC110V	0.082A		
	AC220V	0.041A		

SH1LR/SH2LR LED Reflector Warning Lights Specification Category and Products Weight Chart

Type	SH1 series		SH2 series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1LR (1.64kg)		SH2LR (1.69kg)
Built-in protection cage		SH1LRP (1.89kg)		SH2LRP (1.98kg)
Built-in terminal box		SH1TLR (2.10kg)		SH2TLR (2.15kg)
Built-in protection cage &Terminal box		SH1TLRP (2.35kg)		SH2TLRP (2.44kg)

※ Product weight is based on AC type.

Ordering Specification

SH1LR	-	12	-	R
[Model number]		[Voltage]		[Color]

[Model number]
• SH1LR
• SH1LRP
• SH1TLR
• SH1TLRP
• SH2LR
• SH2LRP
• SH2TLR
• SH2TLRP

[Voltage]
• 12-DC12V
• 24-DC24V
• 110-AC110V
• 220-AC220V

[Color]
• R-Red
• A-Amber
• G-Green
• B-Blue

SH1L/ SH2L series

Heavy-Duty Steady/ Flash Signal Lights for Vessels and Heavy Industry Applications

IP66 | -30~+50℃

· **SH1L-Ø125mm**
· **SH2L-Ø150mm**

SH1LP

SH2TLP

SH1L/SH2L models are equipped with flexible connector, and SH1TL/SH2TL models are equipped with 15C nipple at cable entry.

Flexible connector   15C nipple

ⓘ **Common Specifications(SH1L/ SH2L)**

• Uniform and clear light diffusion with multi layered LED light distribution reflector
• Built-in switch for selection between steady and flashing mode
• Flashing rate : 60-80 flashes/min
• Standard housing color : MUNSELL No. 7.5BG 7/2
• Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector- Heat resistant ABS
• Ambient operation temperature : -30°C to +50°C
• Cable entry : 1/2″PF
• Protection rating : IP66

SH1L LED Steady/Flashing Signal Light

• Certificates : KIMM, ABS, CCS

Model number	Voltage	Current	Certificates	Color
• SH1L Standard type • SH1LP Protection cage type • SH1TL Terminal box type • SH1TLP Protection cage and terminal box type	DC12V	0.300A	KIMM ABS CCS	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.200A		
	AC110V	0.060A		
	AC220V	0.030A		

SH2L LED Steady/Flashing Signal Light

• Certificates : KIMM, ABS

Model number	Voltage	Current	Certificates	Color
• SH2L Standard type • SH2LP Protection cage type • SH2TL Terminal box type • SH2TLP Protection cage and terminal box type	DC12V	0.300A	KIMM ABS	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.200A		
	AC110V	0.060A		
	AC220V	0.030A		

SH1L/SH2L LED Steady/Flashing Signal Lights Specification Category and Products Weight Chart

Type	SH1 series		SH2 series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1L (1.49kg)		SH2L (1.57kg)
Built-in protection cage		SH1LP (1.74kg)		SH2LP (1.86kg)
Built-in terminal box		SH1TL (1.95kg)		SH2TL (2.03kg)
Built-in protection cage &Terminal box		SH1TLP (2.20kg)		SH2TLP (2.32kg)

※ Product weight is based on AC type.

Ordering Specification

SH2L	-	220	-	R
[Model number]		[Voltage]		[Color]

[Model number]	[Voltage]	[Color]
• SH1L • SH1LP • SH1TL • SH1TLP • SH2L • SH2LP • SH2TL • SH2TLP	• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V	● R-Red ● A-Amber ● G-Green ● B-Blue

SH1S/ SH2S series

Heavy-Duty Xenon Lamp Strobe Signal Lights for Vessels and Heavy Industry Applications

IP66 -30~+50℃
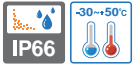
· **SH1S-Ø125mm**
· **SH2S-Ø150mm**

SH1S

SH2TS

SH1S/SH2S models are equipped with flexible connector, and SH1TS/SH2TS models are equipped with 15C nipple at cable entry.

Flexible connector

15C nipple

Common Specifications(SH1S/ SH2S)

• Convenient lamp change with connector type connection structure
• Flashing rate : 60-80 flashes/min
• Standard housing color : MUNSELL No. 7.5BG 7/2
• Materials : Lens-PC, Housing-Al, Protection cage-SUS316L
• Ambient operation temperature : -30°C to +50°C
• Cable entry : 1/2″PF
• Protection rating : IP66

SH1S Xenon Lamp Strobe Signal Light

• Certificates : KIMM, ABS, CCS

Model number		Voltage	Current	Bulb			Certificates	Color
				Spec	Standard	Parts no		
• SH1S	Standard type	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U type	48	KIMM ABS CCS	• R-Red • A-Amber • G-Green • B-Blue
• SH1SP	Protection cage type	DC24V	0.616A					
• SH1TS	Terminal box type	AC110V	0.133A					
• SH1TSP	Protection cage and terminal box type	AC220V	0.106A					

SH2S Xenon Lamp Strobe Signal Light

• Certificates : KIMM, ABS

Model number		Voltage	Current	Bulb			Certificates	Color
				Spec	Standard	Parts no		
• SH2S	Standard type	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U type	48	KIMM ABS	• R-Red • A-Amber • G-Green • B-Blue
• SH2SP	Protection cage type	DC24V	0.616A					
• SH2TS	Terminal box type	AC110V	0.133A					
• SH2TSP	Protection cage and terminal box type	AC220V	0.106A					

SH1S/SH2S Xenon Strobe Signal Lights Specification Category and Products Weight Chart

Type	SH1S series		SH2S series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1S (1.11 kg)		SH2S (1.19 kg)
Built-in protection cage		SH1SP (1.36 kg)		SH2SP (1.48 kg)
Built-in terminal box		SH1TS (1.57 kg)		SH2TS (1.65 kg)
Built-in protection cage &Terminal box		SH1TSP (1.82 kg)		SH2TSP (1.94 kg)

※ Product weight is based on AC type.

Ordering Specification

SH1S	-	12	-	R
[Model number]		[Voltage]		[Color]
• SH1S		• 12-DC12V		• R-Red
• SH1SP		• 24-DC24V		• A-Amber
• SH1TS		• 110-AC110V		• G-Green
• SH1TSP		• 220-AC220V		• B-Blue
• SH2S				
• SH2SP				
• SH2TS				
• SH2TSP				

SH1/ SH2 series

Heavy-Duty Bulb Revolving Signal Light for Vessels and Heavy Industry Applications

IP66 | -20~+50℃

· SH1-Ø125mm
· SH2-Ø150mm

SH1

SH2T

SH1/SH2 models are equipped with flexible connector, and SH1T/SH2T models are equipped with 15C nipple at cable entry.

Flexible connector

15C nipple

ⓘ Common Specifications(SH1/ SH2)

- Excellent light diffusion effect with multi faced reflector
- Adopts a special power transmission system that reduces noise and wear
- Revolving speed : 120-140RPM
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC
- Ambient operation temperature : -20°C to +50°C
- Cable entry : 1/2″PF
- Protection rating : IP66

SH1 Bulb Revolving Warning Light

- Certificates : KIMM, ABS, CCS, CE

Model number	Voltage	Current	Bulb			Certificates	Color
			Spec	Standard	Parts no		
• SH1　　Standard type • SH1P　Protection cage type • SH1T　Terminal box type • SH1TP　Protection cage and 　　　　terminal box type	DC12V	1.544A	12V15W	G23 15S	17	KIMM ABS CCS CE DC24V Only	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		
	AC110V	0.204A	12V15W	G23 15S	17		
	AC220V	0.102A	12V15W	G23 15S	17		

SH2 Bulb Revolving Warning Light

- Certificates : KIMM, ABS, CE

Model number	Voltage	Current	Bulb			Certificates	Color
			Spec	Standard	Parts no		
• SH2　　Standard type • SH2P　Protection cage type • SH2T　Terminal box type • SH2TP　Protection cage and 　　　　terminal box type	DC12V	1.544A	12V15W	G23 15S	17	KIMM ABS CE DC24V Only	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		
	AC110V	0.204A	12V15W	G23 15S	17		
	AC220V	0.102A	12V15W	G23 15S	17		

SH1/SH2 Bulb Revolving Warning Lights Specification Category and Products Weight Chart

Type	SH1 series		SH2 series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1 (1.61kg)		SH2 (1.77kg)
Built-in protection cage		SH1P (1.86kg)		SH2P (2.06kg)
Built-in terminal box		SH1T (2.07kg)		SH2T (2.23kg)
Built-in protection cage &Terminal box		SH1TP (2.32kg)		SH2TP (2.52kg)

※ Product weight is based on AC type.

Ordering Specification

SH1T	-	**220**	-	**R**
[Model number]		[Voltage]		[Color]
• SH1 • SH1P • SH1T • SH1TP • SH2 • SH2P • SH2T • SH2TP		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

SH1/ SH2 series

Technical Diagram

(Units : mm)

SH1LRP/ SH1LP/ SH1SP/ SH1P

Ø135
178
*(167)
120
12
Ø136
149

PCD 155

CABLE ENTRY 1/2″ PF

360°/3-Ø8 FITTING HOLES
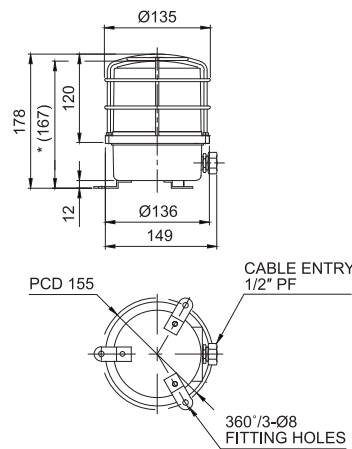
SH1TLRP/ SH1TLP/ SH1TSP/ SH1TP

Ø135
178
*(167)
120
12
Ø136
234

PROTECTION CAGE
TERMINAL BOX

PCD 155

CABLE ENTRY 1/2″ PF

70

360°/3-Ø8 FITTING HOLES
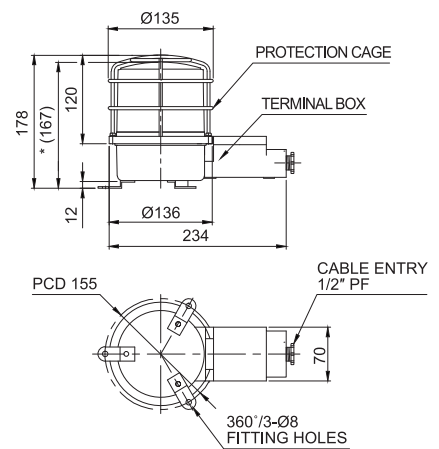
※ *(167) represents SH1LR/ SH1L/ SH1S/ SH1, SH1TLR/ SH1TL/ SH1TS/ SH1T size without protection cage.

SH2LRP/ SH2LP/ SH2SP/ SH2P

Ø158
212
*(198)
146
12
Ø154
164

PCD 155

CABLE ENTRY 1/2″ PF

360°/3-Ø8 FITTING HOLES
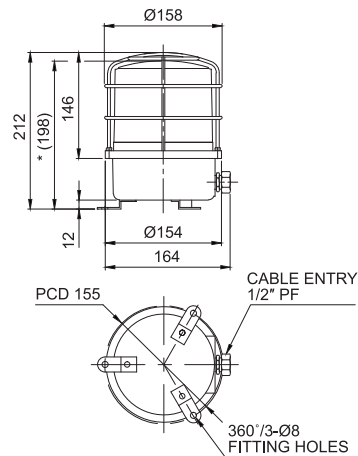
SH2TLRP/ SH2TLP/ SH2TSP/ SH2TP

Ø158
212
*(198)
146
12
Ø154
250

PROTECTION CAGE
TERMINAL BOX

PCD 155

CABLE ENTRY 1/2″ PF

70

360°/3-Ø8 FITTING HOLES
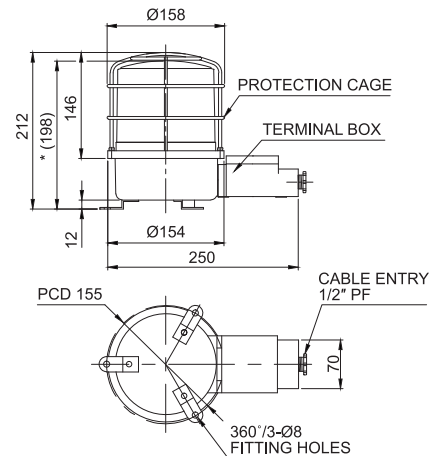
※ *(198)represents SH2LR/ SH2L/ SH2S/ SH2, SH2TLR/ SH2TL/ SH2TS/ SH2T size without protection cage.

Customization

• 3/4″PF cable entry
  Standard cable entry is 1/2″PF
  3/4″PF is customization

• Built-in cable gland type
  Flexible connector is equipped to the standard cable entry

• Brass housing product
  SH2 series brass housing provides products with
  excellent corrosion resistance as customization

※ Color will be MUNSELL No. 7.5BG 7/2 when Released.

• 2T type has 2 cable entries in the terminal box
  2 cable entries terminal box is a customized add-on,
  please refer to the technical diagram on page 21

Built-in cable gland type

Brass housing product

2 cable entries
terminal box model

Technical Diagram for 2T Type Cable Entries (Units : mm)

SH1LR-2TP/ SH1L-2TP/ SH1S-2TP/ SH1-2TP

Ø135
178
*(167)
120
12
Ø136
210
PROTECTION CAGE
TERMINAL BOX

CABLE ENTRY 1/2″ PF
PCD 155
360˚/3-Ø8 FITTING HOLES
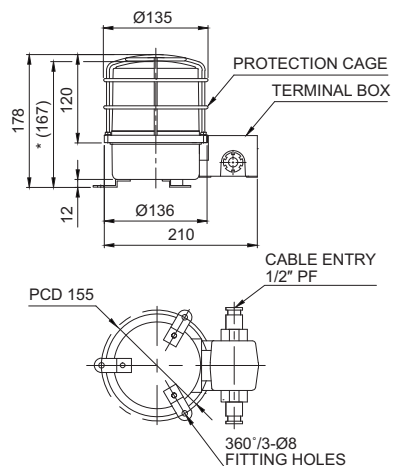
※ *(167) represents SH1LR-2T/ SH1L-2T/ SH1S-2T/ SH1-2T size without protection cage.

SH2LR-2TP/ SH2L-2TP/ SH2S-2TP/ SH2-2TP

Ø158
212
*(198)
146
12
Ø154
223
PROTECTION CAGE
TERMINAL BOX

CABLE ENTRY 1/2″ PF
PCD 155
360˚/3-Ø8 FITTING HOLES
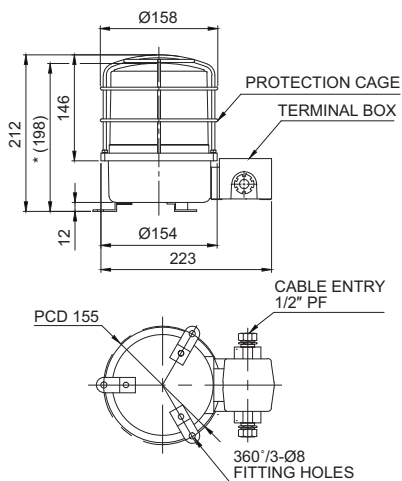
※ *(198) represents SH2LR-2T/ SH2L-2T/ SH2S-2T/ SH2-2T size without protection cage.

SHD/ SHD2 series

Warning light and electric horn combinations with excellent durability and perfectly enclosed structure, designed for vessels and heavy industry applications

■ **A variety of selectable light source and function combinations**

You can select from a variety of light sources for your the work environment, conditions, and purpose. Basic specifications are as follows :

• LED revolving type
• LED steady/flashing type
• Xenon lamp strobe type
• Bulb revolving type

User-selected LED strobe type and LED simulated revolving type are available upon request.

① A variety of selectable warning sounds and sound messages

You can convey specific information with a variety of 20 warning sounds and voice messages.

Sound	Pattern	Ch	Sound Tone
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion
WP	5 Special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short Pl. / 1 Long
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat
WV	5 Customizable sound messages	Ch1 - Ch5	Customized sound tones

· **SHD series - Single electric horn type**
· **SHD2 series - Dual-facing electric horn type**

ⓘ Common Specifications

• Warning light and electric horn combination models for vessels and heavy industries applications
• Aluminum housing and polycarbonate lens material provides excellent durability under seismic conditions
• Excellent hermetic structure that blocks water and dust
• Superior impact and shock resistance
• You can select a variety of sound and light sources(bulb, LED and xenon)
• Equipped with a wire guard
• Terminal box located inside the housing
• Can adjust sound volume and select sound pattern with the switches built inside the products
• Cable entry : 1/2″PF
• Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC, Multi-tiered reflector-Heat resistance ABS
• Standard housing color : MUNSELL No. 7.5BG 7/2
• Protection rating : IP66
• Certificates : KIMM, ABS, CE Compliant

② Lens
• Polycarbonate lens material provides excellent impact resistance

③ Protection cage
• The durable wire guard is made of corrosion resistant stainless steel that prevents damage to the lens from external contact
• Materials : SUS316L

④ Housing
• The special aluminum body housing features superior durability
• The housing is corrosion resistant from a special anodized surface treatment process
• Materials : Al

⑤ Fully enclosed structure
• The tightly sealed warning light structure is waterproof and dustproof
• Protection rating : IP66

SHD series Product Category Chart

SHD series		Light Source and Function	SHD2 series	
Standard Type	Protection Cage Equipped Type		Standard Type	Protection Cage Equipped Type
SHDLR	SHDLRP	LED revolving type	SHD2LR	SHD2LRP
SHDL	SHDLP	LED steady/ flashing type	SHD2L	SHD2LP
SHDS	SHDSP	Xenon lamp strobe type	SHD2S	SHD2SP
SHD	SHDP	Bulb revolving type	SHD2	SHD2P

Heavy-Duty Warning/ Signal Lights and Electric Horn for Vessels and Heavy Industry Applications

Qlight

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN
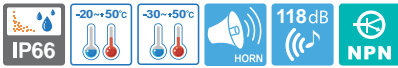
· SHD series
 -Single Electric Horn
· SHD2 series
 -Dual Electric Horn

SHDLR

SHD2LR

SHDLP   **SHD2LP**

SHD2L used in KTX tunnels for an evacuation alarm warning light system.

SHDLR/ SHDLRP LED Revolving Warning Light & Electric Horn Combination

• Features high visibility in all directions with special concentrated LED light structure and multi side reflector
• Revolving speed : 120-140RPM
• Ambient operation temperature : -20°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHDLR SHDLRP	DC12V	2.633A	• WS -5 Warning sounds : 118dB • WP -5 Special warning sounds : 118dB • WM -5 Melodies : 118dB • WA -5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS	• SHDLR DC-3.21kg AC-3.91kg • SHDLRP DC-3.46kg AC-4.16kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

SHD2LR/ SHD2LRP LED Revolving Warning Light & Dual Electric Horn Combination

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHD2LR SHD2LRP	DC12V	4.844A	• WS -5 Warning sounds : 118dB×2 • WP -5 Special warning sounds : 118dB×2 • WM -5 Melodies : 118dB×2 • WA -5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2LR DC-4.26kg AC-4.97kg • SHD2LRP DC-4.51kg AC-5.22kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.255A				
	AC110V	0.535A				
	AC220V	0.267A				

SHDL/ SHDLP LED Steady/Flashing Warning Light & Electric Horn Combination

• Uniform and clear light diffusion with multi layered LED light distribution reflector
• Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
• Ambient operation temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHDL SHDLP	DC12V	2.511A	• WS -5 Warning sounds : 118dB • WP -5 Special warning sounds : 118dB • WM -5 Melodies : 118dB • WA -5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS	• SHDL DC-3.02kg AC-3.39kg • SHDLP DC-3.27kg AC-3.64kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

SHD2L/ SHD2LP LED Steady/Flashing Warning Light & Dual Electric Horn Combination

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHD2L SHD2LP	DC12V	4.722A	• WS -5 Warning sounds : 118dB×2 • WP -5 Special warning sounds : 118dB×2 • WM -5 Melodies : 118dB×2 • WA -5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2L DC-4.07kg AC-4.45kg • SHD2LP DC-4.32kg AC-4.70kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.188A				
	AC110V	0.513A				
	AC220V	0.256A				

SHD/ SHD2 series

Warning Lights and Electric Horns for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

· SHD series
-Single Electric Horn
· SHD2 series
-Dual Electric Horn

SHDS

SHD2S

SHD   **SHD2P**

SHD/SHD2 series are equipped with flexible connector at cable entry. Cable gland is an optional item.

