

**Notice to Customer**

- Thank you very much for purchasing our PATLITE products.
- This product requires installation and wiring work. Always have installation and wiring performed by a professional contractor.
- Re-read this manual before conducting maintenance, inspections, repairs, and so on. If there are any questions concerning this product, refer to the contact information at the end of this document and contact your nearest PATLITE Sales Representative.
- For instructions on how to use this product, download the Instruction Manual from our website.

Website Address [www.patlite.com](http://www.patlite.com)

**To the Contractor**

- Prior to installation, read this manual thoroughly to ensure it is installed correctly.
- Return this manual to the customer.
- If there are any questions concerning this product, refer to the contact information at the end of this document and contact your nearest PATLITE Sales Representative.

**1 Before You Begin**

**About Safety Symbols**

- To prevent injuries to the user and other personnel, as well as to prevent damage to assets, note the following.
- The following symbols classify warnings and cautions, and describe the level of harm and damage that will occur when the corresponding instructions are ignored.

**WARNING** This symbol indicates, "Failure to follow the instructions may lead to death or serious injury."  
**CAUTION** This symbol indicates, "Failure to follow the instructions may lead to injury or property damage."

- The following symbols classify and describe the content of associated messages.
- This symbol identifies "Prohibited" operations that should never be carried out.
- This symbol identifies "Mandatory" instructions that should always be carried out.

**Safety Precautions**

**WARNING** Do not use this product in the vicinity of implanted cardiac pacemakers and other medical equipment, as this product's radio waves may affect the performance of these devices. Do not modify or disassemble this product. Failure to follow this instruction could result in fire or electric shock. Do not use this product when there is condensation. Failure to follow this instruction could result in fire or electric shock. Do not use the head cover, LED units or buzzer unit either removed or cracked. Failure to follow this instruction could result in fire or electric shock. Do not apply voltage that exceeds the acceptable range. If you apply more than the rated voltage, internal circuits will be damaged. Failure to follow this instruction could result in fire or electric shock. Do not use or control this product in equipment or devices that, directly or indirectly, affect human life, or in equipment or devices where a high degree of reliability is required. We cannot be held responsible in the event of injury, death, or property damage that may result from the use of this product in facilities, equipment, or control systems. After installation, do not use this product to climb up onto equipment. Failure to follow this instruction will result in product damage and/or falling off the machinery. Do not use for applications that require real-time operation, such as crane control or robot control. Do not install on moving objects, such as a vehicle or unmanned transportation vehicles. Do not use this product in applications where real-time performance is required. Take the following precautions to prevent electric shock, short-circuit, or damage. Disconnect the power before wiring, repairs, or replacing a fuse. Use this product under suitable conditions. (If the body or unit becomes damaged, replace it.) Request the installation and wiring be performed by a professional contractor if construction work is involved. Failure to follow this instruction could result in fire, electric shock, or falling of the product. Turn off the power before performing any electric wiring or product installation. Failure to follow this instruction could result in electric shock. If an unusual condition occurs while using this product, such as the emission of smoke, heat, abnormal odors, or unusual sounds, stop the application, disconnect the power, and contact your nearest PATLITE Sales Representative. To prevent injuries and property damage that could result from product failure or malfunction, ensure sufficient safety by using this product together with other equipment. To prevent accidents when operating or maintaining this product, in addition to the safety guidelines identified in the instructions of this manual, follow all general safety guidelines. We cannot foresee all circumstances concerning the handling and dangers associated with this product. Therefore, not every possible danger is indicated in this instruction manual. In case the product falls over or falls down, install in a location where it will not hit any people or other objects.

**CAUTION** Do not install this product near other electrical appliances. If you install this product near a facsimile, personal computer, television, microwave oven, or equipment using a motor, this product may not operate properly. This product is for indoors only. Do not use outdoors. Do not use this product with the O-ring or waterproof gasket removed. This will lower waterproofing performance. Failure to follow this instruction could result in product failure. Do not use this product near fire, in hot or humid environments, or where corrosive or flammable gas is present. Do not use this product near equipment (such as a solenoid) or wires that generate strong electric or magnetic fields. Failure to follow these instructions could result in malfunction due to inductive noise. Do not use excessive force on this product. Failure to follow this instruction could result in deformed frame and product damage. Do not use this product near chemicals. This product could melt or become deformed if any chemicals adhere to it. Do not use thinners, benzene, gasoline, oil, chemicals, and so on to wipe away dirt on this product. Failure to follow this instruction could result in discoloration and deterioration. Wipe with a soft cloth, dampened with water and wrung tightly. Do not touch the connector terminals inside the unit when attaching or removing each unit or head cover. Failure to follow this instruction could result in product damage. Do not apply voltage to the transmitter's "Flashing COM" terminal. Failure to follow this instruction will result in product failure. This product uses frequencies in the 2.4 GHz band. If this product is used in the vicinity of other wireless devices that use the same frequency as this product, radio interference may occur between this product and the other wireless devices. If radio interference occurs, shut down the other wireless devices or change the location where this product is used in order to avoid radio interference. Due to the nature of radio waves, communication can be disabled even over insignificant distances as a result of noise or other environmental factors. Always use this product with the head cover, LED unit, or buzzer unit securely attached to maintain dust and waterproofing performance. When removing covers or packing, which are attached to this product, be careful not to snag the product. Failure to follow this instruction may result in equipment damage. Use only the specified replacement parts listed in this manual.

