Γ / **NNOVATION in**

IO-Link Product CATALOG 2025



Signal Tower Lights Signal Beacons and Sounders Heavy-Duty and Explosion Proof Signalings Warning Light Bars Aviation Obstruction Lights Smart Factory Product Industrial LED Lights Performance Line - E Series IO-Link Product



Olight Gives you a Brighter Future

Qlight Gives You a Brighter Future!

Qlight has been contributed to an industrial safety and efficiency by producing several audible/ visual signaling devices and industrial LED lights since its establishment in 1986. Our technology and quality are highly reputable among various industries for example semiconductor manufacturing equipment, automobile industry, unmanned automation facility, steel production facility, shipbuilding industry, offshore plant, specialized unit for petrochemical industry based on diverse technology patents and core technologies such as LED light source, heat radiation technology, explosion proof design. Our established local corporations in South Korea and China, sales branches in the United States, Japan, Vietnam, and a global service network provides a distribution and sales system servicing over 80 countries that help Qlight reinforces industrial fields all over the world.



Qlight is a representative of signaling device in Korea.

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.

As a market leader, Qlight is going to accomplish our responsibility by introducing state of the art equipment and unmanned facilities.

1986 - 1995

Business foundation and consolidation

- 1986 Established Qlight
- 1993 Nominated for developing domestic explosion proof warning lights by Korean Ministry of Science & Technology

1996 - 2005

<u>Growing as a signal</u> <u>transmission device specialist</u>

2001 Established Shanghai Qlight Electronic Co., Ltd. in China



2004 ISO 9001:2000 certificates acquired

2006 - 2017

Mission device specialist <u>A great leap forward &</u> business reconstruction

2010	Established R&D Center
2011	Selected as a venture
	company
2011	Selected as an INNO-BIZ
	firm which is an innovative
	tech company
2014	Selected as a promising
	export company by Small
	and Medium Business
	Administration(SMBA)
2014	Established the Qlight USA,
	Inc. in San Jose, CA.
2016	The second headquarter
	factory built



History of Change 8 Innovation

2018 to Present

New engines for growth

2019 Established Qidong factory



- 2019 Selected as a family friendly company by Ministry of Gender Equality and Family
- 2020 Selected as a small giants company by Small and Medium Business Administration(SMBA)
- 2021 Selected as a youth-friendly small giants company
- 2023 Selected as the best reading management company by the Ministry of Culture, Sports and Tourism of Korea

The 2nd growth and globalization

Qlight, the best professional company Leading the **improvement of industrial efficiency**



Aiming for the first-class specialized company to contribute industrial efficiency and safety of customer based on the core competency of System, Variety, and Hi-quality

Global networks in 80 countries

Exporting to all over the world through global network spanning over 200 distribution channels in 80 countries and brightening industrial sites around the world

Continuous growth for about 35 years

Based on a partnership-oriented corporate culture and sharing management, we have grown continuously for 35 years since our founding and are recognized for our quality and technology.

Multi-variety production

Satisfying various needs of customers through systematic customer-customized production system for over 450 products

Quick

Prompt customer satisfaction and real time enterprise(RTE)

Question

Problem oriented thinking and creative problem solving are based on achieving strategic task.

Quality

Emphasis on product and service quality, workplace innovation and ethical management

Qualified

The most suitable company that leads the innovation of signaling device technology and industrial efficiency improvement



Core Competency

System	Delicate mechanism of the work realizes shorter lead time by effectively managing over- all procedures such as purchasing, production, stock management, and distribution.
Broad-line	Customers are highly satisfied with Qlight products because we offer over 450 types of wide variety of product family with a systematic customized production system.
Supreme Quality	Qlight's technological capability and supremacy of quality are being recognized be- cause of our strict technology standard and inspection system. We've obtained over 22 certificates such as IECEx, ATEX, NEPSI, CCS, CE, and UL. We've been expanding it in accordance with industrial demands.

