Smarter Remote Monitoring and Control
Gather and analyze more data in real-time to make smarter, data-driven decisions

Effective Local Status Indication
Reliable visual and audible signals with a built-in counting feature

Visualize More Data Points
Equipped with 8 contact inputs enabling acquisition of up to 255 data codes

Acquire Additional Levels of Information
Features a serial communication interface to attach devices, such as a barcode reader

Improve Work Efficiency
Features 2-way wireless communication to remotely trigger tower light signals
The WD Pro adds a myriad of additional features to any existing WD Series network.

**WD PRO Transmitter**

**WDT-6LR-Z2-PRO**

- **Compatible base unit:** WD PRO series
- **Current consumption:** MAX 110mA
- **Radio wave reaching distance without obstacles:** 20m

*To be installed on the WDB-D80S-PRO base unit. (not compatible with the LR6 body unit)*

**Contact Input - Serial Communication Base Unit**

**WDB-D80S-PRO**

- **Input Serial base unit**

**WD PRO Transmitter**

**WDT-6LR-Z2-PRO**

**WD PRO Transmitter for WD PRO**

**WD Z2 series**

**Operation Status**

**Traceability Information**
### Wireless Data Acquisition System

#### WD-Z2 series

<table>
<thead>
<tr>
<th>Transmitter</th>
<th>Receiving machine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transmitter for LR6/LR5</strong></td>
<td><strong>Receiver</strong> WDR-LE-Z2</td>
</tr>
<tr>
<td>WDT-6LR-Z2</td>
<td>Recommended number of connected transmitters <strong>20 Max. 30</strong></td>
</tr>
<tr>
<td>LR6 series</td>
<td><strong>Connection method</strong> LAN/USB</td>
</tr>
<tr>
<td>MAX 55mA</td>
<td><strong>Current consumption</strong> typ. 65mA</td>
</tr>
<tr>
<td>20m</td>
<td><strong>Multiple receivers can operate at the same time.</strong></td>
</tr>
<tr>
<td><strong>Transmitter for the LR5 signal light</strong></td>
<td></td>
</tr>
<tr>
<td>WDT-5LR-Z2</td>
<td><em>Not compatible with WD PRO Series</em></td>
</tr>
<tr>
<td>LR5 series</td>
<td></td>
</tr>
<tr>
<td>MAX 55mA</td>
<td></td>
</tr>
<tr>
<td>20m</td>
<td></td>
</tr>
</tbody>
</table>

*1: There are some restrictions on compatible signal lights, so please contact Patlite for details.  *2: Due to the properties of radio waves, this number may differ according to the location of the receiver, the communication environment, and the communication frequency.  *3: This is a reference value. The actual value may differ due to the properties of radio waves.  *4: Multiple receivers cannot operate at the same time if a USB connection is used. (Contact Patlite for details.)
More Data Means Smarter Decision-Making

The WD PRO Series features 2-way wireless communication for better plant-wide visibility while enabling you to gather more data points for better predictive maintenance, quicker problem resolution, and OEE improvement.

Understand the cause of equipment shutdown

Up to 765 data codes can be acquired to identify exact cause and timing of equipment malfunctions.

Error code table

External contact input 8 points

External contact input 3 points

Signal tower Information 3 points

765 factor data can be acquired when using 3 segment signal tower

Contact input (ON - ● OFF - ○)

<table>
<thead>
<tr>
<th>Contact input (ON - ● OFF - ○)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>1</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>amber</td>
<td>2</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>3</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Equipment operation status

Detailed information

Detailed data of equipment operation / non-operation

Cause-based Pareto analysis

Acquire additional levels of information

Connect a bar code reader to the WD PRO to trace employee data for greater control over products and process quality.

Serial Cable

Worker ID input by barcode

Serial data such as barcode or RFID

Serial cable

Equipment operation data by WD

Item number input by barcode

Production planning

Unit 01 (total) 77340 20XX. 00. 00 SMITH 78.43% 16560 4600

Unit 01 (actual) 78960 81.9% 7620 9780

Unit 01 (earned) 12345 61.9% 4567 7878

Unit 02 8

9

10

11

12

13

14

15

16

17

18

19

20

20XX. 00. 00 SMITH 78.43% 16560 4600

Unit 01 (actual) 77340 78.43% 16560 4600

Unit 01 (earned) 78960 81.9% 7620 9780

Unit 01 (total) 12345 61.9% 4567 7878

Unit 02 8
**Eliminate downtime**

Notifies remote operators instantly of equipment abnormalities, as well as the type of maintenance required.