Flexible connector   Cable gland

SHDS/ SHDSP Xenon Lamp Strobe Warning Light and Electric Horn Combination

• Flashing rate : 60-80 flashes/min
• Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SHDS SHDSP	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS CE DC Only	• SHDS DC-3.05kg AC-3.38kg • SHDSP DC-3.3kg AC-3.6kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

SHD2S/ SHD2SP Xenon Lamp Strobe Warning Light and Dual Electric Horn Combination

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SHD2S SHD2SP	DC12V	5.144A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB×2 • WP -5 Special warning sounds :118dB×2 • WM-5 Melodies : 118dB×2 • WA-5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2S DC-4.11kg AC-4.44kg • SHD2SP DC-4.36kg AC-4.69kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.377A							
	AC110V	0.586A							
	AC220V	0.333A							

SHD/ SHDP Bulb Revolving Warning light and Electric Horn Combination

• Revolving speed : 120 - 140RPM
• Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SHD SHDP	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS CE DC24V only	• SHD DC-3.18kg AC-3.89kg • SHDP DC-3.43kg AC-4.14kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

SHD2/ SHD2P Bulb Revolving Warning light and Dual Electric Horn Combination

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SHD2 SHD2P	DC12V	5.966A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB×2 • WP -5 Special warning sounds :118dB×2 • WM-5 Melodies : 118dB×2 • WA-5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2 DC-4.23kg AC-4.95kg • SHD2P DC-4.48kg AC-5.20kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.755A	24V15W	G23 15S	18				
	AC110V	0.648A	12V15W	G23 15S	17				
	AC220V	0.324A	12V15W	G23 15S	17				

SHD/ SHD2 series

Technical Diagram

(Units : mm)

SHDP

Ø135
PROTECTION CAGE
116
121
*(227)
237
Ø120
255
CABLE ENTRY 1/2" PF

4-Ø8.5 FITTING HOLES
134
152
128   87   40
255
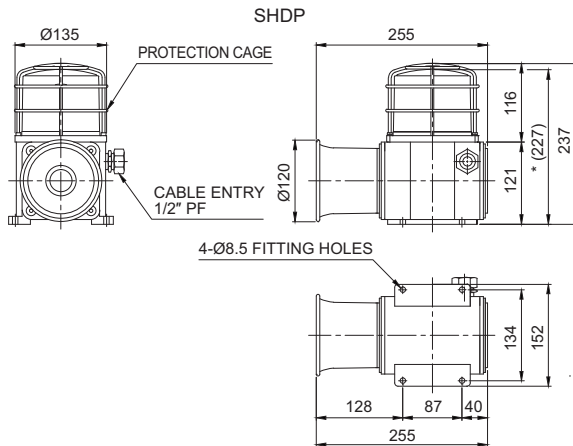
※ *(227) represents SHD size without protection cage.

SHD2P

Ø135
PROTECTION CAGE
343
116
121
*(227)
237
Ø120
CABLE ENTRY 1/2" PF

4-Ø8.5 FITTING HOLES
134
152
128   87   128
343
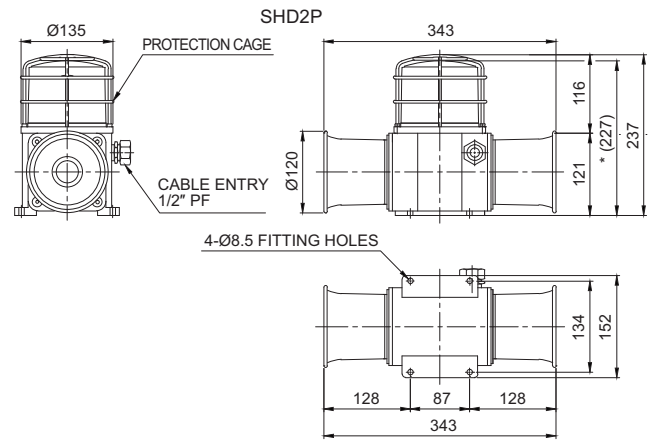
※ *(227) represents SHD2 size without protection cage.

Sound Selection Instructions and Wiring

• Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.

ON   DP
1 2 3 4 5

Ch1 Ch2 Ch3 Ch4 Ch5   VOLUME

• Customization : External contact(LC)
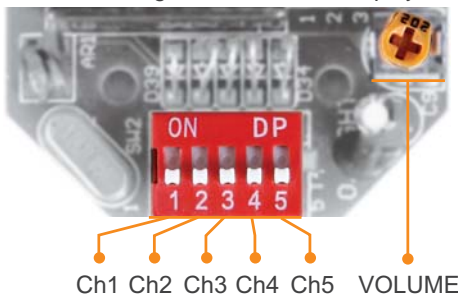
SHD SERIES-DC/AC
SHD2 SERIES-DC/AC

EXTERNAL CONTACT

Red(R)   Ch 1 Sound Pattern
Amber(A)   Ch 2 Sound Pattern
Green(G)   Ch 3 Sound Pattern
Blue(B)   Ch 4 Sound Pattern
White(W)   Ch 5 Sound Pattern
Black(BK)   Common
White(W)
Black(BK)   Fuse   Power

EXTERNAL TRANSISTOR-NPN

Red(R)   Ch 1 Sound Pattern
Amber(A)   Ch 2 Sound Pattern
Green(G)   Ch 3 Sound Pattern
Blue(B)   Ch 4 Sound Pattern
White(W)   Ch 5 Sound Pattern
Black(BK)   Common
White(W)
Black(BK)   Fuse   Power
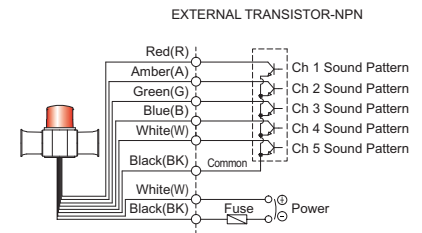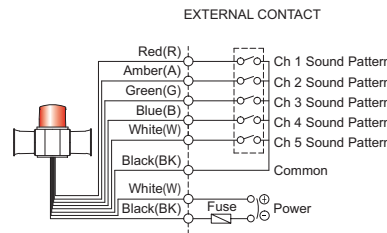
Customization

• Customized cable entry(3/4″PF) available(Standard : 1/2″PF)
• Cable gland type
• Customized external sound line type available : SHD/SHD2 series have built-in switch for sound tone selection

■ Sound tones for standard model

Sound	Built-in sound	Ch	Sound tone	Sound	Built-in sound	Ch	Sound tone
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion	WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WP	5 Special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short PI. / 1 Long	WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat
				WV	5 Customizable Voices	Ch1-Ch5	Customized sound

※ Standard model has 5 warning sounds(WS), 5 special warning sounds(WP), 5 melodies(WM), 5 alarms(WA) and 5 customizable voices(WV).

Ordering Specification

SHD2L	-	WA	-	24	-	R
[Model number]		[Sound]		[Voltage]		[Color]

[Model number]
• SHDLR   • SHDLRP   • SHD2LR   • SHD2LRP
• SHDL   • SHDLP   • SHD2L   • SHD2LP
• SHDS   • SHDSP   • SHD2S   • SHD2SP
• SHD   • SHDP   • SHD2   • SHD2P

[Sound]
• WS-Warning sounds
• WP-Special warning sounds
• WM-Melodies
• WA-Alarms
• WV-Customizable voices

[Voltage]
• 12-DC12V
• 24-DC24V
• 110-AC110V
• 220-AC220V

[Color]
● R-Red
● A-Amber
● G-Green
● B-Blue

SCD series

Warning Light and Electric Horn Combinations for Vessels and Heavy Industry Applications

Light weight warning light and electric horn combinations with polycarbonate housing for vessels and heavy industry applications

· **SCDF series**
  - Self stand type
· **SCDW series**
  - Well mount type

Self stand type

Well mount type

Common Specifications(SCDF/SCDW)

- Warning light and electric horn combinations for vessels and heavy industrial applications
- Light weight model with special polycarbonate (PC+GF) housing
- Excellent hermetic structure that blocks water and dust
- Superior impact and shock resistance
- Prevents damage from external contact with recessed horn structure, high volume output possible with the extended length of the horn housing
- Easy wiring and sound control with the terminal box attached on the side of housing
- Standard model comes with a protection cage equipped
- Can select a variety of light sources and sound pattern combinations
- Detachable mounting bracket structure enables product to be either self stand type or wall mount type
- Can adjust sound volume and select sound pattern with the switches built inside the units
- Materials : Lens-PC, Housing-PC+GF, Protection cage-SUS316L, Reflector-PC, Multi-tiered reflector-Heat resistance ABS
- Cable entry : 1/2″PF
- Ambient operating temperature
  -20°C to +50°C : SCDFLR, SCDWLR, SCDF, SCDW
  -30°C to +50°C : SCDFL, SCDWL, SCDFS, SCDWS
- Protection rating : IP66
- Certificates : KIMM, KR, CE Compliant
- Mountings : Available in self stand type and wall mount type

SCD series Product Category Chart

	LED revolving type	LED steady/ flashing type	xenon lamp strobe type	Bulb revolving type
Self stand type	SCDFLR	SCDFL	SCDFS	SCDF
Well mount type	SCDWLR	SCDWL	SCDWS	SCDW
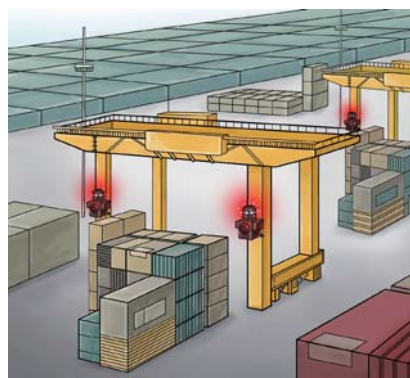
Easy control of the audible sound since the sound control board is located separately from the main board

Easy wire configuration possible with terminal box located on the side of the housing
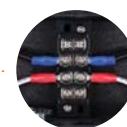
Recessed horn structure protects it from damage by external forces
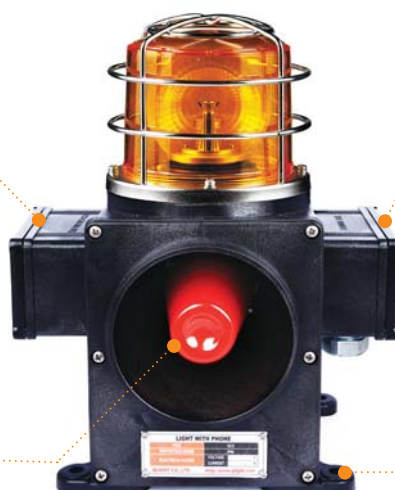
Detachable mounting bracket structure enables product to be either self stand type or wall mount type

SCD series

Warning Light and Electric Horn Combinations for Vessels and Heavy Industry Applications

Qlight

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

· SCDF series
 - Self stand type
· SCDW series
 - Wall mount type

SCDWLR

SCDFLR

SCDWL / SCDWS

SCDFL / SCDFS

SCDW

SCDF

SCDF/SCDW series are equipped with flexible connector at cable entry. Cable gland is an optional item.

Flexible connector

Cable gland

SCDFLR/ SCDWLR LED Revolving Warning Light and Electric Horn Combination

• Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
• Revolving speed : 120 - 140RPM
• Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SCDFLR SCDWLR	DC12V	2.633A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	KR	• SCDFLR DC-2.60kg AC-3.50kg • SCDWLR DC-2.70kg AC-3.45kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

SCDFL/ SCDWL LED Steady/Flashing Warning Light and Electric Horn Combination

• Multi layer LED reflect system emits clear and uniform level of signal lights throughout the lens
• Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
• Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SCDFL SCDWL	DC12V	2.511A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	KR	• SCDFL DC-2.42kg AC-3.46kg • SCDWL DC-2.52kg AC-3.27kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

SCDFS/ SCDWS Xenon Lamp Strobe Warning Light and Electric Horn Combination

• Convenient lamp exchange by adopting connector type lamp installation
• Flashing rate : 60-80 flashes/min
• Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SCDFS SCDWS	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KR	• SCDF DC-2.46kg AC-2.85kg • SCDW DC-2.46kg AC-3.85kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

SCDF/ SCDW Bulb Revolving Warning Light and Electric Horn Combination

• Multi layer reflector system provides excellent signal light diffusing effect
• Revolving speed : 120 - 140RPM
• Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SCDF SCDW	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM KR CE DC24V only	• SCDF DC-2.58kg AC-3.60kg • SCDW DC-2.68kg AC-3.43kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

Technical Diagram

(Units : mm)

SCDFLR/ SCDFL/ SCDFS/ SCDF

Ø140
322
10
146
167

249
170
4-Ø9 FITTING HOLES
119
9

SCDWLR/ SCDWL/ SCDWS/ SCDW

Ø140
313
150
4-Ø9 FITTING HOLES
146
170
177
10

249

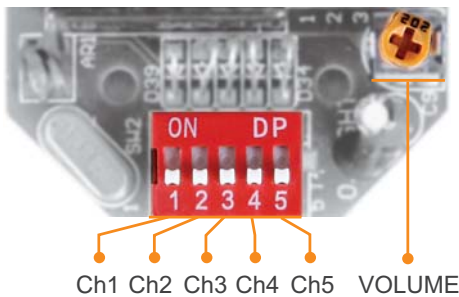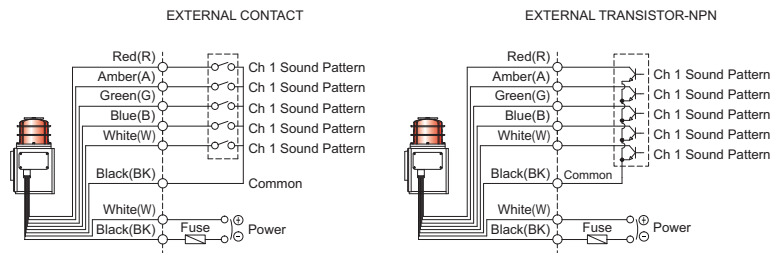## Sound Selection Instructions and Wiring

• Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.

ON   DP
1 2 3 4 5

Ch1 Ch2 Ch3 Ch4 Ch5   VOLUME

• Customization : External contact(LC)

SCDW SERIES-DC/AC
SCDF SERIES-DC/AC

EXTERNAL CONTACT

Red(R) — Ch 1 Sound Pattern
Amber(A) — Ch 1 Sound Pattern
Green(G) — Ch 1 Sound Pattern
Blue(B) — Ch 1 Sound Pattern
White(W) — Ch 1 Sound Pattern
Black(BK) — Common
White(W)
Black(BK) — Fuse — Power

EXTERNAL TRANSISTOR-NPN

Red(R) — Ch 1 Sound Pattern
Amber(A) — Ch 1 Sound Pattern
Green(G) — Ch 1 Sound Pattern
Blue(B) — Ch 1 Sound Pattern
White(W) — Ch 1 Sound Pattern
Black(BK) — Common
White(W)
Black(BK) — Fuse — Power

Customization

• Customized cable entry(3/4″PF) available(Standard : 1/2″PF)
• Customized external sound line type available : SCD series has built-in switch for sound tone selection
• Customized wiring available to select the sound tone via external contact or transistor wiring type(Model number : -LC)
• Cable gland type

Ordering Specification

SCDW	-	WA	-	24	-	R
[Model number]		[Sound]		[Voltage]		[Color]

[Model number]	[Sound]	[Voltage]	[Color]
• SCDFLR	• WS-Warning sounds	• 12-DC12V	● R-Red
• SCDFL	• WP-Special warning sounds	• 24-DC24V	● A-Amber
• SCDFS	• WM-Melodies	• 110-AC110V	● G-Green
• SCDF	• WA-Alarms	• 220-AC220V	● B-Blue
• SCDWLR	• WV-Customizable voices		
• SCDWL			
• SCDWS			
• SCDW			

Wall mount warning light and electric horn combinations featuring superior durability, tight seal, and corrosion resistance, designed for vessels and heavy Industrial applications

· SED series
  - 125mm warning light & electric horn with Max 118dB sound output
· SD series
  - 150mm warning light & electric horn with Max 118dB sound output
· SMD series
  - 150mm warning light & electric horn with Max 120dB sound output

ⓘ Common Specifications

• Wall mount warning light and electric horn combinations for vessels and heavy industrial applications
• Aluminum housing and polycarbonate lens material provides excellent impact and shock resistance
• Excellent hermetic structure that block water and dust
• Can select a variety of light source(bulb, LED, xenon lamp) and sound pattern combination
• Attached terminal box enables easy wiring
• Can adjust sound volume and select sound pattern with the switches built inside the products
• Cable entry : 1/2"PF
• Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC, Multi-tiered reflector-Heat resistance ABS
• Standard housing color : MUNSELL No. 7.5GBG 7/2
• Protection rating : IP66

■ A variety of selectable light source and function combinations

You can select from a variety of light sources for your work environment, condition, and purpose. Basic specifications are as follows :

• LED Revolving Type   • LED Steady/Flashing Type
• Xenon Lamp Strobe Type   • Bulb Revolving Type

User-selected LED strobe type and LED stimulated revolving type are available upon request.

❸ A variety of selectable warning sounds and sound massages

You can convey specific information with a variety of 20 warning sounds and voice messages.

Sound	Pattern	Ch	Sound Tone
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion
WP	5 Special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short Pl. / 1 Long
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat
WV	5 Customizable sound messages	Ch1-Ch5	Customized sound tones

❶ Lens

Utilizes a strong and durable polycarbonate material with excellent shock and vibration resistance.

The lens surface has two types according to the light source type and function-light diffusion type and light transmission type.