How Qlight works



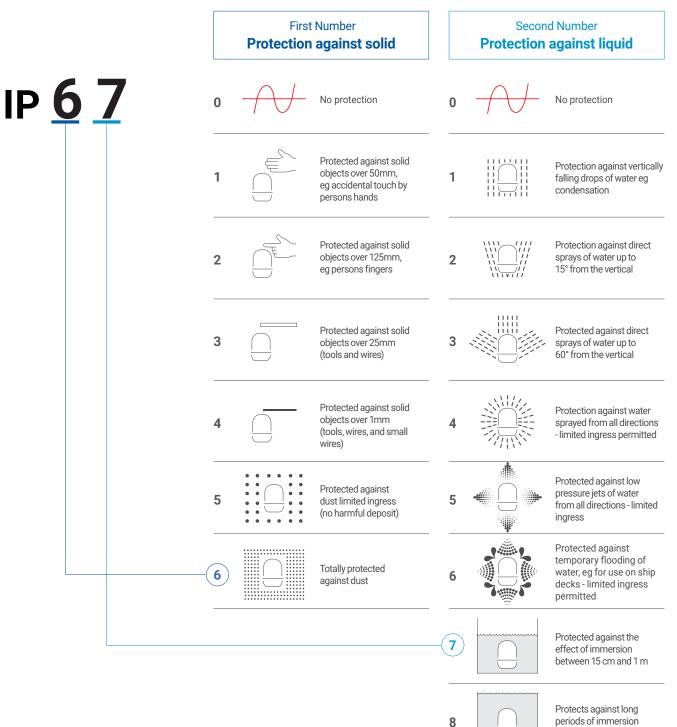
Waterproof and Dustproof Protection Structure

Comparing waterproof & dustproof protection structure

IP rating _ Known as "Ingress Protection rating" indicated in two-digit code showing the amount of protection against solid and the liquid(IEC60529)

8

under pressure



NEMA SIZE

National Electrical Manufacturers Associations standard for enclosure protection rating, NEMA1-6 and 11-13 type is applicable in Non-Hazardous Locations, NEMA 7-10 is applicable in Hazardous Locations

Туре	Usage place	Environment	Protection rating
1	Indoor Use	Non-explosion proof	Intended for indoor use primarily to provide a degree of protection against limited amounts of falling dirt
2	Indoor Use	Non-explosion proof	Intended for indoor use primarily to provide a degree of protection against limited amounts of falling water and dirt
3	Outdoor Use	Non-explosion proof	Intended for outdoor use primarily to provide a degree of protection against rain, sleet, windblown dust; and damage from external ice formation
3R	Outdoor Use	Non-explosion proof	Intended for outdoor use primarily to provide a degree of protection against rain, sleet; and damage from external ice formation, and must have a drain hole
3S	Outdoor Use	Non-explosion proof	Intended for outdoor use primarily to provide a degree of protection against rain, sleet, windblown dust; and to provide for operation of external mechanisms when ice laden
4	Indoor/Outdoor	Non-explosion proof	Intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water, hose directed water; and damage from external ice formation
4X	Use	Non-explosion proof	Intended for indoor or outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, hose directed water; and damage from external ice formation
5	Indoor Use	Non-explosion proof	Intended for indoor use primary to provide
6	Indoor/Outdoor	Non-explosion proof	Intended for indoor or outdoor use primarily to provide a degree of protection against hose directed water, the entry of water during occasional temporary submersion at a limited depth; and damage from external ice formation
6P	- Use	Non-explosion proof	Intended for indoor or outdoor use primarily to provide a degree of protection against hose-directed water, the entry of water during prolonged submersion at a limited depth; and damage from external ice formation
7	Outdoor Use	Explosion proof	Intended for indoor use in locations classified as Class I, Groups A, B, C, or D, as defined in the NEC
8	Indoor/Outdoor Use	Explosion proof	Intended indoor or outdoor use in locations classified as Class I, Groups A, B, C, or D, as defined in the NEC
9	Indoor Use	Explosion proof	Intended for indoor use in locations classified as Class II, Groups E, F, and G, as defined in the NEC
10	Indoor/Outdoor Use	Explosion proof	Are constructed to meet the applicable requirements of the Mine Safety and Health Administration (MSHA)
11	Indoor Use	Non-explosion proof	Protection from the corrosive effects of liquids and gases by oil immersion
12	Indoor Use	Non-explosion proof	Intended for indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping non-corrosive liquids
12K	Indoor Use	Non-explosion proof	Intended knockouts are intended for indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping non corrosive liquids
13	Indoor Use	Non-explosion proof	Intended for indoor use primarily to provide a degree of protection against dust, spraying of water, oil, and non- corrosive coolant