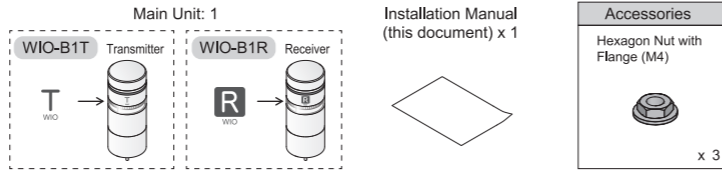
**CAUTION** The maximum number of attachments for each unit: 1 x this product + 5 x LED units + 1 x buzzer unit. Do not attach units beyond that. Do not attach a WD transmitter due to possible radio interference effects. Do not apply excessive force to this product and to each unit. Failure to follow this instruction could result in equipment damage. Do not touch the connectors on this product and on each unit as well as LEDs in LED units. Failure to follow this instruction could result in equipment damage. Securely lock each unit when attaching. Failure to secure units could result in product damage. Remove or install additional units, in order, one at a time. Any other method may result in damaging additional units. When LED and buzzer units are attached, operate with an input voltage from 21.6 to 26.4 VDC.

**2 Model Number Configuration**

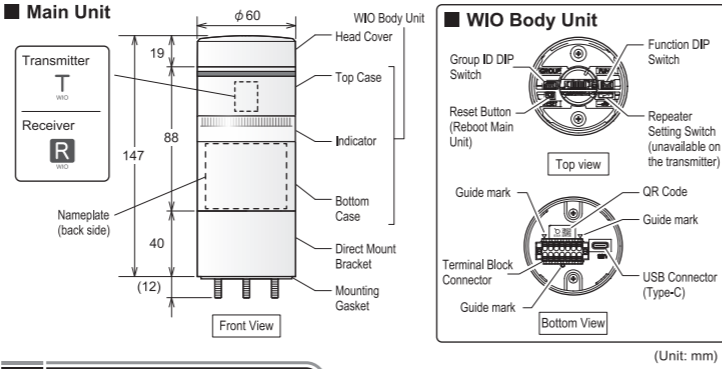
	Model	Wireless Type	Transmitter / Receiver	LED Unit
Model Number	WIO	B1		



**3 Package Contents**



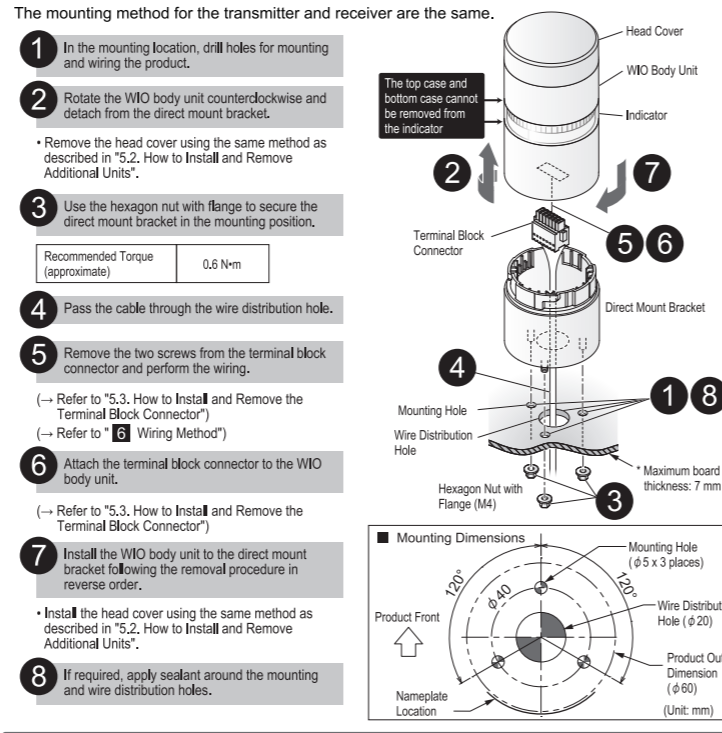
**4 Names and Dimensions**



**5 Mounting Method**

**WARNING** Before any work is done, disconnect the power.  
**CAUTION** The following requirements are necessary for the mounting location. Location with a solid and even surface with minimal vibration. Install this product in the upright position. If you need to install on an uneven surface and waterproofing is required, use a sealant in the gap between the product and mounting surface. For the IP65 rating requirement, when clamping direct mount brackets to the mounting surface, apply sealant to the screw or nut portion and any wire openings.