Light transmission type		LED revolving type(SEDLR) Bulb revolving type(SED)
Light diffusion type		LED steady/flashing type(SEDL/LF) Xenon lamp strobe type(SEDS)

❷ Protection cage

• The durable protection cage is made of corrosion resistant stainless steel that prevents damage to the lens from external contact
• Materials : SUS316L

❹ Housing

• The special aluminum housing features superior durability
• The housing is corrosion resistant from a special anodized surface treatment process
• Materials : Al

❺ Fully enclosed structure

• The tightly sealed warning light structure is waterproof and dustproof
• Protection rating : IP66

❻ Terminal Box

• Terminal box is located at the bottom of the product for easy wiring
• Materials : Al

Warning Light and Electric Horn Combinations for Vessels and Heavy Industry Applications

Qlight

SED/ SD/ SMD series Information

Standard type
- No protection cage is provided
- Recommended for the places where the lens is not damaged by external contact
- Model lists : SED/ SD/ SMD

Protection cage type
- Provided with protection cage
- Lens can be protected from the damage by external contact
- Model lists : SEDP/ SDP/ SMDP

SED/ SD/ SMD series References

	SED series		SD series		SMD series	
Diameter / dB	Ø125mm / Max 118dB at 1m		Ø150mm / Max 118dB at 1m		Ø150mm / Max 120dB at 1m	
Materials	Lens - PC, Housing - Al, Protection cage-SUS316L, Reflector - PC/ Heat resistant ABS					
Protection rating	IP66					
Certificates	KIMM/ CCS/ KR/ CE		KIMM/ ABS/ LR/ KR/ CE			
Cable entry	Standard : 1/2″PF (Customized cable entry available : 3/4″PF)					
Mounting	Wall mounting					
	Standard	With protection cage	Standard	With protection cage	Standard	With protection cage
LED revolving	SEDLR	SEDLRP	SDLR	SDLRP	SMDLR	SMDLRP
LED steady/flashing	SEDL	SEDLP	SDL	SDLP	SMDL	SMDLP
Xenon lamp strobe	SEDS	SEDSP	SDS	SDSP	SMDS	SMDSP
Bulb revolving	SED	SEDP	SD	SDP	SMD	SMDP

SED series

Warning Lights and Electric Horns for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN
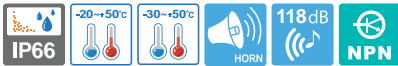
Ø125mm signal light and 118dB electric horn combination

SEDLR

SEDLP/ SEDSP

SED

ⓘ **Common Specifications(SEDLR/ SEDL/ SEDS/ SED)**

- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC/ Heat resistant ABS
- Cable entry : 1/2″PF
- Housing color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66

SEDLR/ SEDLRP LED Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SEDLR SEDLRP	DC12V	2.633A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	-	• SEDLR DC-3.09kg AC-3.86kg • SEDLRP DC-3.34kg AC-4.11kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

SEDL/ SEDLP LED Steady/Flashing Warning Light and Electric Horn Combination

- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SEDL SEDLP	DC12V	2.511A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	KR	• SEDL DC-2.96kg AC-3.38kg • SEDLP DC-3.21kg AC-3.63kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

SEDS/ SEDSP Xenon Lamp Strobe Warning Light and Electric Horn Combination

- Convenient lamp exchange by adopting a connector type lamp installation
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

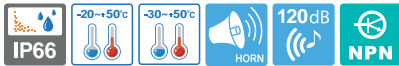| Model number	Voltage	Current	Bulb Spec	Bulb Standard	Parts no	Sound pattern and volume	Certificates	Weight	Color
SEDS SEDSP	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	-	• SEDS DC-3.01kg AC-3.40kg • SEDSP DC-3.26kg AC-3.65kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

SED/ SEDP Bulb Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Bulb Spec	Bulb Standard	Parts no	Sound pattern and volume	Certificates	Weight	Color
SED SEDP	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS KR CCS CE DC24V only	• SED DC-3.17kg AC-3.94kg • SEDP DC-3.42kg AC-4.19kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

Ø150mm signal light and 118dB electric horn combination

SDLR

SDL/ SDS

SD

ℹ️ **Common Specifications(SDLR/ SDL/ SDS/ SD)**

- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC/Heat resistant ABS
- Cable entry : 1/2″PF
- Housing color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66

🔔 SDLR/ SDLRP LED Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SDLR SDLRP	DC12V	2.633A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	Ⓡ	• SDLR DC-3.36kg AC-4.13kg • SDLRP DC-3.65kg AC-4.42kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

🔆 SDL/ SDLP LED Steady/Flashing Warning Light and Electric Horn Combination

- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SDL SDLP	DC12V	2.511A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	Ⓡ	• SDL DC-3.22kg AC-3.64kg • SDLP DC-3.51kg AC-3.93kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

🔦 SDS/ SDSP Xenon Lamp Strobe Warning Light and Electric Horn Combination

- Convenient lamp exchange by adopting a connector type lamp installation
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SDS SDSP	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	Ⓡ	• SDS DC-3.28kg AC-3.66kg • SDSP DC-3.57kg AC-3.95kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

📡 SD/ SDP Bulb Revolving Warning Light and Electric Horn Combination
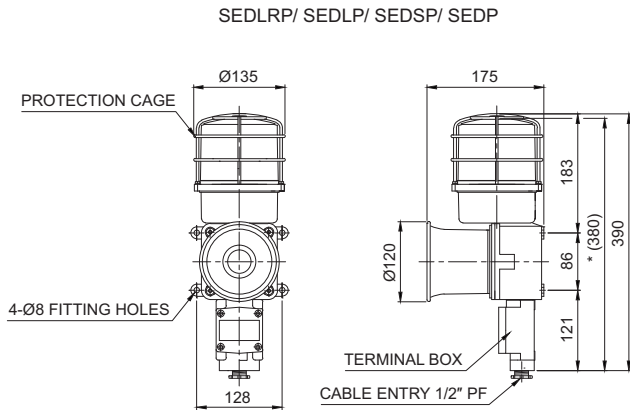
- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SD SDP	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS Ⓡ KR CE DC24V only	• SD DC-3.43kg AC-4.21kg • SDP DC-3.72kg AC-4.50kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

SMD series

Warning Lights and Electric Horns for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 120dB | NPN

Ø150mm signal light and 120dB electric horn combination

SMDLR

SMDLP/SMDSP

SMDP

ⓘ Common Specifications(SMDLR/ SMDL/ SMDS/ SMD)

- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC/ Heat resistant ABS
- Cable entry : 1/2″PF
- Housing color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66

SMDLR/ SMDLRP LED Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SMDLR SMDLRP	DC12V	2.522A	• WS-5 Warning sounds : 120dB • WP-5 Special warning sounds : 120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV-5 Customizable voices : 115dB	-	• SMDLR DC-5.91kg AC-6.68kg • SMDLRP DC-6.20kg AC-6.97kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.322A				
	AC110V	0.326A				
	AC220V	0.163A				

SMDL/ SMDLP LED Steady/Flashing Warning Light and Electric Horn Combination

- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SMDL/ SMDLP	DC12V	2.400A	• WS-5 Warning sounds : 120dB • WP-5 Special warning sounds : 120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV-5 Customizable voices : 115dB	-	·SMDL DC-5.77kg AC-6.19kg ·SMDLP DC-6.06kg AC-6.48kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.255A				
	AC110V	0.304A				
	AC220V	0.152A				

SMDS/ SMDSP Xenon Lamp and Electric Horn Combination

- Convenient lamp exchange by adopting connector type lamp installation
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb Spec	Bulb Standard	Parts no	Sound pattern and volume	Certificates	Weight	Color
SMDS SMDSP	DC12V	2.822A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :120dB • WP -5 Special warning sounds :120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV -5 Customizable voices : 115dB	-	·SMDS DC-5.83kg AC-6.21kg ·SMDSP DC-6.12kg AC-6.50kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.444A							
	AC110V	0.377A							
	AC220V	0.228A							

SMD/ SMDP Bulb Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Bulb Spec	Bulb Standard	Parts no	Sound pattern and volume	Certificates	Weight	Color
SMD SMDP	DC12V	3.644A	12V15W	G23 15S	17	• WS-5 Warning sounds :120dB • WP -5 Special warning sounds :120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV -5 Customizable voices : 115dB	-	·SMD DC-5.98kg AC-6.76kg ·SMDP DC-6.27kg AC-7.05kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.822A	24V15W	G23 15S	18				
	AC110V	0.448A	12V15W	G23 15S	17				
	AC220V	0.224A	12V15W	G23 15S	17				

SED/ SD/ SMD series

Warning Lights and Electric Horns Combinations for Vessels and Heavy Industry Applications

Qlight

Technical Diagram

(Units : mm)

SEDLRP/ SEDLP/ SEDSP/ SEDP

Ø135 · 175

PROTECTION CAGE

4-Ø8 FITTING HOLES

TERMINAL BOX
CABLE ENTRY 1/2″ PF

183 · 86 · 121 · *(380) · 390

Ø120

128

※ *(380)represents SEDLR/ SEDL/ SEDS/ SED size without protection cage.

SDLRP/ SDLP/ SDSP/ SDP

Ø158 · 175

PROTECTION CAGE

4-Ø8 FITTING HOLES

TERMINAL BOX
CABLE ENTRY 1/2″ PF

217 · 86 · 121 · *(410) · 424

Ø120

128
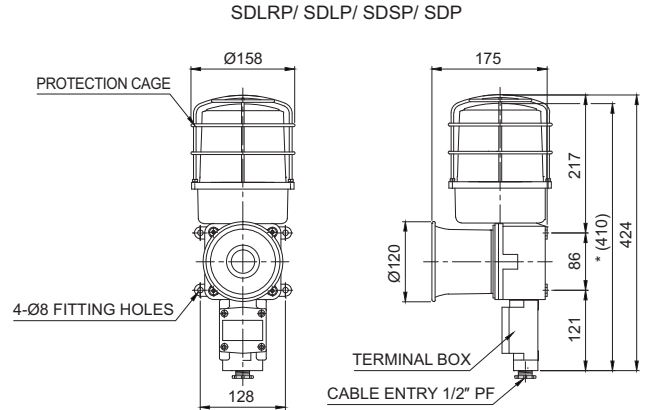
※ *(410)represents SDLR/ SDL/ SDS/ SD size without protection cage.

SMDLRP/ SMDLP/ SMDSP/ SMDP

Ø158 · 210

PROTECTION CAGE

4-Ø9 FITTING HOLES

TERMINAL BOX
CABLE ENTRY 1/2″ PF

226 · 125 · 125 · *(462) · 476

Ø172

183
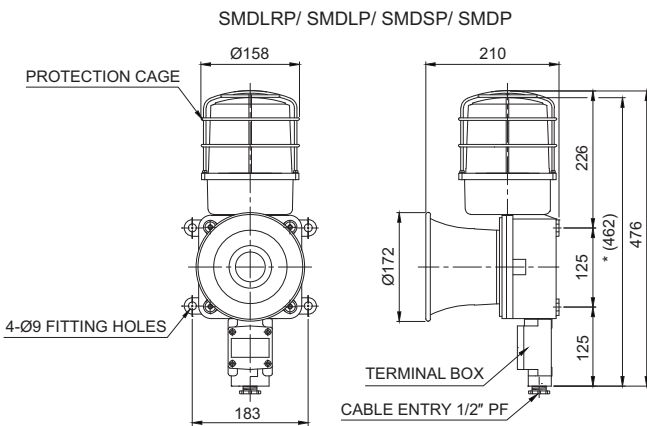
※ *(462) represents SMDLR/ SMDL/ SMDS/ SMD size without protection cage.

Customization

- Cable gland type
- Customized cable entry(3/4″PF) available(Standard : 1/2″PF)
- Customized external sound line type available : SED/SD/SMD series have built-in switch for sound tone selection
  Customized wiring in case of external contact or transistor wiring type as sound tone selector (Model number : -LC)
- Brass housing
  Brass housing for SD/ SMD series are optionally provided which has excellent anti-corrosive properties

※ Color will be MUNSELL No. 7.5BG 7/2 when released.

Sound Selection Instructions and Wiring

- Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.

Ch1 Ch2 Ch3 Ch4 Ch5   VOLUME

- Customization : External contact(LC)
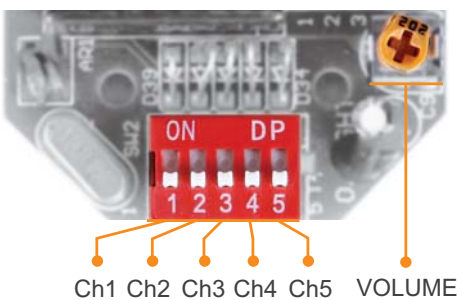
SED SERIES-DC/AC
SD SERIES-DC/AC
SMD SERIES-DC/AC

EXTERNAL CONTACT

Red(R) — Ch 1 Sound Pattern
Amber(A) — Ch 2 Sound Pattern
Green(G) — Ch 3 Sound Pattern
Blue(B) — Ch 4 Sound Pattern
White(W) — Ch 5 Sound Pattern
Black(BK) — Common
White(W)
Black(BK) — Fuse — Power

EXTERNAL TRANSISTOR-NPN

Red(R) — Ch 1 Sound Pattern
Amber(A) — Ch 2 Sound Pattern
Green(G) — Ch 3 Sound Pattern
Blue(B) — Ch 4 Sound Pattern
White(W) — Ch 5 Sound Pattern
Black(BK) — Common
White(W)
Black(BK) — Fuse — Power

Ordering Specification

SEDLR	-	WA	-	24	-	R
[Model number]		[Sound]		[Voltage]		[Color]

- SEDLR • SEDLRP • SEDL • SEDLP
- SEDS • SEDSP • SED • SEDP
- SDLR • SDLRP • SDL • SDLP
- SDS • SDSP • SD • SDP
- SMDLR • SMDLRP • SMDL • SMDLP
- SMDS • SMDSP • SMD • SMDP

- WS-Warning sounds
- WP-Special warning sounds
- WM-Melodies
- WA-Alarms
- WV-Customizable voices

- 12-DC12V
- 24-DC24V
- 110-AC110V
- 220-AC220V

- R-Red
- A-Amber
- G-Green
- B-Blue

SC series

Warning Light & Electric Horn Combinations

IP44 | -20~+50℃ | HORN | 108 dB | 115 dB

SC series can combine all of our warning light and electric horn products into a single combination model depending on your specific needs

SC1

The budget model of small-sized warning light and electric horn combinations

• Protection rating : IP44

Specification for Standard Model

• Standard combination includes S100R products combination with SRN
  (same as pictured to the left)

Technical Diagram　　　　　　　　　　　　　　　　　　　　　（Units : mm）

SC1

137
287
3t
200
25
105
120
150
20
4-Ø9
FITTING HOLES
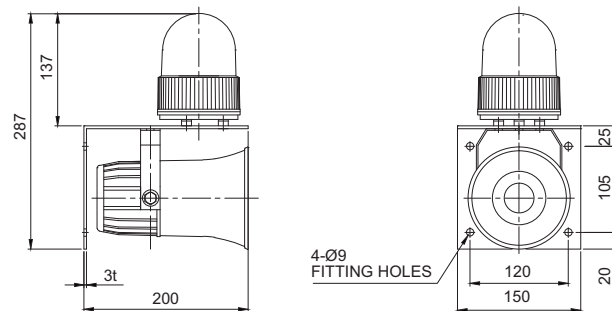
Customization

• Warning light : Select one from S100 series for the combination
• Electric horn : Select one from SN, SRN, SEN15/ 25 for the combination

SC2

Most commonly used standard-sized warning light and electric horn combination model

• Protection rating : IP44

Specification for Standard Model

• Standard combination includes S125U products combined with the SEN15
  (Same as pictured to the left)

Technical Diagram　　　　　　　　　　　　　　　　　　　　　（Units : mm）

SC2

155
312
3t
232
25
105
140
174
20
4-Ø9
FITTING HOLES
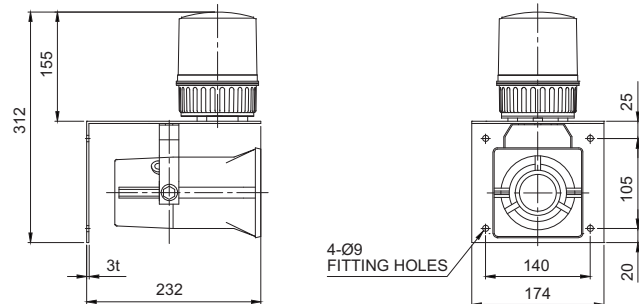
Customization

• Warning light : Select one from S125 series for the combination
• Electric horn : Select one from SN, SRN, SEN15/ 25 for the combination

SC series

Warning Light & Electric Horn Combinations

IP56 | -20~+50°C | HORN | 118dB | 120dB

SC3

Waterproof, dustproof type warning light and electric horn combinations

• Protection rating : IP56

Common Specifications

• Combination of SH1-2T and signal horn SEWN30L(Same as pictured to the left)

Technical Diagram
(Units : mm)

SC3

TERMINAL BOX
CABLE ENTRY
1/2" PF

PROTECTION CAGE

178
381
*(371)
3.2t
292

28
150
203
25
4-Ø9
FITTING HOLES
200
244
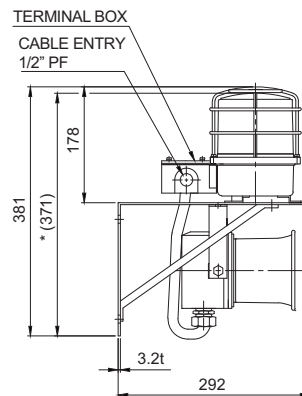
SC3
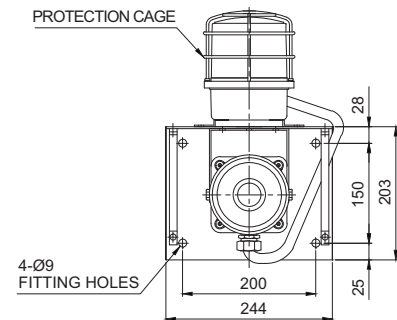
※ *(371) represents SC3 size without protection cage.

Customization

• Warning light : Select between models SH1P-2T and SH2P-2T series
 (Please refer to page 15-21)
• Electric horn : Choose one model among SEWN30L/50L, SEHN25 and SEHN50
 (Please refer to page 43-48)
• Stainless steel bracket

Standard Model Number

SC1	-	220	-	R
[Model number]		[Voltage]		[Color]

• SC1 (S100R+SRN)
• SC2 (S125U+SEN15)
• SC3 (SH1P-2T+SEWN30L)

• 12-DC12V
• 24-DC24V
• 110-AC110V
• 220-AC220V

● R-Red
● A-Amber
● G-Green
● B-Blue

Ordering Specification

SC3	- (	SH1P-2T	-	R	+	SEWN30L	-	WS	) -	220
[Model number]		[Light type]		[Color]		[Horn type]		[Sound]		[Voltage]

• SC1

• Select 1 model among S100 series

● R-Red
● A-Amber
● G-Green
● B-Blue

• Select 1 model among SN, SRN and SEN15/25

• WS
 -Warning sounds
• WP
 -Special warning sounds
• WM
 -Melodies
• WA
 -Alarms
• WV
 -Customizable voices

• 12-DC12V
• 24-DC24V
• 110-AC110V
• 220-AC220V

• SC2

• Select 1 model among S125 series

• Select 1 model among SRN and SEN15/25

• SC3

• Select 1 model among SH1P-2T and SH2P-2T series

• Select 1 model among SEWN30L/ 50L and SEHN25/50

※ Light sources can be selected among LED revolving, LED steady/flashing, xenon strobe and bulb revolving type.

SSL series

LED Signal Lights for Container Spreaders

IP68 | -30~+60℃

Provides excellent durability to extreme vibration and shock
Suitable for container spreader, harbor loading equipment, and outdoor conveyor applications

SSL100W/ SSL200W
SSL300W/ SSL400W

SSL100M/ SSL200M
SSL300M/ SSL400M
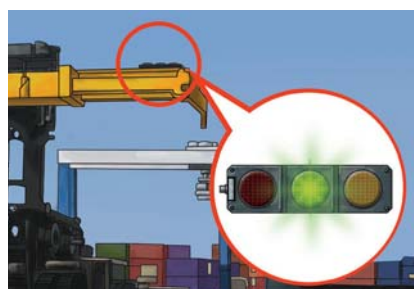
SSL LED Steady Signal Lights for Container Spreaders

- Special anti-reflective lens applied to avoid mistaking the reflected sun light as a signal light (W type)
- M type has excellent visibility from a distance with clear and distinctive layer colors
- Superior durability in extreme vibration and shock thanks to a molded assembly process instead of conventional bolt fastened assembly method
- Customized color arrangement available(Lens color configuration is initiated from the side of cable entry)
- Materials : Housing-Al, Lens-PC
- Protection rating : IP68 (IEC60529)

Specification

Model number	Voltage	Current	Certificates	Weight	Cable entry	Color
SSL100	DC12V	0.280A		1.80kg		● R-Red
	DC24V	0.151A		1.80kg		
	AC110V	0.040A		1.85kg		
	AC220V	0.040A		1.85kg		
SSL200	DC12V	0.560A		2.15kg		● R-Red
	DC24V	0.302A		2.15kg		● G-Green
	AC110V	0.080A		2.20kg		
	AC220V	0.080A		2.20kg	M12-5PIN	
SSL300	DC12V	0.840A	-	2.50kg	C10-Cable	● R-Red
	DC24V	0.453A		2.50kg	(Customization)	● A-Amber
	AC110V	0.120A		2.55kg		● G-Green
	AC220V	0.120A		2.55kg		
SSL400	DC12V	1.120A		2.95kg		● R-Red
	DC24V	0.604A		2.95kg		● A-Amber
	AC110V	0.160A		3.00kg		● G-Green
	AC220V	0.160A		3.00kg		● B-Blue

SSL series Vibration and Shock Test Conditions

Axial direction	Direction X	Direction Y	Direction Z
Vibration test conditions	10-38 Hz, 3.5mm 38-500 Hz, 20g 1 oct/min, 2 hours	10-38 Hz, 3.5mm 38-500 Hz, 20g 1 oct/min, 2 hours	10-38 Hz, 3.5mm 38-500 Hz, 20g 1 oct/min, 2 hours
Shock test conditions	50g 6 ms ±1000 shocks	50g 6 ms ±1000 shocks	50g 6 ms ±1000 shocks

Ordering Specification

SSL100W	-	24	-	R
[Model number]		[Voltage]		[Color]

- SSL100W   • SSL100M
- SSL200W   • SSL200M
- SSL300W   • SSL300M
- SSL400W   • SSL400M

- 12-DC12V
- 24-DC24V
- 110-AC110V
- 220-AC220V

- ● R-Red
- ● A-Amber
- ● G-Green
- ● B-Blue

Lens Molding paste
LED Circuit Board
Housing
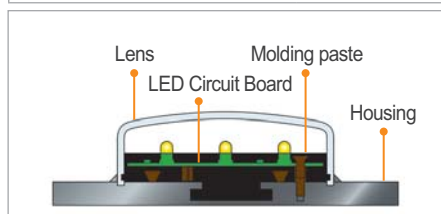
Cross-section of lens structure

SSL series has high resistance to vibration and shock by sealing the housing, lens, and LED circuit board together with epoxy mold compound.