NEMA Ratings and IP Ratings Equivalency Chart

The chart below is for comparison between two enclosure ratings It is only for reference and these two rating standards are not exactly converted

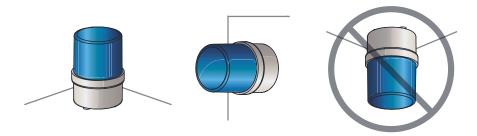
NEMA ENCLOSURE TYPE	IP ENCLOSURE TYPE
1	IP20
2	IP22
3	IP55
4	IP66
4Χ	IP66
6	IP67
12	IP54
13	IP54

PRODUCT INSTALLATION DIRECTION

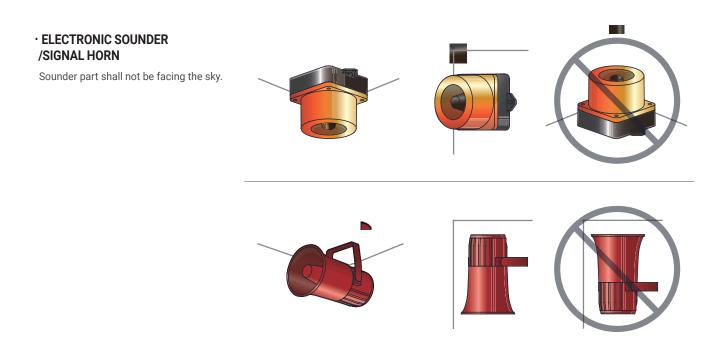
Install the product in accordance with the manual. otherwise, rainwater or moisture may penetrate into the product.

· BEACON/SIGNALING LIGHT

Power cord inlet part shall not be facing the sky.



% For products with a protection rating of less than IPX4, please install it vertically.

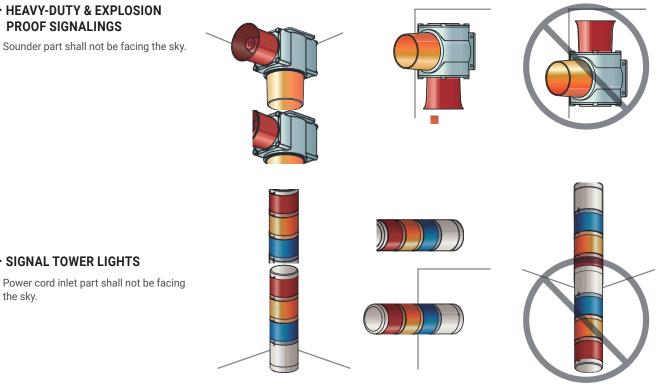


· HEAVY-DUTY & EXPLOSION **PROOF SIGNALINGS**

· SIGNAL TOWER LIGHTS

the sky.

Sounder part shall not be facing the sky.



% For products with a protection rating of less than IPX4, please install it vertically.

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	lcon	Operating Mode
	Bulb steady type		Bulb steady/flashing type
	Bulb revolving type		LED revolving type
.	LED steady type	Ť.	LED steady/flashing type
\$	LED simulated revolving type		LED strobe type
	Xenon lamp strobe type		

Acoustic Signal Icons

lcon	Siren	Icon	Siren
(((O))) BUZZER	Buzzer	())) SPK	Speaker
	Horn	(((ⓒ))) Bell	Bell
((@))) MOTOR	Motor siren	SD MP3	MP3
((15 90db	Volume(dB)		

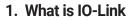
Specifications Icons

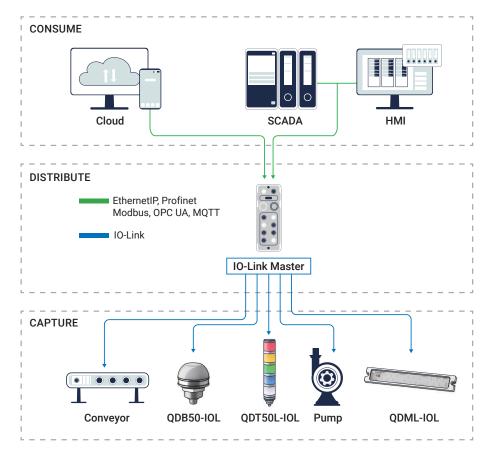
lcon	Specification	lcon	Specification
MAGNET	Magnet type	IJ +50°C -20°C	Ambient operating temperature
NPN	NPN type transistor	(PNP)	PNP type transistor
<u>оро</u> 1Р44	IP rating	WIRELESS	Wireless Network
N RoHS	RoHS		

IO-Link Product



IO-Link Product System Application





1) SERIAL TWO-WAY POINT-TO-POINT CONNECTION

 \cdot for signal transmission and energy supply(no new bus system!)