**5.1. Mounting and Installation**

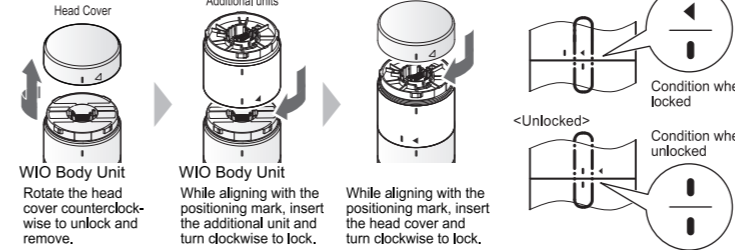


**5.2. How to Install and Remove Additional Units**  
Always follow the instructions below when installing or removing additional units (such as LED unit, Buzzer unit) to and from this product.

**CAUTION** The maximum number of attachments for each unit: 1 x this product + 5 x LED units + 1 x buzzer unit. Do not attach units beyond that. Do not attach a WD transmitter due to possible radio interference effects. Do not apply excessive force to this product and to each unit. Failure to follow this instruction could result in equipment damage. Do not touch the connectors on this product and on each unit as well as LEDs in LED units. Failure to follow this instruction could result in equipment damage. Securely lock each unit when attaching. Failure to secure units could result in product damage. Remove or install additional units, in order, one at a time. Any other method may result in damaging additional units. When LED and buzzer units are attached, operate with an input voltage from 21.6 to 26.4 VDC.

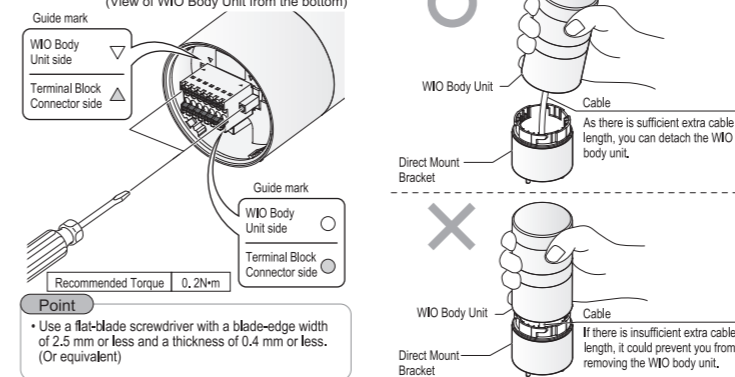
**How to Install and Remove**

To remove, follow the procedure in reverse order.



**5.3. How to Install and Remove the Terminal Block Connector**

To remove the terminal block, turn the terminal block connector screws (2 places) counterclockwise and pull out the terminal block connector. To install the terminal block, line up the guide marks on the WIO body unit and terminal block connector, and follow the removal procedure in reverse order to install.