(Units : mm)

Technical Diagram	Wiring Instructions(External Contact)

SSL100W/ SSL100M

150
120
Ø93
160
130
4-Ø10 Holes

43
80
80
13
31
51
M12-5Pin Connector

SSL100W- AC/DC
SSL100M-AC/DC

Black
2 1
3 4
Blue
M12-5Pin Connector
1
M12-5Pin Connector

EXTERNAL CONTACT
Black2   1
1   Steady
Black1   Fuse   Power
C10 Cable

• **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no.3 or 4 regardless of polarity
• **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

SSL200W/ SSL200M

150
120
Ø93
305
275
4-Ø10 Holes

43
80
145
80
13
31
51
M12-5Pin Connector

SSL200W-AC/DC
SSL200M-AC/DC

White
Black
2 1
5
3 4
Blue   Common
M12-5Pin Connector
1   2
M12-5Pin Connector

EXTERNAL CONTACT
2
1
Black2   1
Black3   2
Steady
Black1   Fuse   Power
C10 Cable

• **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no.3 or 1, 4 regardless of polarity
• **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

SSL300W/ SSL300M

150
120
Ø93
450
420
4-Ø10 Holes

43
80
145
145
80
13
31
51
M12-5Pin Connector

SSL300W-AC/DC
SSL300M-AC/DC

White
Brown
Black
2 1
3 4
Blue   Common
M12-5Pin Connector
1   2   3
M12-5Pin Connector

EXTERNAL CONTACT
3
2
1
BLACK2   1
BLACK3   2
BLACK4   3
Steady
BLACK1   FUSE   Power
C10 Cable

• **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no.3 or 1, 2, 4 regardless of polarity
• **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

SSL400W/ SSL400M

150
120
Ø93
595
565
4-Ø10 Holes

43
80
145
145
145
80
13
31
51
M12-5Pin Connector

SSL400W-AC/DC
SSL400M-AC/DC

Brown
White
Gray
Black
2 1
5
3 4
Blue   Common
M12-5Pin Connector
1   2   3   4
M12-5Pin Connector

EXTERNAL CONTACT
4
3
2
1
BLACK2   1
BLACK3   2
BLACK4   3
BLACK5   4
Steady
BLACK1   Fuse   Power
C10 Cable

• **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no. 3 and pin no. 1, 2, 4, 5 regardless of polarity
• **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

QWCD series
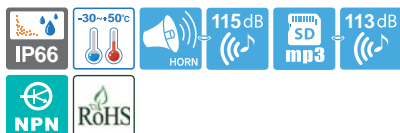
IP66
-30~+50°C
HORN 115dB
SD mp3
113dB
NPN
RoHS

• **Qlight's exclusive inno-vative design - the horn cover emits light!**

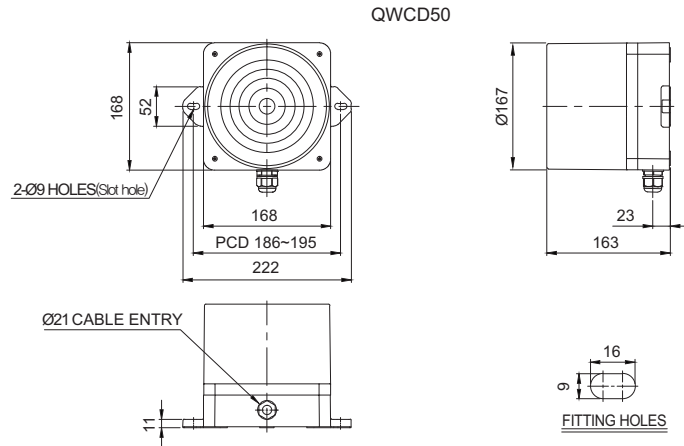• **Combination of 31 sound options built in and SD Card(MP3) option**

QWCD35 series

QWCD35 model applied in an automobile production plant environment.

Common Specifications(QWCD35/ QWCD35SD/ QWCD50/ QWCD50SD)

• Easy device customization with built in sound selection function, volume adjustment function and an SD Card slot for user inputted tones
• 31 available tones that can be selected for a variety of environments
• The user can select their own tones by inputting the MP3 file directly into the SD Card
• 31 pre-recorded tones available via binary input
• Suitable for use in environments that require a tight seal and superior dust protection rated IP66
• Flashing rate : 60-80 flashes/min(steady/flashing mode selection available in built in switch)
• Materials : Horn-PC, Body-PC+ABS
• Ambient operating temperature : -50°C to +60°C(Standard type)
  -20°C to +50°C(SD Card type)
• Protection Rating : IP66
• Certificates : CE Compliant, UL Listed
• Compliant with RoHS directive

QWCD35 LED Strobe Signal Light and Electric Horn Combination

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QWCD35 Built-in standard sound	DC12V-24V	Max 1.30A	• Bit Input : 5Ch (SD Card) • Binary Input : 31Ch • Warning Sounds: 115dB • MP3 Messages : 113dB	CE DC Only	1.10kg	● R-Red ● A-Amber
QWCD35SD MP3	AC110V-220V	Max 0.31A		UL DC Only	1.15kg	● G-Green ● B-Blue

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram   (Units : mm)

QWCD35

136
42
136
PCD 150~163
179
2-Ø8 HOLES(Slot hole)

Ø135
23
126

Ø21 CABLE ENTRY
9

14.5
8
FITTING HOLES
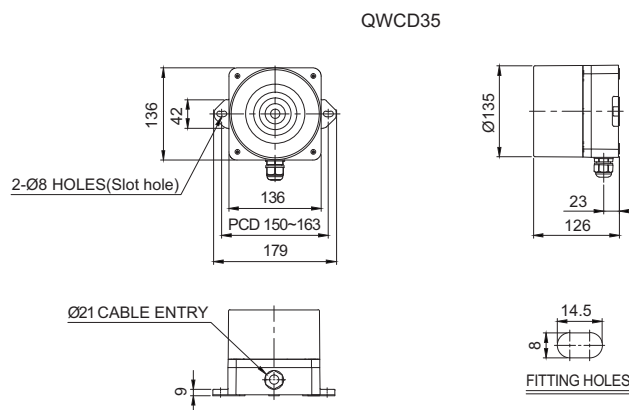
Customization

• External signal line available for users to connect their own sound input (Model number : -LC)

Ordering Specification

QWCD35	-	110/220	-	R	-	LC
[Model number]		[Voltage]		[Color]		[sound selection]

• QWCD35
• QWCD35SD

• 12/24 -DC12V-24V
• 110/220 -AC110V-220V

● R-Red
● A-Amber
● G-Green
● B-Blue

• Standard -Built-in switch
• LC -External contact

QWCD series
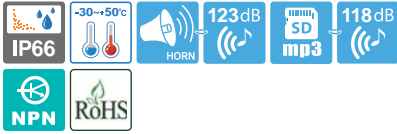
LED Strobe Signal Light and Electric Horn Combinations

Qlight

IP66

-30~+50℃

123dB HORN

SD mp3

118dB

NPN

RoHS

- **Qlight's exclusive innovative design - the horn cover emits light!**

- **Combination of 31 sound options built in and SD Card(MP3) option**

QWCD50 series

QWCD50 LED Strobe Light and Electric Horn Combination

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QWCD50 Built-in standard sound	DC12V	6.4A	• Bit Input : 5Ch (SD Card)	CE DC Only	2.7kg	● R-Red
	DC24V	3.2A	• Binary Input : 31Ch		2.7kg	● A-Amber ● G-Green
QWCD50SD MP3	AC110V-220V	Max 0.600A	• Warning Sounds: 123dB • MP3 Messages : 118dB	UL DC Only	3.0kg	● B-Blue

※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram   (Units : mm)

QWCD50

168
52
2-Ø9 HOLES(Slot hole)
168
PCD 186~195
222

Ø167
23
163

Ø21 CABLE ENTRY
11

16
9
FITTING HOLES

Wiring Instructions

• Standard specification : Use internal switches
• Customization : Use external contact

QWCD-DC/AC

EXTERNAL CONTACT

Red(R)
Amber(A)
Green(G)
Blue(B)
White(W)
Black(BK)
White(W)
Black(BK)
Fuse
Power
Ch 1
Ch 2
Ch 3
Ch 4
Ch 5
Common

EXTERNAL TRANSISTOR-NPN

Red(R)
Amber(A)
Green(G)
Blue(B)
White(W)
Black(BK)
White(W)
Black(BK)
Fuse
Power
Ch 1
Ch 2
Ch 3
Ch 4
Ch 5
Common
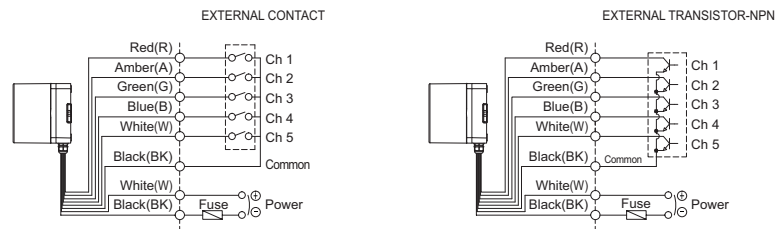
• Wiring to external contact and transistor
• Wiring to transistor, use the NPN transistor
• Power line standard UL1015 AWG18(0.75sq)×2C 400mm
• Signal line standard UL1007 AWG22(0.3sq) 400mm
• DC type : Black output line is negative(-)
• Channel selection : Bit input, 5 sound tones for each group
• Binary input 31 sound tones output

※ Please refer to Page 92 for set of channel input.
 (If wiring is changed by channel selection switch)

Customization

• External sound selection line(Model number : -LC)

Ordering Specification

QWCD50	-	110/220	-	R	-	LC

[Model number]
• QWCD50
• QWCD50SD

[Voltage]
• 12-DC12V
• 24-DC24V
• 110/220
  -AC110V-220V

[Color]
● R-Red
● A-Amber
● G-Green
● B-Blue

[sound selection]
• Standard
  -Built-in switch
• LC
  -External contact

Wall mount electric horn that offers 31 pre-recorded warning sounds and 30 user selected sound messages

- Bit input offers 5 channels with 6 sound outputs
- Binary input offers 31 sound outputs and SD Card (MP3) combination

• Sound Selection and Volume Adjustment Instructions

QWH series has control switches inside the unit for sound selection and volume adjustment. You can play customized sound message(MP3) with SD Card.

QWH series Product Category	
QWH35	Standard pre-recorded sound type
QWH35SD	SD Card(MP3) type
QWH50	Standard pre-recorded sound type with high volume output
QWH50SD	SD Card (MP3)type with high volume output

Common Specifications(QWH35/ QWH35SD/ QWH50/ QWH50SD)

- Signal fit for the specific environment and condition.
- Options to select between 31 special warning sounds included in the pre-recorded sound type and SD Card(MP3) type
- Volume adjustment and sound selection switches located inside the unit. SD Card in the unit offers convenient operation.
- SD Card type allows the user to input the proper voice messages for specific operating conditions.
- The SD Card type 31 Special alarms built in which includes the voice alert from the SD Card (MP3). 31 special warning sounds are built both in pre-recorded sound type and SD Card type
- Offers both Binary and Bit input mode options (only the SD Card type has the bit input)
- Tightly sealed structure that blocks water and dust with IP66 protection rating suitable for outdoor installation
- Cable entry : PG 13.5
- Materials : Horn-PC, Housing-PC+ABS
- Ambient operating temperature : -30°C to +50°C(Standard type)
  -30°C to +50°C(SD Card type)
- Protection rating : IP66
- Certificates : CE Compliant
- Compliant with RoHS directive

Pre-recorded sound type

1. Switch for channel selection
2. Switch for volume adjustment

SD Card (MP3) type
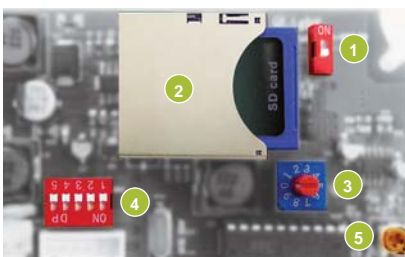
1. Switch for sound pattern selection
2. SD Card slot for MP3
3. Switch for play mode selection
4. Switch for channel selection
5. Switch for volume adjustment

The input method of built-in sound type

No.	1	2	3	4	5
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
:	:	:	:	:	:
31	1	1	1	1	1

Select from 31 pre-recorded output sound options by using a combination of the 5 channel input switches.

The binary input method allows you to express each of the 31 alarm sound signals with a ″0″or ″1″by switching the 5 channels on and off as shown in the table.

Sound selection instruction for SD Card type

You can select between pre-recorded sound mode and SD Card sound (MP3) mode with the SOUND selection switch.
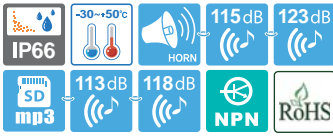
ON (1)
OFF (0)
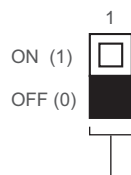
Selection between pre-recorded sound mode and SD Card sound mode
0 : pre-recorded sound mode
1 : SD Card sound mode

- 31 built-in alarm sounds and special sound
- Supports SD Cards for external sound (MP3)
- Binary Input : 31Ch
- Bit Input : 5Ch(SD Card only)
- A versatile product that can play MP3 files via the SD card
- For detailed setup instructions, please see page 92 for the special beep-type products.
- Channel 1 is set as the factory default

QWH series

Wall Mount Electric Horn with Pre-recorded Special Warning Sound

Qlight

IP66 | -30~+50℃ | HORN | 115dB | 123dB
SD mp3 | 113dB | 118dB | NPN | RoHS

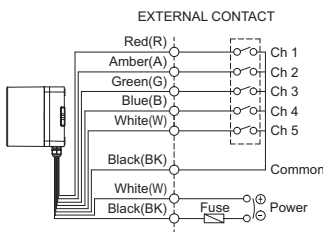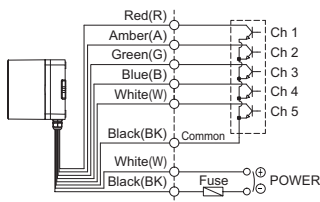**115dB**

QWH35 series

123dB

QWH50 series

Sound Selection and Wiring Instructions

- Standard : Internal switch
- Customization : External contact(LC)

QWH35/ QWH50-DC/AC

EXTERNAL CONTACT

Red(R) — Ch 1
Amber(A) — Ch 2
Green(G) — Ch 3
Blue(B) — Ch 4
White(W) — Ch 5
Black(BK) — Common
White(W)
Black(BK) — Fuse — Power

EXTERNAL TRANSISTOR-NPN

Red(R) — Ch 1
Amber(A) — Ch 2
Green(G) — Ch 3
Blue(B) — Ch 4
White(W) — Ch 5
Black(BK) — Common
White(W)
Black(BK) — Fuse — POWER

- Channel selection, 5 sounds available with Bit input and 31 sound available with Binary input
- DC type : Black line is negative(-)

※ Please refer to Page 92 for channel input. (Wiring Instructions is changed to channel selection switches)

QWH35 Wall Mount Electric Horn MP3(SD Card) with Pre-recorded Special Warning Sound

Model number	Voltage	Current	Volume	Binary input/ Channels	Certificates	Weight
QWH35	DC12V-24V AC110V-220V	Max 0.800A Max 0.290A	• Special warning sound : 115dB • MP3 sound : 113dB	Binary Input : 31Ch	CE DC Only	0.9kg
QWH35SD				Bit Input : 5Ch (SD Card only) Binary Input : 31Ch		

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram (Units : mm)

QWH35

136 | 42
2-Ø8 HOLES (Slot hole)
136
PCD 150~163
179
Ø135
23
126

Ø21 CABLE ENTRY
9

14.5
8
FITTING HOLES

QWH50 Wall Mount Electric Horn MP3(SD Card) with Pre-recorded Special Warning Sounds

Model number	Voltage	Current	Volume	Binary input /Channels	Certificates	Weight
QWH50	DC12V DC24V AC110V-220V	Max 5.800A Max 0.600A	• Special warning sound : 123dB • MP3 sound : 118dB	Binary Input : 31Ch	CE DC Only	2.7kg
QWH50SD				Bit Input : 5Ch (SD Card only) Binary Input : 31Ch		

※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram (Units : mm)

QWH50

168 | 52
2-Ø9 HOLES (Slot hole)
168
PCD 186~195
222
Ø167
23
163

Ø21 CABLE ENTRY
11

16
9
FITTING HOLES

Customization

- External threading of sound selection signal line (Model number : -LC)

Ordering Specification

QWH50	-	110/220	-	LC
[Model number]		[Voltage]		[Sound selection]

- QWH35
- QWH35SD

- 12/24-DC12V-24V
- 110/220-AC110V-220V

- Standard -Built-in Switch
- LC -External contact

- QWH50
- QWH50SD

- 12-DC12V
- 24-DC24V
- 110/220-AC110V-220V

SN/ SEHN25

Electric Horns for Vessels and Heavy Industrial Applications

IP55 | -25~+50℃ | HORN | 105dB | 115dB | NPN

Steel Housing

105dB

SN

115dB

SEHN25

ⓘ Common Specifications(SN/ SEHN25/ SEHN50)

- Steel housing provides excellent vibration and shock resistance under seismic conditions
- A variety of sound selections between warning sounds, alarm sounds, melodies and voice messages to fit your sophisticated application needs
- Can adjust sound volume with the switch built inside the unit
- Materials : Housing-Steel, Horn housing -Steel
- Housing standard color : Red
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP55, Suitable for outdoor installation
- Certificates : KIMM Compliant

SN Max 105dB, Self Stand Type

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SN	WS	5 Warning sounds	105dB	DC12V / 0.266A DC24V / 0.211A AC110V / 0.062A AC220V / 0.031A	KIMM	DC-0.91kg AC-1.06kg
	WM	5 Melodies	105dB			
	WA	5 Alarms	103dB			
	WV	5 Customizable sounds	95dB			

※ Please refer to Page 90 for detailed information about selectable sound patterns.

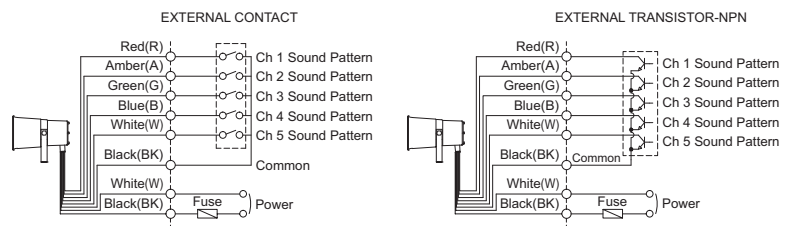### 📐 Technical Diagram　　　　　　　　　　　　　　　　　　(Units : mm)

SN

Ø119　Ø78　150　86　107　60　167　Ø10 CABLE ENTRY
3-Ø8 FITTING HOLES　25 25　92　20
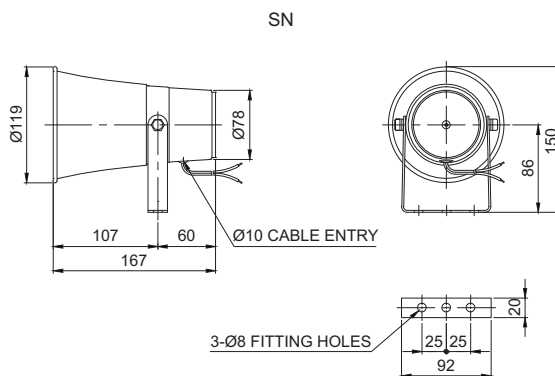
SEHN25 Max 115dB, Self Stand Type

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SEHN25	WS	5 Warning sounds	115dB	DC12V / 2.211A DC24V / 1.022A AC110V / 0.226A AC220V / 0.113A	KIMM	DC-2.26kg AC-2.48kg
	WM	5 Melodies	115dB			
	WA	5 Alarms	113dB			
	WV	5 Customizable sounds	108dB			

※ Please refer to Page 90 for detailed information about selectable sound patterns.