2) BACKWARD COMPATIBLE

 \cdot for switching PNP or push-pull sensors

3) OPERATION MODES

· Standard-I/O mode(SIO), IO-Link mode

4) 3 COMMUNICATION SPEEDS

· 4,800(COM 1), 38,400(COM 2), optional 230,400 baud(COM 3)

5) UNSHIELDED STANDARD INDUSTRY CABLE

 \cdot and standard M12, M8 or M5 plug connectors

6) 2 TRANSMISSION TYPES

· Process data(e.g. switch signals or distance values) is transmitted cyclically, service data(e.g. parameters) is transmitted cyclically

2. Benefits of IO-Link Digital Communication: It enables bi-directional communication over a simple three-wire connection (typically power, ground, and signal).

Parameterization and Diagnostics

IO-Link allows for detailed parameterization of sensors and actuators, as well as the retrieval of diagnostic data such as device status and health information.

Integration with Industrial Ethernet

IO-Link can be seamlessly integrated with higher-level communication protocols such as PROFINET, EtherNet/IP, or Modbus TCP/IP, enabling connectivity in modern industrial networks.

Enhanced Flexibility and Efficiency

It supports the integration of smart sensors and actuators into the Industrial Internet of Things (IoT) ecosystem, facilitating data-driven insights and predictive maintenance.

3. USE IO-Link & Application Report

1) Simplified Wiring and Installation

 In a traditional automation setup, sensors and actuators may require multiple cables for power and data transmission, leading to complex wiring schemes. With IO-Link, a single standard 3- or 4-wire cable can transmit both power and data, simplifying installation. This reduces installation time and costs and decreases the chances of wiring errors. For instance, connecting a proximity sensor to a PLC via IO-Link can be done using just one cable instead of separate ones for signal and power.

2) Improved Data Availability and Diagnostics

 IO-Link devices provide extensive diagnostic information in addition to standard process data. For example, a pressure sensor with IO-Link connectivity not only sends real-time pressure readings but also provides additional data such as sensor temperature, operating hours, and error messages. This allows maintenance teams to perform predictive maintenance by analyzing this diagnostic data to foresee potential failures and intervene before breakdowns occur, minimizing downtime.

3) Cost Reduction in Components and Maintenance

 Traditional sensors and actuators with integrated intelligence (such as signal processing) are usually more expensive. IO-Link enables the use of simpler, cost-effective devices by moving the intelligence to the IO-Link master. Additionally, because IO-Link supports condition monitoring and predictive maintenance, equipment failures can be anticipated and resolved before causing extensive damage, reducing maintenance costs. For example, using IO-Linkenabled vibration sensors on motors can provide early warnings of potential failures, preventing costly repairs and downtime.

4) Easy Integration with Digitalization and Industry 4.0

 IO-Link provides a standardized way of transmitting data that can easily be integrated with higher-level systems, such as Manufacturing Execution Systems (MES) or cloud-based analytics platforms. This is critical for Industry 4.0 initiatives, where data from various devices is aggregated and analyzed to optimize manufacturing processes. For instance, temperature data from IO-Link sensors across different parts of a factory can be collected in real-time and analyzed to optimize energy usage, enhance product quality, and increase overall operational efficiency.