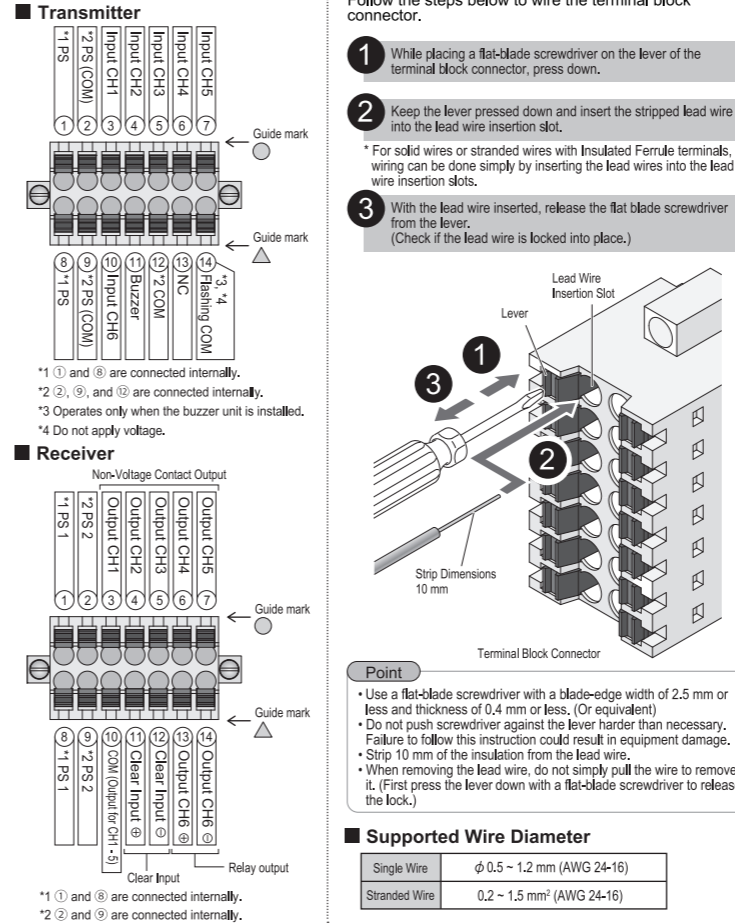


**6 Wiring Method**

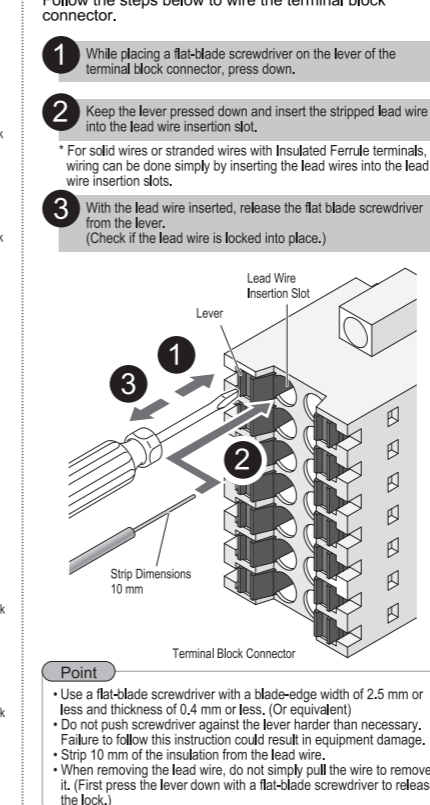
Lead wires are not included with this product. Please provide your own.

**WARNING** Before any work is done, disconnect the power. Be sure wiring is carried out correctly. Failure to follow these instructions could result in burning internal circuits or fire.  
**CAUTION** Do not use excessive force when pressing the lever of the terminal block connector. To protect external equipment, install a fuse on the power supply side. When wiring lead wires, consider the voltage drop along and use with the appropriate length and diameter. Before turning on the power, check that the wiring and switch settings are correct. Wire so that the core of the lead wire is not exposed. Failure to follow this instruction could cause a short circuit leading to fire or equipment damage. After completing the wiring, check for any loose wires. Failure to follow this instruction could result in malfunction or electric shock.

**6.1. Terminal Block Connector Pin Arrangement**



**6.2. Wiring the Terminal Block Connector**



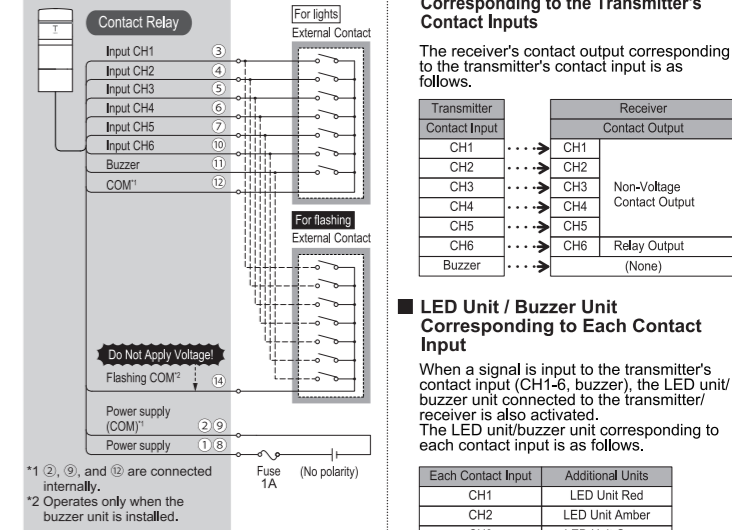
**Supported Wire Diameter**

Single Wire	φ 0.5 - 1.2 mm (AWG 24-16)
Stranded Wire	0.2 - 1.5 mm² (AWG 24-16)