📐 Technical Diagram　　　　　　　　　　　　　　　　　　(Units : mm)

SEHN25

Ø158　Ø104　201　122　137　101　238　Ø21 CABLE ENTRY
3-Ø10 FITTING HOLES　43 43　136　26
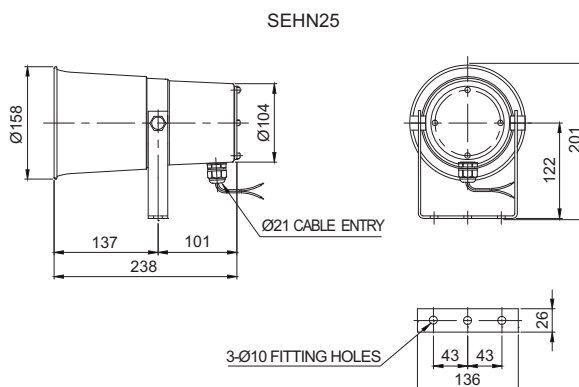
SEHN50

Electric Horns for Vessels and Heavy Industrial Applications

Qlight

IP55 | -25~+50°C | HORN | 120dB | NPN

Steel Housing

120dB

SEHN50

SEHN50 Max 120dB, Self Stand Type

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SEHN50	WS	5 Warning sounds	120dB	DC12V / 2.440A DC24V / 1.186A AC110V / 0.244A AC220V / 0.122A	KIMM	DC-2.67kg AC-3.30kg
	WM	5 Melodies	120dB			
	WA	5 Alarms	118dB			
	WV	5 Customizable sounds	115dB			

※ Please refer to Page 90 for detailed information about selectable sound patterns.

Technical Diagram
(Units : mm)

SEHN50

Ø167 Ø120 206 122
149 93 Ø21 CABLE ENTRY
242
3-Ø10 FITTING HOLES 43 43 136 26
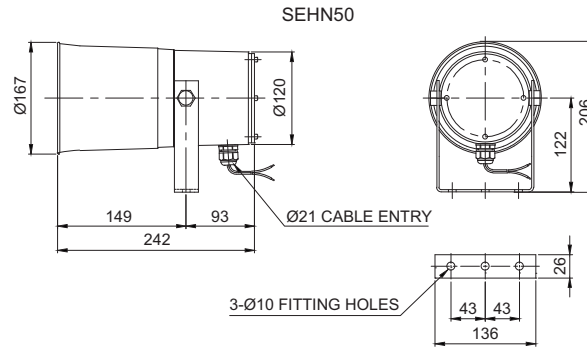
Sound Selection and Wiring Instructions

• Standard : Internal switch
• When each channel dip switch is on, a related sound will be played

Ch1 Ch2 Ch3 Ch4 Ch5 VOLUME
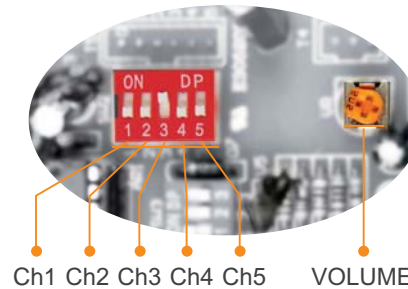
• Customization : External contact(LC)

SN/ SEHN25/ SEHN50-DC/AC

EXTERNAL CONTACT

Red(R) — Ch 1 Sound Pattern
Amber(A) — Ch 2 Sound Pattern
Green(G) — Ch 3 Sound Pattern
Blue(B) — Ch 4 Sound Pattern
White(W) — Ch 5 Sound Pattern
Black(BK) — Common
White(W)
Black(BK) — Fuse — Power

EXTERNAL TRANSISTOR-NPN

Red(R) — Ch 1 Sound Pattern
Amber(A) — Ch 2 Sound Pattern
Green(G) — Ch 3 Sound Pattern
Blue(B) — Ch 4 Sound Pattern
White(W) — Ch 5 Sound Pattern
Black(BK) — Common
White(W)
Black(BK) — Fuse — Power

• External power line standard : VCTF(0.75sq)×2C 400mm
• LC type signal line standard : UL1007 AWG22(0.3sq) 400mm
• Product can be wired regardless of polarity

Customization

• You can select the audible sound pattern using external contacts or transistor with a customized external sound line.
(Model number : -LC)

Ordering Specification

SEHN25	-	WA	-	220	-	LC
[Model number]		[Sound]		[Voltage]		[Sound selection]

• SN
• SEHN25
• SEHN50

• WS-Warning
• WM-Melody
• WA-Alarm
• WV-Customizable sound

• 12-DC12V
• 24-DC24V
• 110-AC110V
• 220-AC220V

• Standard
  -Built-in switch
• LC
  -External contact

SEWN series

Electric Horns for Vessels and Heavy Industrial Applications

Electric horns for vessels and heavy industrial applications featuring excellent sealing, corrosion resistance, and durability

Can select from wall mount type, self stand type, and terminal box type
for your various application needs

SEWN30 - Max 118dB
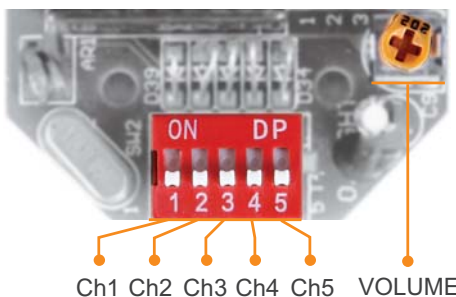### SEWN50 - Max 120dB
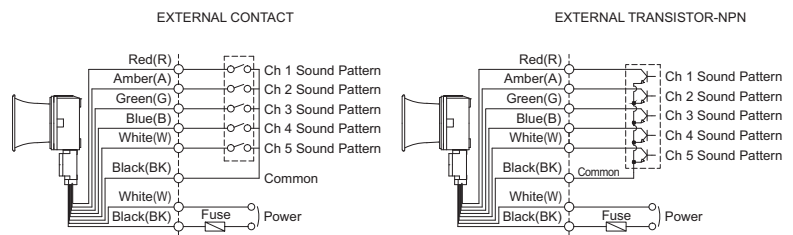### Aluminum housing

Common Specifications(SEWN30/ SEWN50)

• Electric horn with tightly sealed structure has excellent durability. Suitable for vessels, steel industry, and outdoor plant applications
• Can select between a variety of mounting options (wall mount type, self stand type, and terminal box type)
• Aluminum housing provides excellent durability
• A variety of sound selection between warning sounds, alarm sounds, melodies and voice messages to fit your sophisticated application needs
• Can adjust sound volume with the dial built inside the unit
• Terminals located inside the terminal box or product
• Cable entry : 1/2″PF
• Materials : Housing-Al, Horn housing-PC/ SUS316L
• Standard Housing color : MUNSELL No. 7.5BG 7/2
• Ambient operating temperature : -30°C to +50°C
• Protection rating : IP56, Suitable for outdoor installation
• Certificates : KIMM, ABS, CCS, CE Compliant

Sound Selection and Wiring Instructions

• Standard type : Select sound using the switch inside the unit. When you turn on the dip switch for each channel the sound is turned on.

• Customized type : Select sound using the external contact(LC)
  You can select the audible sound pattern using external contacts or transistor with a customized external sound line(Model number : -LC)
• Product can be wired regardless of polarity

Ch1 Ch2 Ch3 Ch4 Ch5   VOLUME

SEWN30 SERIES-DC/AC
SEWN50 SERIES-DC/AC

EXTERNAL CONTACT

Red(R)	Ch 1 Sound Pattern
Amber(A)	Ch 2 Sound Pattern
Green(G)	Ch 3 Sound Pattern
Blue(B)	Ch 4 Sound Pattern
White(W)	Ch 5 Sound Pattern
Black(BK)	Common
White(W)	
Black(BK)	Fuse Power

EXTERNAL TRANSISTOR-NPN

Red(R)	Ch 1 Sound Pattern
Amber(A)	Ch 2 Sound Pattern
Green(G)	Ch 3 Sound Pattern
Blue(B)	Ch 4 Sound Pattern
White(W)	Ch 5 Sound Pattern
Black(BK)	Common
White(W)	
Black(BK)	Fuse Power

SEWN30 series

Electric Horns for Vessels and Heavy Industries Applications

Qlight

IP56 | -30~+50℃ | HORN | 118dB | NPN
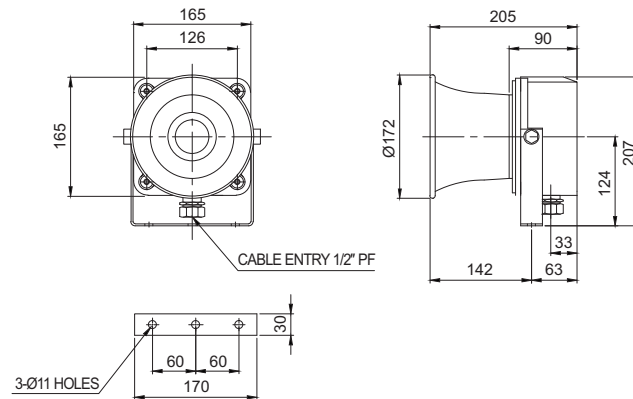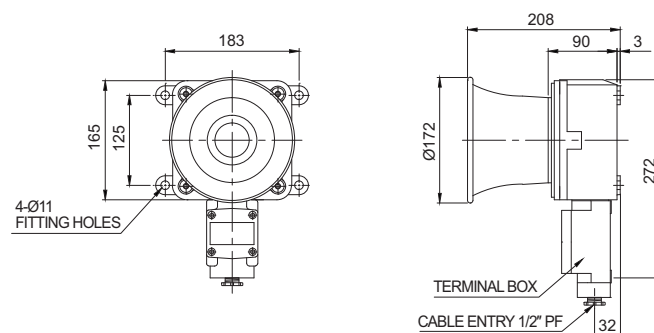
118dB

SEWN30E

SEWN30L

SEWN30T

- SEWN30E/ SEWN30L model uses flexible connector at cable entry and SEWN30T model use 15C nipple at cable entry.
- Cable gland is customizable

Flexible connector   15C nipple

SEWN30 series Max 118dB

Model number		Sound pattern	Volume	Voltage / Current	Certificates	Weight
SEWN30E -Wall mount	WS	5 Warning sounds	118dB	DC12V / 2.211A DC24V / 1.022A AC110V / 0.226A AC220V / 0.113A	KIMM CCS ABS CE DC24V only	SEWN30E DC-1.76kg AC-2.11kg
	WP	5 Special warning sounds	118dB			
SEWN30L -Self stand	WM	5 Melodies	118dB			SEWN30L AC-1.74kg AC-2.13kg
SEWN30T -Wall mount with terminal box	WA	5 Alarms	116dB			SEWN30T DC-2.23kg AC-2.58kg
	WV	5 Customizable sounds	113dB			

※ Please refer to Page 90 for detailed information about selectable sound patterns.

Technical Diagram
(Units : mm)

SEWN30E
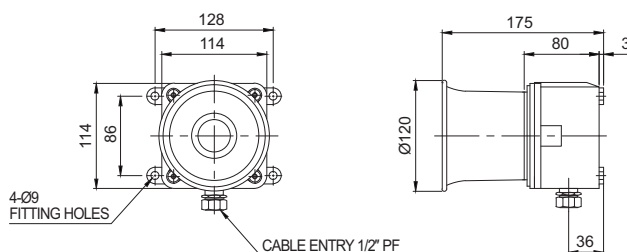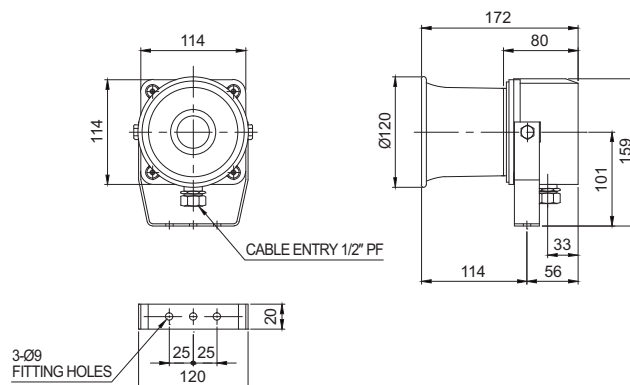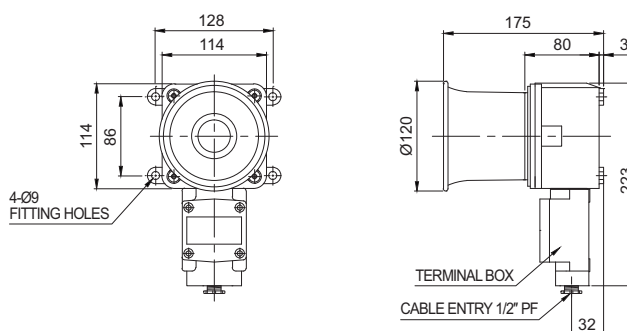
128
114
114
86
4-Ø9 FITTING HOLES
CABLE ENTRY 1/2″ PF
175
80
3
Ø120
36

SEWN30L

114
114
CABLE ENTRY 1/2″ PF
172
80
Ø120
159
101
33
56
114
3-Ø9 FITTING HOLES
25 25
120
20

SEWN30T

128
114
114
86
4-Ø9 FITTING HOLES
175
80
3
Ø120
223
TERMINAL BOX
CABLE ENTRY 1/2″ PF
32

SEWN50 series

Electric Horns for Vessels and Heavy Industries Applications

IP56 | -30~+50℃ | HORN | 120dB | NPN

120dB

SEWN50E

SEWN50L

SEWN50T

- SEWN50E/ SEWN50L model uses flexible connector at cable entry and SEWN50T model uses 15C nipple at cable entry.
- Cable gland is customizable

Flexible connector   15C nipple

SEWN50 series Max 120dB

Model number		Sound pattern	Volume	Voltage / Current	Certificates	Weight
SEWN50E -Wall mount SEWN50L -Self stand SEWN50T -Wall mount with terminal box	WS	5 Warning sounds	120dB	DC12V / 2.440A DC24V / 1.186A AC110V / 0.244A AC220V / 0.122A	KIMM CE DC24V only	SEWN50E DC-4.22kg AC-4.52kg SEWN50L AC-4.20kg AC-4.50kg SEWN50T DC-4.65kg AC-4.95kg
	WP	5 Special warning sounds	120dB			
	WM	5 Melodies	120dB			
	WA	5 Alarms	118dB			
	WV	5 Customizable sounds	115dB			

※ Please refer to Page 90 for detailed information about selectable sound patterns.

Technical Diagram   (Units : mm)

SEWN50E

SEWN50L

SEWN50T

SEWN series

Electric Horns for Vessels and Heavy Industries Applications

2 Cable Entry Terminal Box Type Technical Diagram （Units : mm）

SEWN30-2T

128
114
114
86
Ø120
175
80
3
32
4-Ø9 FITTING HOLES
CABLE ENTRY 1/2″ PF

SEWN50-2T

210
183
165
165
125
Ø172
208
90
3
272
32
4-Ø11 FITTING HOLES
CABLE ENTRY 1/2″ PF
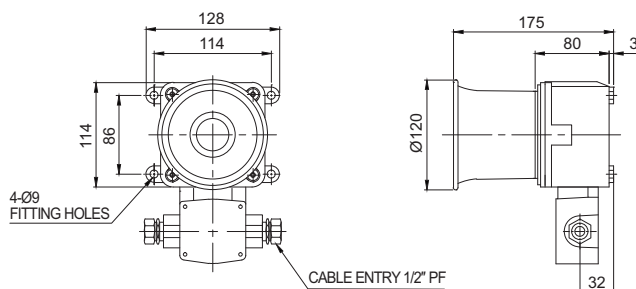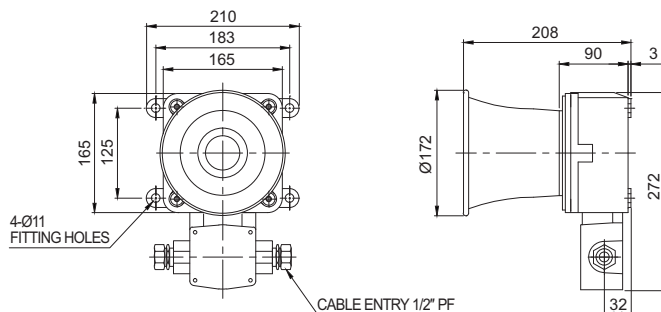
Customization

- Cable gland available
- 3/4″PF cable entry (Standard : 1/2″PF)
- 2 cable entries terminal box :
  Customized terminal box available with two cable entries in opposite directions
  (Model number : SEWN30-2T, SEWN50-2T)
- Brass housing product :
  Brass housing products provide improved corrosion resistance.
- ※ Color will be MUNSELL No. 7.5BG 7/2 when released.
- External threading of sound line (Model number : -LC)

Brass housing product

Ordering Specification

SEWN30T	-	WS	-	220	-	LC
[Model number]		[Sound]		[Voltage]		[Sound selection]

- SEWN30E
- SEWN30L
- SEWN30T
- SEWN50E
- SEWN50L
- SEWN50T

- WS-Warning
- WP-Special warning sounds
- WM-Melody
- WA-Alarm
- WV-Customizable sound

- 12-DC12V
- 24-DC24V
- 110-AC110V
- 220-AC220V

- Standard
  -Built-in switch
- LC
  -External contact

SHDN series

Dual-Facing Electric Horns for Vessels and Heavy Industry Applications

IP56 **-30~+50℃** **HORN** **118dB** **NPN**

Aluminum housing
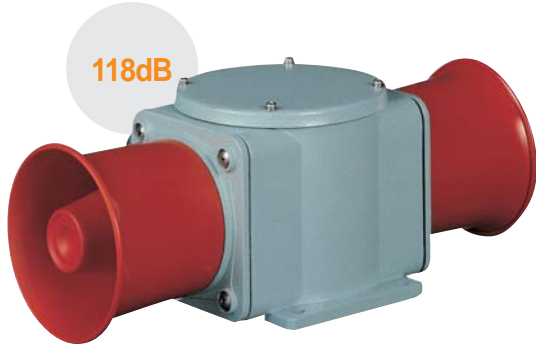
118dB

SHDN30

SHDN30 Max 118dB×2 Direct Mount Type

- Electric horn with tightly sealed structure and excellent durability, suitable for vessels, steel industry, and outdoor plant applications
- Aluminum housing provides excellent durability
- A variety of sound selection between warning sounds, alarm sounds, melodies and voice messages to fit your sophisticated application needs
- Terminals located inside the terminal box or product
- Cable entry : 1/2″PF
- Materials : Housing-Al, Horn housing-PC
- Can adjust sound volume with the switch built inside the unit
- Standard Housing color : MUNSELL No. 7.5BG 7/2
- Ambient operating temperature : -30℃ to +50℃
- Protection rating : IP56, Suitable for outdoor installation

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SHDN30	WS	5 Warning sounds	118dB×2	DC12V / 4.422A DC24V / 2.044A AC110V / 0.453A AC220V / 0.226A	-	DC-3.49kg AC-4.21kg
	WP	5 Special warning sounds	118dB×2			
	WM	5 Melodies	118dB×2			
	WA	5 Alarms	116dB×2			
	WV	5 Customizable sounds	113dB×2			

※ Please refer to Page 90 for detailed information about selectable sound patterns.

Sound Selection Instructions

- Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.