Product Specification for IO-Link Product







Мос	del number	QDML-IOL	QDT50L-IOL	QDB50-IOL	
	Voltage	DC24V	DC24V	DC24V	
	Length	125-910	Ø51	Ø50	
Dimension (mm)	Width	10	-	-	
((1111))	Height	40	165-278	20	
	Material	Housing-Al Lens-PU	Housing-Al Lens-PC	Housing-Al Lens-PC	
	Layers		3 Layers, 5 Layers		
Lamp & Operation	LED Steady	٠	٠	٠	
Sound & Volume	buzzer sound	-	Max. 80dB at 1m	-	
Mo	unt bracket	Magnetic Holder Mounting bracket	Direct mount, Wall mount Pole mount	Mounting bracket	
	Bracket	-	QZ30, QZ302, LB35	-	
Prot	ection rating	IP67	IP65/IP20	IP67	
C	ertificates	IO Link, CE, UKCA	IO Link, CE, UKCA	IO Link, CE, UKCA	
Cus	stomization				
	Page	P15	P17	P19	

Multiple Color Programmable LED Work Light with IO-Link Technology

QDML-IOL

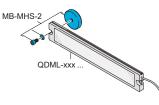




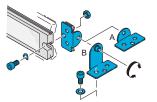
QDML-IOL Multi-Segment IOL Signal Lighting

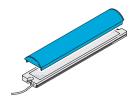
			Optics Specifications		
Model number	QDML-IOL-125	QDML-IOL-250	QDML-IOL-480	QDML-IOL-700	QDML-IOL-910
Lens Color			Transparent		
Light color		Red, Green, Yellov	w, Blue, White, Orange, Pi	nk, Customization	
Deflection angle FWHM			120°		
			Specifications		
Model number	QDML-IOL-125	QDML-IOL-250	QDML-IOL-480	QDML-IOL-700	QDML-IOL-910
Voltage			DC24V		
Range for operation voltage		DC	18V-DC30V (Supply Clas	s 2)	
Power consumption	ЗW	3W 5W 9.1W 13.4W 17		17.5W	
Insulation resistance		Min. 10	0MΩ(500V DC mega ohr	n meter)	
Withstanding voltage		DC: 500VAC, 60H	z, 1 minute/AC: 1,500VA	.C, 60Hz, 1 minute	
Operating temperature			0°C to +50°C		
Protection rating			IP67		
Materials	Housing-Al, Lens-PU				
Certification		● IO-Link C € 岩			
Weight(Approx.)	0.115kg	0.21kg	0.39kg	0.55kg	0.70kg

Structural features



Magnetic Holder Set





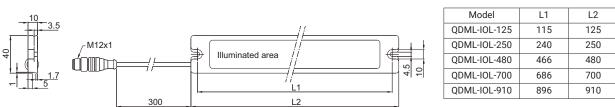
Mounting Bracket

Diffusor

Technical Diagram

Units: mm

·QDML

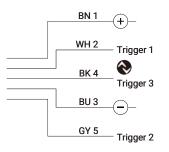


QDML-IOL



Wiring Instructions

·QDML-IOL



Operating	perating mode: External trigger					
TRIG 1	TRIG 2	TRIG 3	Pre-set	Factory setting		
				Var. 126	Var. 251-911	
0	0	0	1	- Off	- Off	
1	0	0	2	Red	Red	
0	1	0	3	- Green	Green	
1	1	0	4	-Yellow	-Yellow	
0	0	1	5	— Blue	-Blue	
1	0	1	6	- Red	- Red	
0	1	1	7	Green	Green	
1	1	1	8		- Yellow	

All Trigger Inputs have a delay -50 ms. Pre-sets can b defined via IO-Link.

Signal Color Options



Ø50mm Multiple Color Programmable LED Tower Light with IO-Link Technology

QDT50L-IOL

(((①)))	(((♬
BUZZER	80dB



Materials Housing-Al, Lens-PC Ambient operating temperature 0°C to +50°C Volume Max. 80dB at 50cm Protection rating IP65/IP20

- State-of-the-art multi colored LED Signal Tower Light with IO-Link technology
- Signaling device optimized for Industry 4.0
- Plug & play technology applied for immediate operation when mounted on an international standard M12 connector
- 8 types of preset color modes and user-defined settings
- Optional 80dB built-in buzzer available
- Convenient environment setting possible via IO-Link
- Ambient operating temperature: 0°C to +50°C