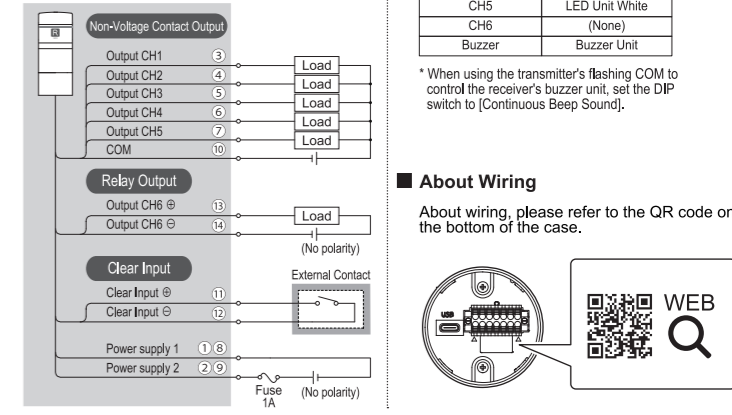
**6.3. Wiring Example**

The following is a basic wiring example. If you have any questions about a special application for this product, refer to the contact information at the end of this document and contact your nearest PATLITE Sales Representative, especially before any wiring. Wiring examples are provided in the Instruction Manual. Please download the Instruction Manual from our website and confirm the wiring.

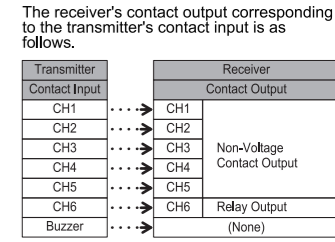
**Transmitter**



**Receiver**



**Receiver's Contact Outputs Corresponding to the Transmitter's Contact Inputs**



**LED Unit / Buzzer Unit Corresponding to Each Contact Input**

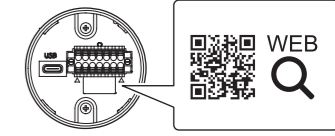
When a signal is input to the transmitter's contact input (CH1-6, buzzer), the LED unit/buzzer unit connected to the transmitter/receiver is also activated. The LED unit/buzzer unit corresponding to each contact input is as follows.

Each Contact Input	Additional Units
CH1	LED Unit Red
CH2	LED Unit Amber
CH3	LED Unit Green
CH4	LED Unit Blue
CH5	LED Unit White
CH6	(None)
Buzzer	Buzzer Unit

\* When using the transmitter's flashing COM to control the receiver's buzzer unit, set the DIP switch to [Continuous Beep Sound].

**About Wiring**

About wiring, please refer to the QR code on the bottom of the case.



**7 Conformity requirements**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. (Responsible party in U.S.A.) PATLITE U.S.A. Corporation, 20130 S. Western Ave. Torrance, CA90501, U.S.A.

This product has been tested and found to comply with the limits for a Class A device. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This product must not be used in residential areas.

**EU & UK Declaration of Conformity**  
This product conforms to EN standards and shows the CE & UKCA Marking. We PATLITE Corporation, 4-1-3, Kyūtaromachi, Chūō-ku, Ōsaka-shi, Ōsaka 541-0056 JAPAN declare under our sole responsibility that the product described below is in compliance the following directives.  
- Product Name: Wireless Control Unit Transmitter / Receiver  
- Company Logo: **PATLITE**  
- Communication Frequency: 2402 to 2480 MHz (40 channels)  
- Maximum Output Power: 8 dBm  
<EU Directive>  
- Electromagnetic Compatibility Directive(EMC): 2014/30/EU  
- RoHS Directive: 2011/65/EU  
- Radio Equipment Directive: 2014/53/EU  
- Low Voltage Directive (LVD): 2014/35/EU  
<UK Regulation>  
- Electromagnetic Compatibility Regulations 2016  
- Electrical Equipment (Safety) Regulations 2016  
- Radio Equipment Regulations 2017  
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012  
Visit our homepage at [www.patlite.com/ce/wd\\_07539.html](http://www.patlite.com/ce/wd_07539.html) to download "EU & UK Declaration of Conformity".

**Canada, Innovation, Science and Economic Development Canada (ISED) Notices**  
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:  
(1) This device may not cause interference.  
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

**Radio Frequency (RF) Exposure Information**  
The radiated output power of the Wireless Device is below the Innovation, Science and Economic Development Canada (ISED) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized. This device has also been evaluated and shown compliant with the ISED RF Exposure limits under mobile exposure conditions. (antennas are greater than 20cm from a person's body).

**PATLITE Corporation**  
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PATLITE (U.S.A.) Corporation: [www.patlite.us/](http://www.patlite.us/)  
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