Ch1 Ch2 Ch3 Ch4 Ch5 VOLUME
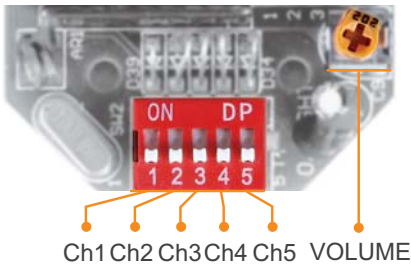
- Customized type : Select using the external contact(LC)
  You can select the audible sound pattern using external contacts or transistor with a customized external sound line
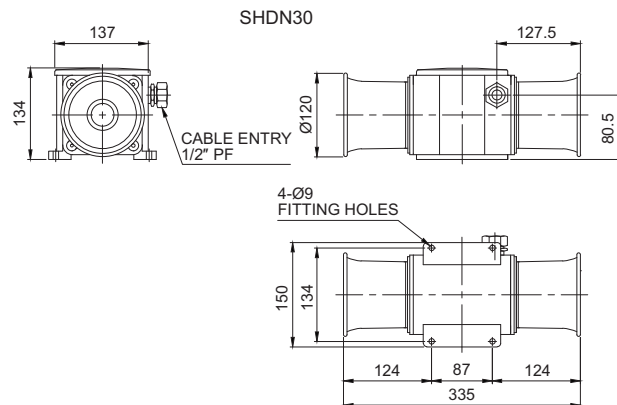 (Model number : -LC)
- Product can be wired regardless of polarity

Technical Diagram

(Units : mm)

SHDN30

137
134
CABLE ENTRY 1/2″ PF
127.5
Ø120
80.5

4-Ø9 FITTING HOLES
150
134
124   87   124
335

Wiring Instructions

SHDN30-DC/AC
EXTERNAL CONTACT

Red(R)   Ch 1 Sound Pattern
Amber(A)   Ch 2 Sound Pattern
Green(G)   Ch 3 Sound Pattern
Blue(B)   Ch 4 Sound Pattern
White(W)   Ch 5 Sound Pattern
Black(BK) Common
White(W)
Black(BK) Fuse   Power

SHDN30-DC/AC
EXTERNAL TRANSISTOR-NPN

Red(R)   Ch 1 Sound Pattern
Amber(A)   Ch 2 Sound Pattern
Green(G)   Ch 3 Sound Pattern
Blue(B)   Ch 4 Sound Pattern
White(W)   Ch 5 Sound Pattern
Black(BK) Common
White(W)
Black(BK) Fuse   Power

Customization

- Customized cable entry(3/4″PF) available
- Customized external sound line type available
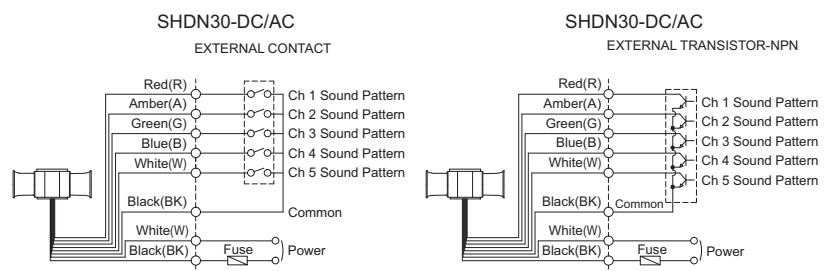
Ordering Specification

SHDN30	-	WP	-	110	-	LC

[Model number]
- SHDN30

[Sound]
- WS-Warning
- WP-Special warning sounds
- WM-Melody
- WA-Alarm
- WV-Customizable sound

[Voltage]
- 12-DC12V
- 24-DC24V
- 110-AC110V
- 220-AC220V

[Sound selection]
- Standard
  -Built-in switch
- LC
  -External contact

SM series   Motor Sirens

IP44 -25~+50℃ MOTOR 110dB 116dB
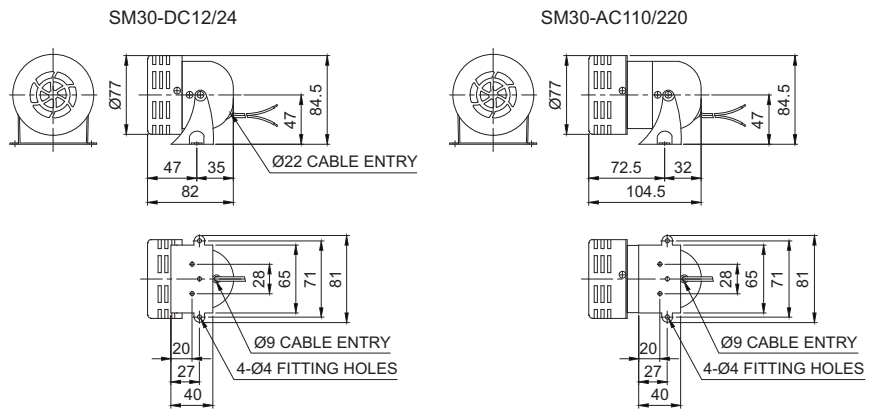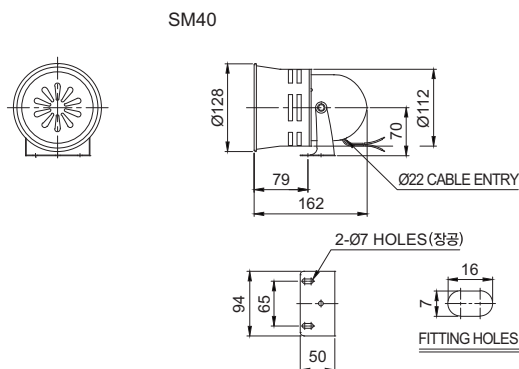
SM30 Miniature Motor Siren

- Ø80mm compact structure with 110dB sound output
- Motor RPM : 10,000RPM
- Materials : Steel
- Power consumption : 40W
- Protection rating : IP 44
- Housing standard color : Red
- Insulation resistance : 100MΩ(at 500 VDC)
- Ambient operation temperature : -25℃ to +50℃

110dB

SM30

Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM30	110dB	DC12V	3.222A	-	0.22kg	10 min
		DC24V	1.779A		0.22kg	
		AC110V	1.333A		0.42kg	
		AC220V	1.000A		0.42kg	

Technical Diagram   (Units : mm)

SM30-DC12/24

Ø77 · 84.5 · 47 · 47 · 35 · 82 · Ø22 CABLE ENTRY
28 · 65 · 71 · 81 · 20 · 27 · 40 · Ø9 CABLE ENTRY · 4-Ø4 FITTING HOLES

SM30-AC110/220

Ø77 · 84.5 · 47 · 72.5 · 32 · 104.5 · Ø22 CABLE ENTRY
28 · 65 · 71 · 81 · 20 · 27 · 40 · Ø9 CABLE ENTRY · 4-Ø4 FITTING HOLES

116dB

SM40

⚠ Continuous operation rating time is 10 mins. Over 10 mins of continuous operation may cause motor damage. Please be careful.

SM40 Miniature Motor Siren

- Ø100mm compact structure with 116dB sound output
- Motor RPM : 7,000RPM
- Materials : ABS
- Power consumption : 80W
- Protection rating : IP 44
- Housing standard color : Gray
- Insulation resistance : 100MΩ(at 500 VDC)
- Ambient operation temperature : -25℃ to +50℃

Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM40	116dB	DC12V	6.778A	-	0.53kg	10 min
		DC24V	3.666A		0.53kg	
		AC110V	1.000A		0.68kg	
		AC220V	0.722A		0.68kg	

Technical Diagram   (Units : mm)

SM40

Ø128 · Ø112 · 70 · 79 · 162 · Ø22 CABLE ENTRY
2-Ø7 HOLES(장공) · 94 · 65 · 50 · 16 · 7 · FITTING HOLES

Ordering Specification

SM30	-	24
[Model number]		[Voltage]

- SM30
- SM40

- 12-DC12V
- 24-DC24V
- 110-AC110V
- 220-AC220V

SM series   Motor Sirens

IP44 -25~+50°C MOTOR 120dB 123dB

120dB

SM200

123dB

SM400

⚠ Continuous operation rating time of SM400 is 3 mins. Over 3 mins of continuous operation may cause damage to the motor. Please be careful.

Ordering Specification

SM200	-	24
[Model number]		[Voltage]

- SM200
- SM400

- 24-DC24V
- 110-AC110V
- 220-AC220V

SM200   120dB Heavy-Duty Motor Siren

- Excellent durability and high volume are suitable for noisy environment
- Motor RPM : 7,200RPM
- Materials : Steel/Al
- Ambient operation temperature : -25°C to +50°C
- Housing standard color : Red
- Insulation resistance : 100MΩ(at 500 VDC)
- Protection rating : IP 44
- Certificates : CE Compliant

Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM200	120dB	DC24V	7.820A	CE	2.19kg	10 min
		AC110V	2.105A	-	2.55kg	
		AC220V	1.005A		2.55kg	

Technical Diagram   (Units : mm)

SM200

Ø143 Ø114 94 121 231

100 74 65 85

6-Ø9 FITTING HOLES
Ø9 CABLE ENTRY
42
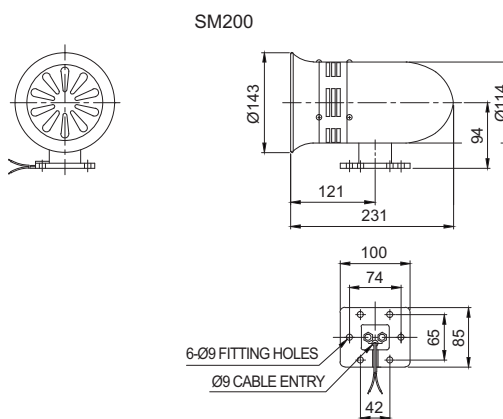
SM400 Sound 123dB Heavy-Duty Motor Siren

- 123dB high volume model suitable for long-distance audible signal in noisy environments
- Motor RPM : 7,600RPM
- Materials : Steel/ABS
- Ambient operation temperature : -25°C to +50°C
- Housing standard color : Red
- Insulation resistance : 100MΩ(at 500 VDC)
- Protection rating : IP 44

Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM400	123dB	DC24V	12.000A	-	3.19kg	3 min
		AC110V	6.300A		3.75kg	
		AC220V	3.800A		3.75kg	

Technical Diagram   (Units : mm)

SM400

210.5 196 14.5 Ø165 113.5 Ø137 95.5 42.5 284

Ø22 CABLE ENTRY
4-Ø9 FITTING HOLES
146 210 105 135
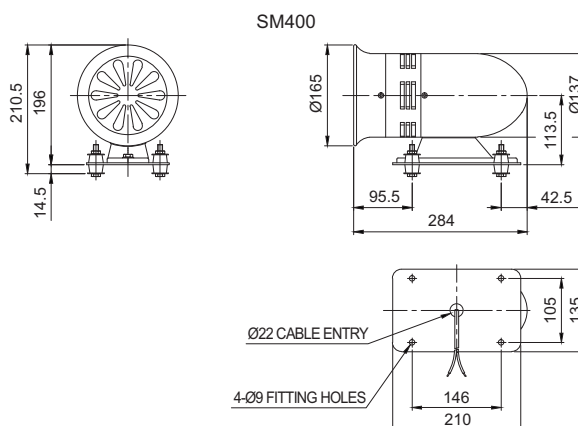
SAB series

Alarm Bells with Lamp Attached for Vessels and Heavy Industrial Applications

Qlight

IP56 | -25~+50℃ | BELL | 95dB
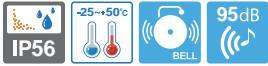
SAB130
-Bell housing Ø130mm

SAB200
-Bell housing Ø200mm

95dB

SAB130

95dB

SAB200

SAB130/ SAB200 Max 95dB

- Electric solenoid bell system provides excellent durability to vibration and shock for vessels and large facilities
- Special material for bell housing provides clear and crisp alarm sound
- Excellent vibration and shock resistant structure for superior durability
- Easy wiring and maintenance with terminal box attached
- Lamp attached provides visual signals
- Bell and lamp operation is synchronized. Each function can also operate separately
- Sound volume : Max 95dB at 1m
- Standard color : Housing-beige, Bell/ Lamp-Red
- Materials : Bell-Steel, Housing-ABS
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP56
- Cable entry : PG19

Specifications

Model number	Frequency	Volume	Bell diameter	Voltage	Current	Certificates	Weight	Bell/ Lamp color
SAB130	400-600Hz	95dB	130mm	DC24V	1.100A	-	1.88kg	● R-Red
SAB200			200mm	AC110V	0.350A		2.00kg	
				AC220V	0.300A			

Technical Diagram （Units : mm）

SAB130

107 / 115
238
Ø130
3-Ø8 FITTING HOLES
102
BELL
LED LAMP
80 / 29
Ø26 CABLE ENTRY

SAB200

107 / 115
269
Ø200
3-Ø8 FITTING HOLES
102
BELL
LED LAMP
80 / 29
Ø26 CABLE ENTRY
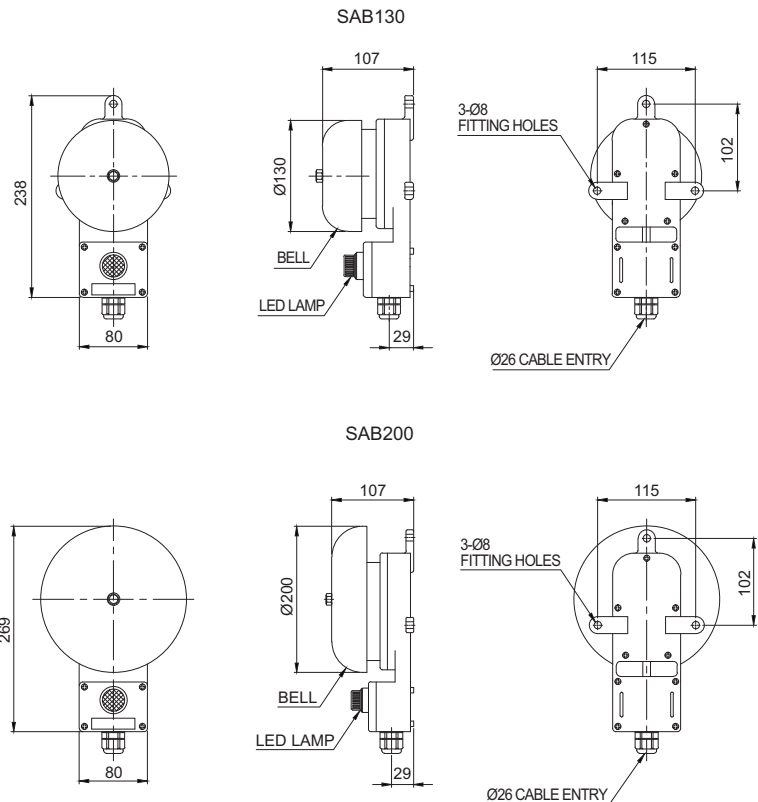
Customization

- Two way cable entries with PG19

Ordering Specification

SAB200	-	**110**	-	**CG**
[Model number]		[Voltage]		[Cable gland]

- SAB130
- SAB200

- 24-DC24V
- 110-AC110V
- 220-AC220V

- Standard
  -Back wiring type
- CG
  -Built-in cable gland type

SANA series

Air Horns for Vessels and Heavy Industrial Applications

IP56 | -20~+60℃ | HORN | 130dB
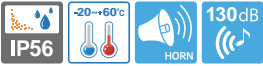
SANA200-200-300HZ
SANA400-400-600HZ
SANA700-700-800HZ

SANA200

SANA400

Common Specifications(SANA200/ SANA400/ SANA700)

- High volume horn uses compressed air to power the high pitched sound made with the diaphragm
- Uses a special material which consumes a small quantity of compressed air and has long durability
- Suitable for applications like a large and noisy engine rooms, a phone alarm in a pump room, or as an emergency alarm
- Sound volume : Max 130dB at 1m
- Housing standard color : ● R-Red, ● B-Black, ● 7.5BG-MUNSELL No.7.5BG 7/2
- Materials : Horn-PC, Solenoid valve box-ABS
- Air pressure : 5-7kg/cm^2
- Ambient operation temperature : -20℃ to +60℃
- Protection rating : IP 56
- Certificates : KIMM Compliant

Model number	Frequency	Volume	Certificates	Weight	Voltage	Current	Color
SANA200	200-300Hz			1.19kg		0.448A	● R-Red
SANA400	400-600Hz	Max 130dB	KIMM	1.13kg	DC24V AC110V AC220V	0.111A	● BK-Black
SANA700	700-800Hz			1.07kg		0.055A	● 7.5BG

SANA200 200-300Hz

Technical Diagram

（Units : mm）

SANA200

SANA400 400-600Hz

Technical Diagram

（Units : mm）

SANA400
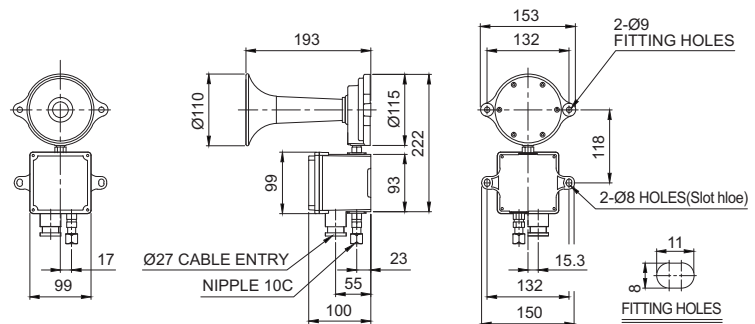
SANA series

Air Horns for Vessels and Heavy Industrial Applications

Qlight

SANA700 700-800Hz

SANA700

Technical Diagram (Units : mm)

SANA700

Ø27 CABLE ENTRY
NIPPLE 10C

2-Ø9 FITTING HOLES
2-Ø8 HOLES(Slot hole)
FITTING HOLES
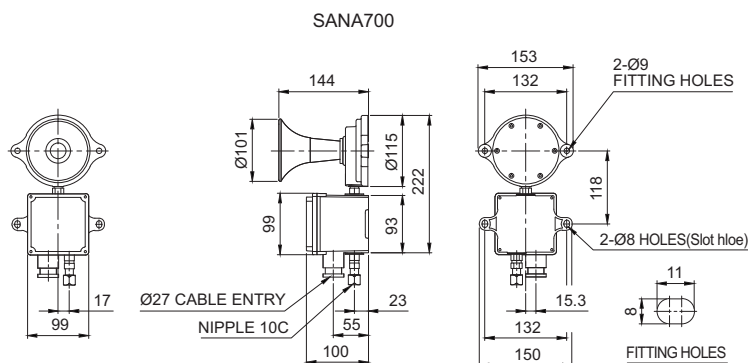
Ordering Specification

SANA200	-	220	-	R
[Model number]		[Voltage]		[Color]
• SANA200		• 24-DC24V		● R-Red
• SANA400		• 110-AC110V		● BK-Black
• SANA700		• 220-AC220V		● 7.5BG

Customization

• Horn and solenoid valve box available separately for individual installation

• Non return valve and Y filter installation
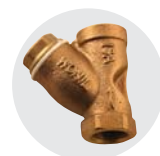
Non return valve   Y filter

QEB Explosion Proof Solenoid Valve Box

IP66   -40~+60℃

QEB Explosion Proof Solenoid Valve Box

• Materials : Housing, Cover-Al
• Ambient operation temperature : -40℃ ≤ T_{amb} ≤ +60℃
• Protection rate : Ex d ⅡC T6, IP66
• Certificates : KIMM Compliant
• Left picture has a cable gland installed, explosion proof cable gland configuration is available as a customized option

Technical Diagram (Units : mm)

QEB

1/4" PT
2-Ø10.5 FITTING HOLES
1/4" PT
CABLE ENTRY 1/2" NPT
(AIR IN)

QEB

Ordering Specification

QEB	-	24
[Model number]		[Voltage]
• QEB		• 24-DC24V
		• 110-AC110V
		• 220-AC220V
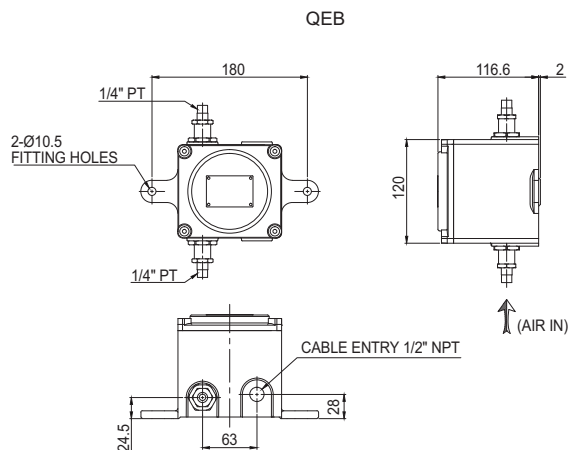
Technical Certification

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 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)

KGS Korea Gas Safety Corporation

Approved from "Korea Gas Safety Corporation" that Qlight's design and manufacturing system meets the standard of KGS.