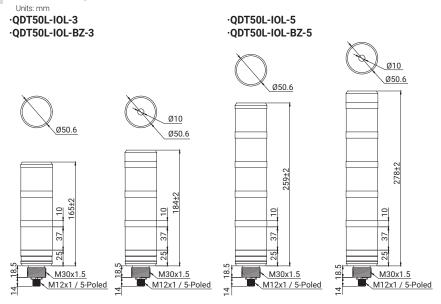


QDT50L

QDT50L-IOL Multi-Segment IOL Signal Columns

Model number	Layers	Voltage	Certificates	Weight	Color
	0		@ IO- Link -	0.27kg	●R-Red - ●G-Green
QDT50L-IOL Standard QDT50L-IOL-BZ Buzzer type	3	500414	CE UK	0.31kg	→ Y-Yellow B-Blue
	5	DC24V		0.35kg	○W-White ● 0-Orange
	5		CA -	0.39kg	P-Pink Custom

Technical Diagram



Mounting bracket & Pole

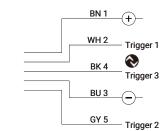


QDT50L-IOL

Wiring Instructions

·QDT50L-IOL

·QDT50L-IOL-BZ



Legend	
>RT<	= flashing red slowly
>>RT<<	= rapidly flashing red
>BUZ<	= Buzzer intermittent (1Hz)
>>BUZ<<	= Buzzer intermittent (2.5Hz)

All Trigger Input have a delay ~50 ms Pre-sets can be defined via IO-Link.

·3 Layers

TRIG 1	TRIG 2	TRIG 3	Pre-set	Factory setting (Layer 1 / Layer 2 / Layer 3 / Buz)						
	TRIG Z	1110.5	FIESEL							
					Var. 3S			Va	r. 3B	
0	0	0	1							
1	0	0	2			RT			RT	
0	1	0	3	GN			GN			
1	1	0	4		YE			YE		
0	0	1	5	BU			BU			
1	0	1	6	WH			WH			
0	1	1	7			>RT<			>RT<	>BUZ<
1	1	1	8			>>RT<<			>>RT<<	>>BUZ<<

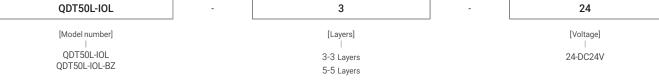
·5 Layers

TRIG 1	TRIG 2	TRIG 3	Pre-set		Factory setting									
TRIGT	TRIG Z	TRIG 3	Pre-set	(Layer 1 / Layer 2 / Layer 3 / Layer 4 / Buz)										
						Var. 5S					Var.	5B		
0	0	0	1											
1	0	0	2					RT					RT	
0	1	0	3			GN					GN			
1	1	0	4				YE					YE		
0	0	1	5		BU					BU				
1	0	1	6	WH					WH					
0	1	1	7					>RT<					>RT<	>BUZ<
1	1	1	8					>>RT<<					>>RT<<	>>BUZ<<

Signal Color Options



Ordering Specification



Multiple Color Programmable LED Signal Beacon Light with IO-Link Technology

QDB50-IOL



PRODUCT SPECIFICATION

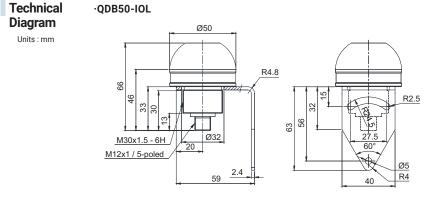
QDB50-IOL

Materials Housing-Al, Lens-PC Ambient operating temperature 0°C to +50°C Protection rating IP67

- State-of-the-art multi colored LED Signal Beacon Light with IO-Link technology
- Signaling device optimized for Industry 4.0
- Plug & play technology applied for immediate operation when mounted on an international standard M12 connector
- 8 types of preset color modes and user-defined settings
- Convenient environment setting possible via IO-Link
- High protection rating of IP67 allows use in various environments
- Ambient operating temperature: 0°C to +50°C

QDB50 1-Segment IOL Lights





Ordering Specification

QDB50-IOL	-	24
[Model number] I QDB50-IOL		[Voltage] 24-DC24V

Signal Color Options













Pink

Red

Green

Yellow

White

Orange



ODB50

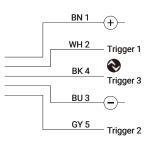
Bracket

· It can be installed on the wall by adopting wall mounting type bracket.