KOSHA Korea Occupational Safety and Health Agency

Approved by the "Korea Occupational Safety and Health Agency" that Qlight's design and manufacturing system meets the standard of KOSHA.

ABS American Bureau of Shipping

Qlights design and quality assurance system has been certified by the American Bureau of Shipping.

LR Lloyd's Register

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

CCS China Classification Society

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

RMRS Russian Maritime Register of Shipping

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

KR Korean Register of Shipping

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

CE European Commission

Qlight has been certified by the European Commission.

UL Underwriters Laboratories

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

KC Korea Safety Certification

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

CCC China Compulsory Certificate

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

ICAO International Civil Aviation Organization

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

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)

RoHS Restriction of Hazardous Substances Directive

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

Light Source of Warning Light/ Signal Light

SELECTION OF WARNING LIGHT

The selection of signaling devices will depend on the particular situation and environment.

• Whether the location of installation is dark or bright.
• Whether the signal transmission range should be short or long, or should have good visibility.
• Whether you need an economical but short lifetime product or upscale product with longer lifetime.
• Whether the environment is harsh with vibration and shock, or the environment is stable so that the life of the lights can be guaranteed.
• The selection of signaling device can be different depending on the situation and environment. The convenience and efficiency of maintenance should also be considered.

※ Factors to consider in signal selection
1. Purpose   2. Signal transmission   3. Environment   4. Budget   5. Ease of maintenance

TYPE OF LIGHT SOURCE

Bulb

Light bulb is a light source that uses temperature reflection generated by the current flowing through the light bulb filament (thin line of metal), tungsten wire coil filament is often used. The hot filament is protected from oxidation with a glass sphere injected with inert gas (Argon gas, etc.). Typical characteristics of the gas injected bulb is described below.

1. If the input voltage decreases more than 10% of the rated voltage, the bulb life increases four times than before, and the power consumption is reduced by 85%.

2. On the other hand, If input voltage is 10% higher than the rated voltage, the life of the bulb is shortened by about 30% and the power consumption increases about 16%, and the brightness is increased by about 40%. The standard service life of a normal bulb is about 1,000 - 1,500 hours.

LED

The LED is a light emitting diode which emits light by injecting a current in the PN junction of the special semiconductor, semiconductors such as GaAs, GaP that Maximizes the electro-optical conversion effects are used. Like other semiconductors, over-voltage or ambient temperature affects the lifetime, but due to the absence of mechanical abrasion of the part, LED is shock/ vibration resistant so there is no need for proper seismic design. The standard service life of an LED is about 50,000 hours.

Xenon Lamp

Xenon lamp is a flash type light source that emits bright light instantly by inserting high energy into the lamp. Compared with the steady type lamp, xenon lamps need a lot of input power instantly and a extremely large amount of light it is diffused.

The lamp is filled with xenon(Xe) gas due to the convenience of the production(choice of materials), its use, xenon lamp was named after the xenon gas that it uses. xenon lamps are also resistant to vibration due to its mounting method. In addition, it is visible even in bright environments not only because the spectacle distribution of the visible light is close to the sunlight, it uses the same method as the strobe of the camera.

Warning Light/ Indicator Light Operating Principle

Bulb Steady/ Flashing Type

- Highly diffusible light bulb that refracts light though a special lens and can be used in a steady or flashing state

Bulb Revolving Type

- By combining a highly diffusible light bulb and a reflector, light is reflected in a parallel beam with a rotating cycle
- Our bulb revolving model has a long lifetime enabled by using a high durability bulb and a power transfer system that minimizes noise and abrasion
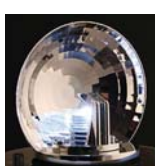
LED Revolving Type

- The combination of an LED and a reflector creates a parallel light beam with a rotating cycle
- Our LED revolving model is patented for emitting light with the same level of uniformity and brightness compared to the bulb reflecting type
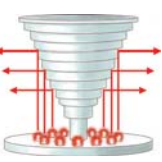
LED Steady/ Flashing Type

- The indirect light distribution system uses a special structure to radiate a uniform light signal throughout the entire body of the lens by using a multi-stage reflector
- The direct light distribution system uses a high-intensity LED light and diffusion lens to transfer signal over a long distance. Qlight LED lights / flashing lights are equipped with two structures depending on the model type, Steady or Flashing Type
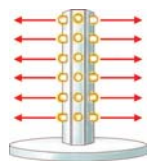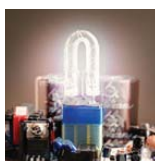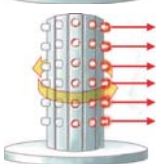
LED Strobe-Type

- By shortening the LED flashing period and supplying the maximum current to the LED, It produces a flash effect just like the xenon lamp

LED Simulated Revolving Type

- By uniformly arranging the LED lens in a 360 degree circumferential direction, it will produce a flash in a regular rotating sequence
- The visual effect looks just the same as the revolving model

Xenon Lamp Strobe-Type

- The strobe type model uses a xenon lamp that instantly emits a high brightness light by supplying large energy
- Requires more power than other flashing type models, and the flash is brighter in comparison
- Has excellent vibration resistance compared to regular light bulbs but is not superior to LEDs
- Can spread strong light signals in all directions because of the light projecting structure

Pre-recorded Sound Tone and Sound Combination Chart

■ 20 pre-recorded sound tones for standard type products

Sound Number	Sound Tone	Sound Number	Sound Tone
SND01	Fire.A-ANG	SND11	Piano Sonata
SND02	Emergency WA-U(Yelp)	SND12	Turkish March
SND03	Ambulance PI-PO(Hi-low)	SND13	Magic Flute
SND04	Abandon Alarm	SND14	Badinerie
SND05	Machinery Fault	SND15	Pine Apple Rag
SND06	High Expansion	SND16	Beep Intermittent
SND07	7 Short Pl. / 1 Long	SND17	Door Chime
SND08	Sweet Home	SND18	Phone Ring
SND09	For Elise	SND19	PI.PI.PI Short
SND10	Cuckoo's Waltz	SND20	Tripping Beat

• Standard sound combination for WS/ WP type products

ON = 1 / OFF = 0

7 sounds per combination can be selected according to your preference.
8 combinations are available.

No.	1	2	3	Ch1	Ch2	Ch3	Ch4	Ch5
1	1	0	0	SND01 Fire.A-ANG	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND05 Machinery Fault	SND06 High Expansion
2	0	1	0	SND01 Fire.A-ANG	SND04 Abandon Alarm	SND05 Machinery Fault	SND06 High Expansion	SND07 7 Short Pl. / 1 Long
3	1	1	0	SND01 Fire.A-ANG	SND02 Emergency WA-U	SND04 Abandon Alarm	SND05 Machinery Fault	SND06 High Expansion
4	0	0	1	SND01 Fire.A-ANG	SND03 Ambulance PI-PO	SND05 Machinery Fault	SND06 High Expansion	SND07 7 Short Pl. / 1 Long
5	1	0	1	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND05 Machinery Fault	SND06 High Expansion
6	0	1	1	SND01 Fire.A-ANG	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND07 7 Short Pl. / 1 Long
7	1	1	1	SND01 Fire.A-ANG	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND06 High Expansion	SND07 7 Short Pl. / 1 Long
8	0	0	0	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND05 Machinery Fault	SND07 7 Short Pl. / 1 Long

※ You can select sound tones using the 3P switches located on the circuit board of the WS Type and WP Type products.

• Standard sound combination for WM/ WA type products

ON = 1 / OFF = 0

13 sounds per combination can be selected according to your preference.
8 combinations are available.

No.	1	2	3	Ch1	Ch2	Ch3	Ch4	Ch5
1	1	0	0	SND08 Sweet Home	SND09 For Elise	SND10 Cuckoo's Waltz	SND11 Piano Sonata	SND12 Turkish March
2	0	1	0	SND16 Beep Intermittent	SND17 Door Chime	SND18 Phone Ring	SND19 PI.PI.PI Short	SND20 Tripping Beat
3	1	1	0	SND08 Sweet Home	SND11 Piano Sonata	SND13 Magic Flute	SND17 Door Chime	SND19 PI.PI.PI Short
4	0	0	1	SND13 Magic Flute	SND14 Badinerie	SND15 Pine Apple Rag	SND08 Sweet Home	SND09 For Elise
5	1	0	1	SND10 Cuckoo's Waltz	SND11 Piano Sonata	SND17 Door Chime	SND18 Phone Ring	SND20 Tripping Beat
6	0	1	1	SND08 Sweet Home	SND12 Turkish March	SND16 Beep Intermittent	SND17 Door Chime	SND18 Phone Ring
7	1	1	1	SND08 Sweet Home	SND11 Piano Sonata	SND12 Turkish March	SND17 Door Chime	SND19 PI.PI.PI Short
8	0	0	0	SND11 Piano Sonata	SND12 Turkish March	SND13 Magic Flute	SND16 Beep Intermittent	SND18 Phone Ring

※ You can select sound tones using the 3P switches located on the circuit board of the WM Type and WA Type products.

# Pre-recorded Sound Tone and Sound Combination Chart

■ Sound tone combinations for standard type products

For standard type products, user can select from a variety of 5 pre-recorded sound combinations including 5 warning sounds, 5 special warning sounds, 5 melodies, 5 alarms, and 5 customizable sound.

	Sound Category	Channel	Sound Tone	Sound Combination #
WS	5 warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion	WS/ WP No.1
WP	5 special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short PI. / 1 Long	WS/ WP No.2
WM	5 melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March	WM/ WA No.1
WA	5 alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat	WM/ WA No.2
WV	5 customizable sound	Ch1 Ch2 Ch3 Ch4 Ch5	1. Voice messages are pre-recorded and provided from factory upon user's request 2. Each channel has recording space for 16 sec 3. 5 channels available 4. When only one channel is used, maximum recordable space is 80 sec	-

※ Please refer to page 90 for detailed information about selectable sound patterns.

■ **Sound Selection of Signal Sounds**

Ch1　Ch2　Ch3　Ch4　Ch5　　VOLUME
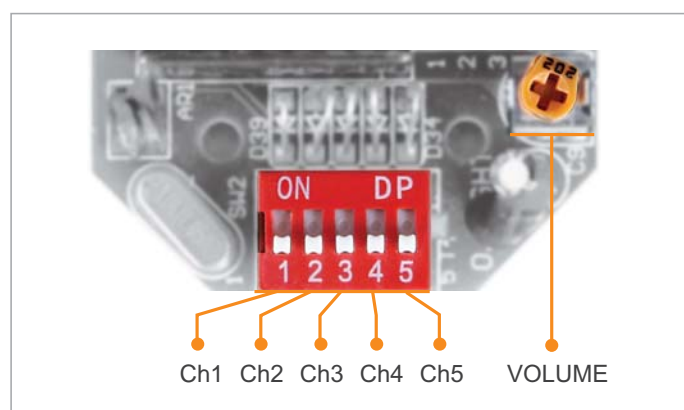
Standard specification : Use internal switches
Turn on dip switches of each channel, designated sound will be played.

Special Alarm Type Feature
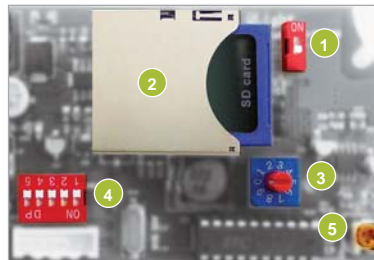
■ How to set-up the special alarm type products

- A special alarm type products are classified into two models; basic model with special alarm and SDcard (MP3) model.
- The 2 models have 31 built-in sounds, which can be chosen and played by binary input method.
- When storing MP3 files on the SDcard (MP3) type models, you can select and play up to 31 sounds by using the binary input method. The bit input method can play 5 sound from #1 to #5, depending on the specifications given in the file name(For file specifications refer to Page 96.)
- Includes eight play mode settings. For example, when the continuous playback setting/ function is selected the warning message is played continuously for conditions that require frequent playback.

■ Built-in sound type model

1 - 2 N/A
4 Sound select switch
5 Volume

※ Built-in sound type model can select and play 31 sounds by using the sound selection switch.

■ SDcard type model

1 Sound setting switch
2 MP3 playable SDcard
3 Play mode setting switch
4 Sound select switch
5 Volume

■ SDcard(MP3) type product feature

1 SOUND setting switch
- If the switch is ON the SDcard (MP3) will be played, and if the switch is OFF the built-in sounds will be played.

2 SDcards
- The SDcard is a compact flash memory card for storing MP3 files.
- After saving the MP3 files in the SDcard with the specified format, insert the card into the SDcard slot and switch the sound setting switch to ON so the sounds can be played from the SDcard.

3 PLAY MODE setting switch
- PLAY MODE setting switch is used to choose the channel input method or select various playing modes. Refer to the table below for switch features.
- Switch #0 and #9 is not used.

1	Bit Input Mode	5 sounds can be played from the selected group (choose one group from six groups) Play sound only once (if using sequential signal input or pulse signal input)
2	Binary Input Mode	Up to 31 sounds available for each model. Plays sound only once (sequential signal input only)
3	Bit Input Hold Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
4	Binary Input Hold Playback Mode	Up to 31 sounds available for each model The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
5	Bit Input Sound Reduction Mode	5 sounds can be played from the selected group (choose one group from six groups) You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
6	Binary Input Sound Reduction Mode	Up to 31 sounds available for each model You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
7	Bit Input Sequence Memory Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) If the sound is inputted in a order, it will remember the order and play each sound about 3 seconds. The last input channel is fully played (bit input mode only)
8	Test Mode	In test mode, Ch1 of group is automatically played back repeatedly. To end the test mode, switch back to the other modes.

4 Channel selection switch
- By using 5 channel selection switches, one can choose the appropriate sound source depending on the Binary input and Bit input.

5 VOLUME
- You can adjust the speakers sound output by using the volume dial.

Sound Pattern and Combination for Special Alarm Type

■ Sound pattern for special alarm type

- Special alarm type product has 31 pre-recorded sound tones.
- Supports binary input mode. 5ch switch allows for 31 sound tones.
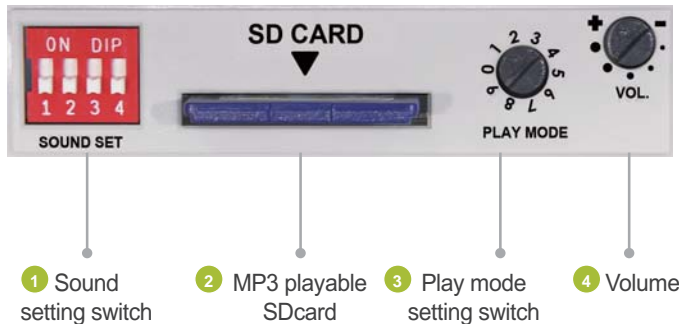
• Composition of binary input mode

| ON = 1 / OFF = 0							
ON OFF	Ch1	Ch2	Ch3	Ch4	Ch5	Left channel switch allows for choosing 31 sound tones. Channel switch will be substituted for an external wiring in case of LC type products.	
No.	1	2	3	4	5	Sound tone	Frequency
0	0	0	0	0	0	No sound	
1	0	0	0	0	1	Rel rel rel	730Hz-920Hz
2	0	0	0	1	0	Slow Ambulance PI-PO	820Hz-1.05kHz
3	0	0	0	1	1	Oit Oit warning sound	360Hz-1.56kHz
4	0	0	1	0	0	Emergency WA-U(Yelp)	770Hz-1.2kHz
5	0	0	1	0	1	Pi- buzzer	770Hz
6	0	0	1	1	0	7 Short PI. / 1 Long	715Hz
7	0	0	1	1	1	Pi o Pi o	940Hz-2.19kHz
8	0	1	0	0	0	Phone Ring	740Hz-910Hz
9	0	1	0	0	1	Pi- buzzer	600Hz
10	0	1	0	1	0	Pi pi pi short	420Hz
11	0	1	0	1	1	Di o Di o 2 tones buzzer	600Hz-1.14kHz
12	0	1	1	0	0	Oit Oit warning sound	500Hz-1.11kHz
13	0	1	1	0	1	Slow Ambulance PI-PO	380Hz-470Hz
14	0	1	1	1	0	Slow Di o Di o	680Hz-840Hz
15	0	1	1	1	1	Fast Li o li o	380Hz-470Hz
16	1	0	0	0	0	Fire.A-ANG	770Hz-1.11kHz
17	1	0	0	0	1	Fast Ambulance PI-PO	680Hz-840Hz
18	1	0	0	1	0	Slow Ambulance PI-PO	650Hz-840Hz
19	1	0	0	1	1	Ri ro ri ro warning sound	420Hz-470Hz
20	1	0	1	0	0	Repeat Di-o 3 times	680Hz-840Hz
21	1	0	1	0	1	Fire.A-ANG	500Hz-1kHz
22	1	0	1	1	0	Ambulance PI-PO	680Hz-840Hz
23	1	0	1	1	1	Slow Fire.A-ANG	480Hz-1.14kHz
24	1	1	0	0	0	Pi-pi- buzzer low frequency	690Hz
25	1	1	0	0	1	Pi-pi- buzzer high frequency	950Hz
26	1	1	0	1	0	Di-di- buzzer high frequency	800Hz
27	1	1	0	1	1	Di-di- buzzer low frequency	500Hz
28	1	1	1	0	0	Rising Po-ong	500Hz-1.2kHz
29	1	1	1	0	1	Fast Ambulance PI-PO	825Hz-1.07kHz
30	1	1	1	1	0	Rising frequency	150Hz-1kHz
31	1	1	1	1	1	Repeat A-ANG	1.4kHz-1.56kHz

Multicfunctional Type Feature

■ **How to set up the multifunctional products(MP3)**

- Multifunctional type products can play MP3 sounds by using an SDcard and can also play WS (5 Warning sounds), WP (5 special warning sounds 1st Group), WM (5 Melodies), WA (5 Alarms), WO (5 special warning sounds 2nd Group), and WN (5 special warning sounds 3rd Group) when not using a SDcard.
- Includes seven different functions. For example, it is able to playback the message continuously with the continuous playback function for warning message that needs to be repeated often.

■ **Function setting**

① Sound setting switch

① Sound setting switch   **② MP3 playable SDcard**   **③ Play mode setting switch**   **④ Volume**
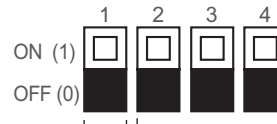
Group Choice in Bit Input Mode
001 : WS (5 Warning sounds)
010 : WP (5 special warning sounds 1st Group)
011 : WM (5 Melodies)
100 : WA (5 Alarms)
101 : WO (5 special warning sounds 2nd Group)
110 : WN (5 special warning sounds 3rd Group)

Sound Selection
0 : Built-in sound
1 : SDcard(MP3)

- #1 switch from the sound setting switch is for selecting Built-in sound/ SDcard
- #2 – #4 switch is for selecting a group of sound incase you have selected bit input mode

② SDcards

- The SDcard is a compact flash memory card for storing MP3 files.
- After saving the MP3 files in the SDcard with the specified format, insert the card into the SDcard slot and switch the sound setting switch to ON so the product will be able to play sounds from the SDcard.

③ PLAY MODE setting switch

- PLAY MODE setting switch is used to choose the channel input method or select various play modes. Refer to the table below for switch features.
- Switch #0 and #9 is not used.