Wiring Instructions

·QDB50



Operating mode: External trigger

				- 33 -
TRIG 1	TRIG 2	TRIG 3	Pre-set	Factory setting
0	0	0	1	Off
1	0	0	2	Red
0	1	0	3	Green
1	1	0	4	Yellow
0	0	1	5	Blue
1	0	1	6	Red blinking
0	1	1	7	Green blinking
1	1	1	8	Yellow blinking

All Trigger Inputs have a delay-50 ms. Pre-sets can b defined via IO-Link.

Global Networks



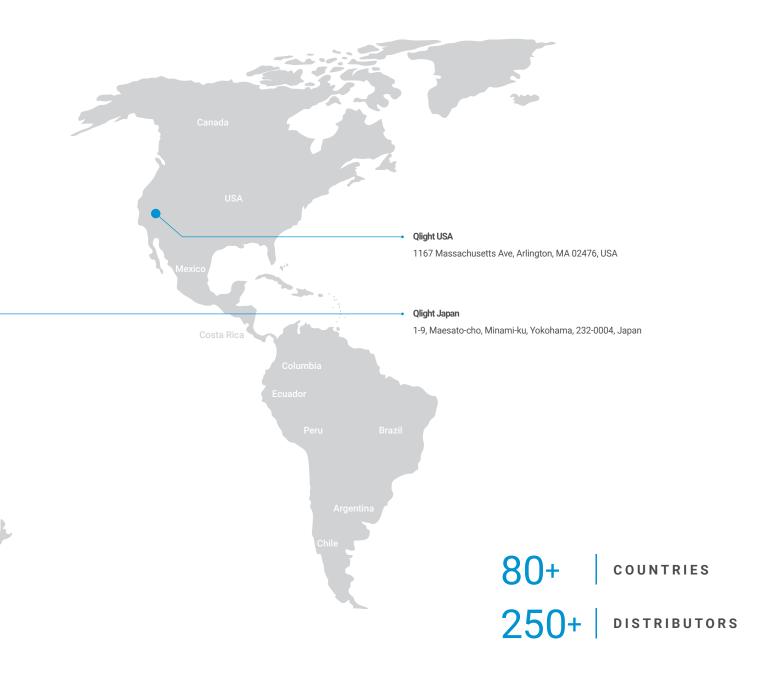


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 Qlight Clients
 Heavy industry/Ship building/Automotive/Steel/Machinery/Petrochemical/Power plants/Electronics/Semiconductor/Emergency Vehicles

SAMSUNG	🕢 НҮШПДАІ	KI	posco	coupang	sk	
🕒 LG Chem	SK innovation			SAMSUNG SAMSUNG HEAVY INDUSTRIES		
DOOSAN	E ∦onMobil	gm		FOXCONN	👋 HUAWEI	
Honeywell	L'ORÉAL	ISUZU	أدنـــوك ADNOC	KONECRANES	Kulicke & Soffa	

Qlight products have been exported all over the world in recognition of excellent technical capabilities and exceptional quality. Qlight products are going to be distributed a lot more countries in the future.





Gimhae Production Headquarters Sec

Seoul Global Headquarters

Busan Business Center

Qlight China Factory

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



IECEx International Explosion Proof Certification(IECEx)



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



NEPSI National Center for Explosion Protection and Safety of Instrumentation



NRTL Certified by designated U.S. laboratory



KCs Korea safety Certification



TIIS Technology Institution of Industrial Safety



CCS China Classification Society



TS Industrial Safety Technology Institute of Taiwan



FCC Federal Communications Commision



S-mark Safety Certification



KC Korea Certification Mark



CCC China Compulsory Certificate



CCCF China Certification Center for Security & Protection



UL Underwriters Laboratories



CE European Commission



ICAO International Civil Aviation Organization



RoHS2 Restriction of Hazardous Substances Directive

Qlight Catalog 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 signal tower lights, Signal Beacons and Sounders, Heavy-Duty and Explosion Proof Signalings, Warning light bars, Aviation Obstruction Lights, Smart Factory Product, Industrial LED lights, Performance Line - E Series, and IO-Link Product.





Signal Beacons and Sounders



Proof Signalings



Warning Light Bars



Aviation Obstruction Lights



Smart Factory Product



Industrial LED Lights



Performance Line - E Series



IO-Link Product

You could download and find the latest Catalog on the Qlight website.

* The latest product information could be accurately checked on the Qlight website (www.qlight.com). Please refer to the user manual attached with the product before installation and use.

Qlight

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