1	Bit Input Mode	5 sounds can be played from the selected group (choose one group from six groups) Play sound only once (if using sequential signal input or pulse signal input)
2	Binary Input Mode	Up to 30 sounds available for each model. Plays sound only once (sequential signal input only)
3	Bit Input Hold Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
4	Binary Input Hold Playback Mode	Up to 30 sounds available for each model The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
5	Bit Input Sound Reduction Mode	5 sounds can be played from the selected group (choose one group from six groups) You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
6	Binary Input Sound Reduction Mode	Up to 30 sounds available for each model You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
7	Bit Input Sequence Memory Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) If the sound is inputted in a order, it will remember the order and play each sound about 3 seconds . The last input channel is fully played (bit input mode only)
8	Test Mode	In test mode, Ch1 of group is automatically played back repeatedly. To end the test mode, switch back to the other modes.

④ VOLUME

- You can adjust the speakers sound output by using the volume dial.

Sound Pattern and Combination for Multifunctional Product

■ Sound patterns for multifunctional products

- Multifunctional product has 30 pre-recorded sound tones.
- 30 sound tones in binary input mode supported. Bit input mode has 5 sound tones within 1 group among 6 groups.

• Bit input mode's sound tone combinations

ON = 1 / OFF = 0

Ch1 Ch2 Ch3 Ch4 Ch5 — ON / OFF

Left channel switch allows to select 5 tons individually within designated group.
(For group selection, please refer to page 94 "How to set-up the multifunctional products")
Channel switch will be substituted for external wiring in case of LC type products.

Sound		Ch	Sound Tone	Sound		Ch	Sound Tone
WS	5 Warning Sounds	Ch1	Fire.A-ANG(560Hz-1.5kHz)	WA	5 Alarms	Ch1	Beep Intermittent
		Ch2	Emergency WA-U(Yelp)(600Hz-1.5kHz)			Ch2	Door Chime
		Ch3	Ambulance PI-PO(Hi-low)(450Hz-900Hz)			Ch3	Phone Ring
		Ch4	Machinery Fault(820Hz)			Ch4	PI.PI.PI Short
		Ch5	High Expansion(1kHz)			Ch5	Tripping Beat
WP	5 Special Warning Sounds (1st Group)	Ch1	Fire.A-ANG(560Hz-1.5kHz)	WO	5 Special Warning Sounds (2nd Group)	Ch1	Rel rel rel(730Hz-920Hz)
		Ch2	Abandon Alarm(820Hz)			Ch2	Slow Ambulance PI-PO(820Hz-1.05kHz)
		Ch3	Machinery Fault(820Hz)			Ch3	Wye yong Wye yong(770Hz-1.2kHz)
		Ch4	High Expansion(1kHz)			Ch4	Phone ring 2(740Hz-910Hz)
		Ch5	7 Short PI. / 1 Long(1kHz)			Ch5	Fire.A-ANG(770Hz-1.11kHz)
WM	5 Melodies	Ch1	Sweet Home	WN	5 Special Warning Sounds (3rd Group)	Ch1	Oit Oit(500Hz-1.11kHz)
		Ch2	For Elise			Ch2	Pi o Pi o(940Hz-2.19kHz)
		Ch3	Cuckoo's Waltz			Ch3	Slow Di o Di o(680Hz-840Hz)
		Ch4	Piano Sonata			Ch4	Li long Li ling(420Hz-470Hz)
		Ch5	Turkish March			Ch5	911 Siren(500Hz-1kHz)

• Binary input mode's sound tone combinations

ON = 1 / OFF = 0

Ch1 Ch2 Ch3 Ch4 Ch5 — ON / OFF

Left channel switch allows the user to select from 30 available sound tones.
Channel switch will be substituted for external wiring in case of LC type products.

No.	1	2	3	4	5	Sound tone	Frequency
0	0	0	0	0	0	No sound	
1	0	0	0	0	1	Fire.A-ANG	560Hz-1.5kHz
2	0	0	0	1	0	Emergency WA-U(Yelp)	600Hz-1.5kHz
3	0	0	0	1	1	Ambulance PI-PO(Hi-low)	450Hz-900Hz
4	0	0	1	0	0	Pi-ik Pi-ik	820Hz
5	0	0	1	0	1	Machinery Fault	820Hz
6	0	0	1	1	0	High Expansion	1kHz
7	0	0	1	1	1	Alarm	1kHz
8	0	1	0	0	0	Sweet Home	-
9	0	1	0	0	1	For Elise	-
10	0	1	0	1	0	Cuckoo's Waltz	-
11	0	1	0	1	1	Piano Sonata	-
12	0	1	1	0	0	Turkish March	-
13	0	1	1	0	1	Magic Flute	-
14	0	1	1	1	0	Badinerie	-
15	0	1	1	1	1	Pineapple Rag	-
16	1	0	0	0	0	Beep Intermittent	-
17	1	0	0	0	1	Door Chime	-
18	1	0	0	1	0	Phone Ring	-
19	1	0	0	1	1	PI.PI.PI Short	-
20	1	0	1	0	0	Tripping Beat	-
21	1	0	1	0	1	Rel rel rel	730Hz-920Hz
22	1	0	1	1	0	Slow Ambulance PI-PO	820Hz-1.05kHz
23	1	0	1	1	1	Wye yong Wye yong	770Hz-1.2kHz
24	1	1	0	0	0	Phone ring 2	740Hz-910Hz
25	1	1	0	0	1	Fire.A-ANG	770Hz-1.11kHz
26	1	1	0	1	0	Oit Oit	500Hz-1.11kHz
27	1	1	0	1	1	Pi o Pi o	940Hz-2.19kHz
28	1	1	1	0	0	Slow Di o Di o	680Hz-840Hz
29	1	1	1	0	1	Li long Li ling	420Hz-470Hz
30	1	1	1	1	0	911 Siren	150Hz-1kHz

How to Use a MP3 Type Product

MP3-type models have 30 or 31 built-in alarm sounds and the users can play their voice messages or music files(MP3). You can choose two methods for playing up to 31 sounds with the binary input method. While the bit input method can only play 5 sounds from #1 to #5.

■ What is a MP3?

- MP3 is a audio compression technology(Audio layer-3) design by MPEG (Motion Picture Experts Group)
  MP3 (MPEG-1 Audio Layer-3) is a standard technology and format for compressing a sound sequence into a very small file while preserving the original level of sound quality when it is played.
- Extension of the MP3 file can be found as "*.mp3", and any voice message, alarm message, and music can be played and saved as MP3 files.

■ What is a SDcard?

SD memory card is a compact flash memory card for storing various data such as MP3s or document files, Models with MP3 features can save voice messages or alarm messages in the SDcard.

※ SDcard sold separately.

Saving a MP3 file

• MP3 file can be saved and played in accordance with the standards specified by filename.
• Using binary input method according to the specifications given in the file name, a SDcard which is used in special alarm type models(MP3) can save up to 31 sounds, multifunctional type models can save and play up to 30 sounds.
• Using bit input method according to the specifications given in the file name, you can select and play up to five sounds from the MP3 file.

User-defined sound(MP3) type

| 23 | _ | For Elise | .mp3 |

40 alphabets
Indicator between file number and name
File number 01-30(31)
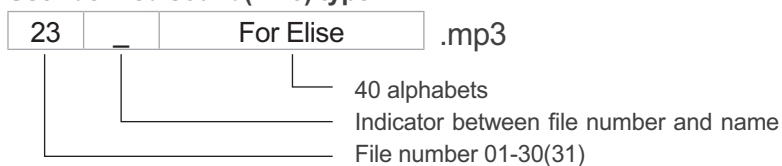
[Example]
♪ 01_Fire alarm.mp3
♪ 02_Emergency alarm.mp3
♪ 03_For Elise.mp3
⋮
♪ 30_Cuckoo Waltz.mp3

Binary input and Bit input method

Special alarm type models and multifunctional type models are divided into Binary input method or Bit input method depending on the source selection method.
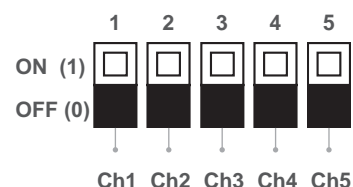
■ Binary input

ON = 1 / OFF = 0

No.	1	2	3	4	5
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
:	:	:	:	:	:
31	1	1	1	1	1

You can only show 2 numbers with 1 switch "0", "1". With 5 switches you can have 31 combinations. Selecting one sound from 5 switches is the Binary input method.
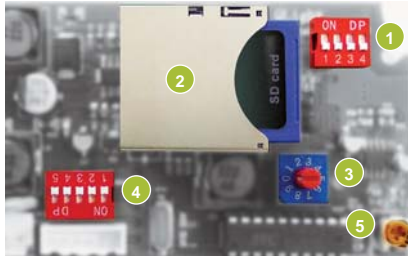
■ Bit input

Ch1 Ch2 Ch3 Ch4 Ch5

The Bit input method only recognizes one of the 5 switches at a time. This method doesn't support two inputs at once. The number of combinations is small, but it is much more convenient to remember the channel number.

How to Use a MP3 Type Product

■ MP3 supported model basic description

- MP3 supported products can play 30-31 built-in sounds or MP3 files saved in an SDcard.
- Binary input method can play up to 30 - 31 sounds, and Bit input method can play 5 sounds in accordance with the standards specified by filename.
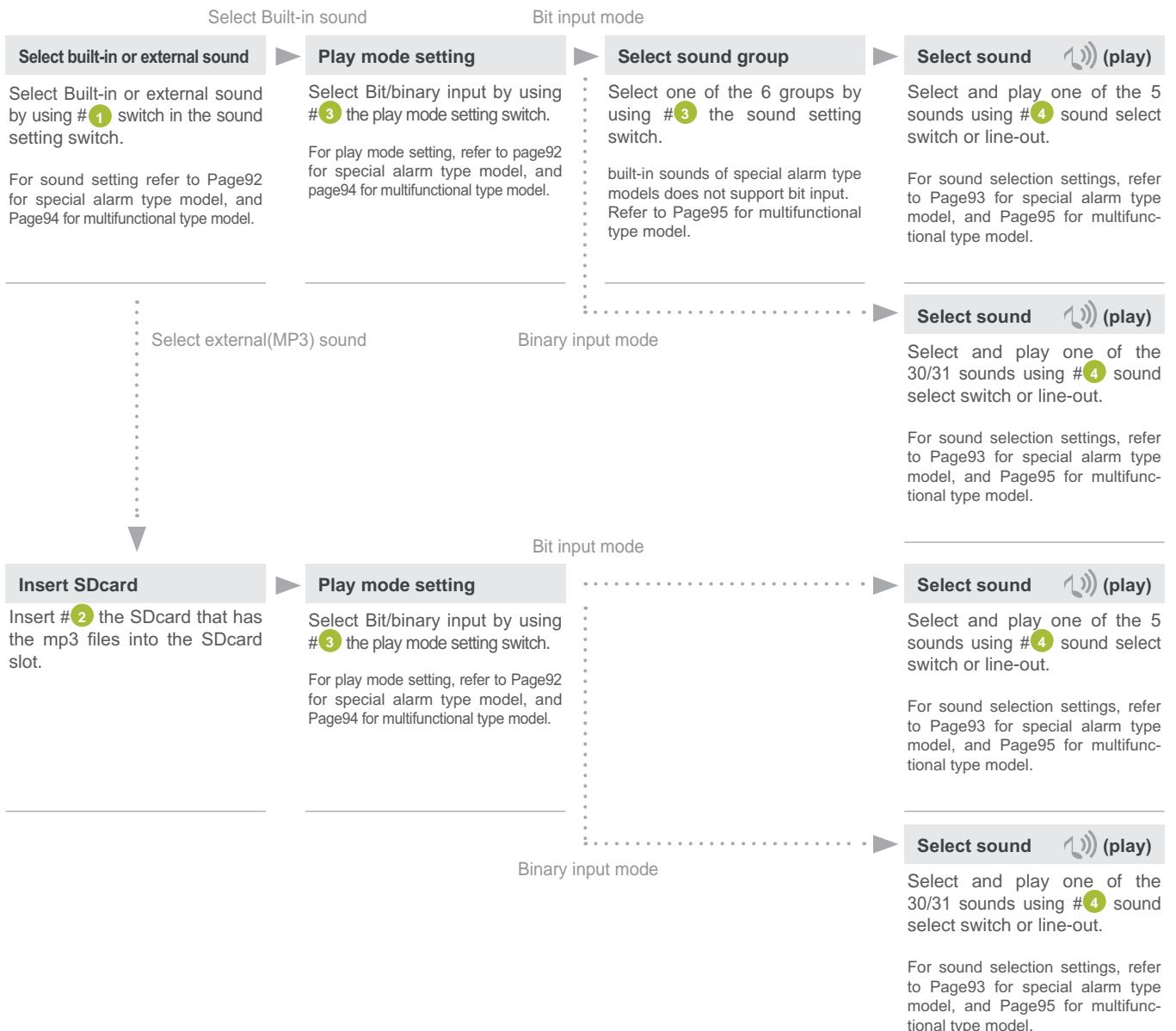- Can choose and play 5 sounds from #1 to #5.

<Switch select type>

<Line-out type>

1 Sound setting switch   **4** Sound select switch
2 MP3 playable SDcard   **5** Volume
3 Play mode setting switch

■ How to set-up a MP3 type product

Select Built-in sound   Bit input mode

Select built-in or external sound ▶	**Play mode setting** ▶	**Select sound group** ▶	**Select sound** (play)
Select Built-in or external sound by using #**1** switch in the sound setting switch. For sound setting refer to Page92 for special alarm type model, and Page94 for multifunctional type model.	Select Bit/binary input by using #**3** the play mode setting switch. For play mode setting, refer to page92 for special alarm type model, and page94 for multifunctional type model.	Select one of the 6 groups by using #**3** the sound setting switch. built-in sounds of special alarm type models does not support bit input. Refer to Page95 for multifunctional type model.	Select and play one of the 5 sounds using #**4** sound select switch or line-out. For sound selection settings, refer to Page93 for special alarm type model, and Page95 for multifunctional type model.

Select external(MP3) sound   Binary input mode

Select sound (play)

Select and play one of the 30/31 sounds using #**4** sound select switch or line-out.

For sound selection settings, refer to Page93 for special alarm type model, and Page95 for multifunctional type model.

Bit input mode

Insert SDcard ▶	**Play mode setting** ▶		**Select sound** (play)
Insert #**2** the SDcard that has the mp3 files into the SDcard slot.	Select Bit/binary input by using #**3** the play mode setting switch. For play mode setting, refer to Page92 for special alarm type model, and Page94 for multifunctional type model.		Select and play one of the 5 sounds using #**4** sound select switch or line-out. For sound selection settings, refer to Page93 for special alarm type model, and Page95 for multifunctional type model.

Select sound (play)

Select and play one of the 30/31 sounds using #**4** sound select switch or line-out.

For sound selection settings, refer to Page93 for special alarm type model, and Page95 for multifunctional type model.

Binary input mode

Icon Description

This catalogue helps users quickly identify the product's specifications and features by using several types of icons. If you understand the concept for each icon, you will find it easy to understand the catalogue information.

Light Source and Operating Mode Icons

Icon	Operating Mode	Icon	Operating Mode
	Bulb steady type		Bulb steady/flashing type
	Bulb revolving type		LED revolving type
	LED steady type		LED steady/ flashing type
	LED simulated revolving type		LED strobe type
	Xenon lamp strobe type		

Acoustic Signal Icons

Icon	Operating Mode	Icon	Operating Mode
	Buzzer		Speaker
	Horn		Bell
	Motor siren		MP3
	Decibel		

Specifications Icons

Icon	Operating Mode	Icon	Operating Mode
	Magnet type		Ambient operating temperature
	NPN type transistor		PNP type transistor
	IP rating		Wireless Network

Detail Icons

Icon	Operating Mode	Icon	Operating Mode
	Common specification		External view drawing
	Wiring		Mounting
	User specifications		Model selection

Qlight Catalogue Introduction

Qlight produces a wide variety of product categories which offers the customer the ability to select the suitable device for their application needs and environments.
There are warning/signal lights, electric signal horns, signal tower lights, warning light bars, PC control tower lights, industrial LED lights, aviation obstruction lights, and limit switches.
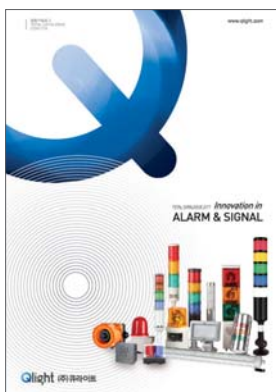
Total Catalogue
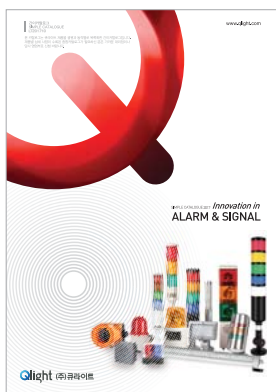
Simple Catalogue
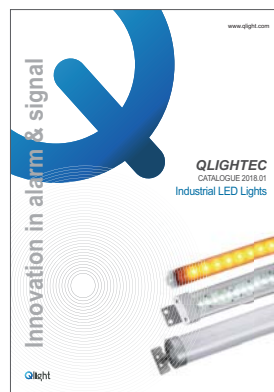
Industrial LED Lights

Signal Tower Lights
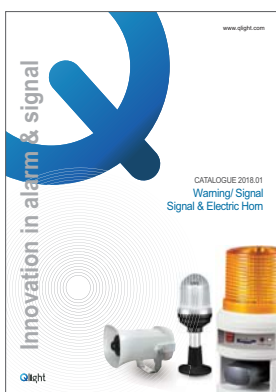
Warning/ Signal/ Signal & Electric Horn
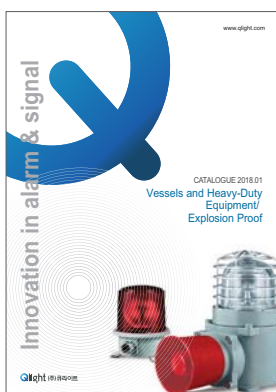
Vessels and Heavy-Duty Equipment/ Explosion Proof
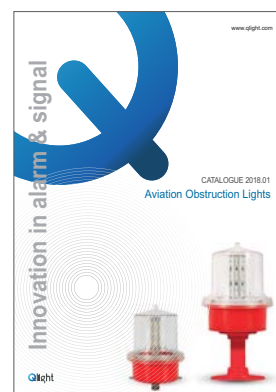
Warning Light Bar

Aviation Obstruction Lights
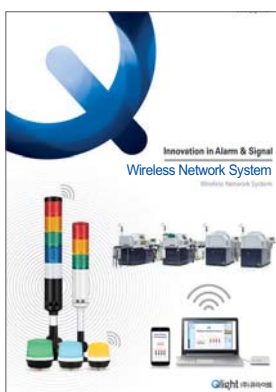
Wireless Network System
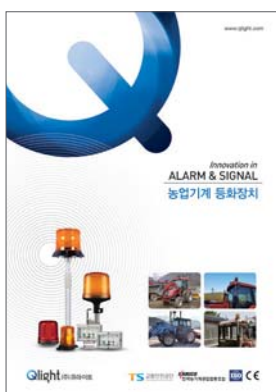
Agriculture Machine Warning Light
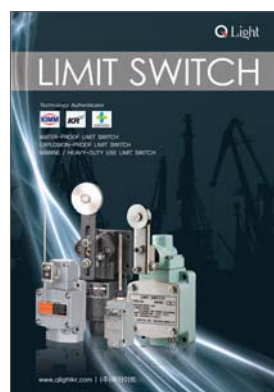
Limit Switch

For Steel Manufacturing Facilities

Qlight Catalogue Introduction

Signal Tower Lights

Warning/ Signal & Electric Horn

Vessels and Heavy-Duty & Equipment/ Explosion Proof

Warning Light Bar

Aviation Obstruction Lights

Industrial LED Lights

Qlight

IECEx ATEX Ex NEPSI KIMM KGS KOSHA ABS ℞ CCS KR CE UL

WARNING LIGHT | ELECTRONIC HORN | SIGNAL TOWER LIGHT | EMERGENCY LIGHT BAR | LED OBSTRUCTION LIGHT | LED WORK LIGHT