- Partner software → Command control → WDR-LE-Z2 → Visual notification → Maintenance completed → Deactivate alarm
- Malfunction report from host server → Wireless signal to activate visual alarm → Maintenance → Maintenance complete

**Monitor multiple facilities remotely and in real-time**

Utilize compatible software to monitor multiple factories located across the globe.

**Supported areas**  
WD-Z2: 41 countries  
WD PRO: USA, China, EU, and Japan

(as of June 2019)
WD PRO System Configuration

WD PRO Transmitter
WDT-6LR-Z2-PRO

Contact Input -
Serial Communication Base Unit
WDB-D80S-PRO

NC, processor, etc.

Buzzer Unit
LR6-BW

LED Unit
LR6-E-R
LR6-E-Y
LR6-E-G

PLC contact output
(switch)

Push button

Gray cable

Black cable

Gray + black dots / GND
Orange + red dots / TXD
White + black dots / RXD
White + red dots / CTS

Not connected

Wiring example *4

RS-232C

Receiver
WDR-LE-Z2

LAN

PC

Barcode *1

RFID *1 *2

WD System Setup Software
WDS-WIN01 Ver. 1.03 or later

Wiring example *4

Orange + red dots / TXD
White + black dots / RXD
Light gray + black dots / GND

White + red dots / CTS
Orange + black dots / RXD

Not connected

D-sub connector, 9-pin, male

Wiring example *3

Red
 Amber
 Green
 Blue
 White
 Buzzer
 Blinking common line
 Power supply
 24V DC

Red
 Amber
 Green
 Blue
 White
 Purple
 Brown
 Amber
 Gray

Reset

Wiring example *3

Red
 Orange
 Green
 Blue
 White
 Purple
 Brown
 Amber
 Gray

Employee ID card

Wiring example *3

Red
 Orange
 Green
 Blue
 White
 Purple
 Brown
 Amber
 Gray

Reset

Wiring example *4

Light gray + black dots / GND
Orange + red dots / TXD
Orange + black dots / RXD

White + red dots / CTS
White + black dots / RXD

Not connected

Wiring example *4

Orange + red dots / TXD
White + black dots / RXD
Light gray + black dots / GND

White + red dots / CTS
Orange + black dots / RXD

Not connected

*1 Power supply to connected devices is required separately.
*2 Depending on the specifications of the RFID reader, data acquisition may not be possible.
*3 Please check the instruction manual for wiring instructions.
*4 For pin assignment when using a serial cable, refer to its corresponding instructions manual.
WDS-WIN01 CSV Output Sample
Ver. 1.03 or later

<table>
<thead>
<tr>
<th>Date Time</th>
<th>MAC address</th>
<th>user name</th>
<th>Red information</th>
<th>Amber information</th>
<th>Green information</th>
<th>WDT Surveillance intelligence</th>
<th>RS-232C data (ASCII code)</th>
<th>External input information (Decimal number)</th>
<th>Clear input information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019/3/25</td>
<td>6CE4D4AFFFED19925 machine 1</td>
<td>0 0 0 9</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2019/3/25</td>
<td>6CE4D4AFFFED19925 machine 1</td>
<td>0 0 1 9</td>
<td></td>
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<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2019/3/25</td>
<td>6CE4D4AFFFED19925 machine 1</td>
<td>0 0 1 9</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Data sample**

1. Signal Tower information (6 inputs = Red, yellow, green, blue, white, buzzer)
2. External configuration information (6 inputs = Binary 0 to 255)
3. Serial data (RS-232C = ASCII code) 2:10:16 can be selected by setting.
4. Reset input information

### Specifications

<table>
<thead>
<tr>
<th>Model code</th>
<th>WD PRO Transmitter</th>
<th>Contact Input - Serial Communication Base Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WDT-6LR-Z2-PRO</td>
<td>WDB-D80S-PRO</td>
</tr>
<tr>
<td>Rated Voltage</td>
<td>DC 24V</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>Ø60</td>
<td></td>
</tr>
<tr>
<td>Protection Rating</td>
<td>IP65</td>
<td></td>
</tr>
<tr>
<td>External Contact Input</td>
<td>—</td>
<td>Signal tower inputs (red, yellow, green, blue, white, buzzer); 8 external contact inputs; 1 reset input; serial communication input</td>
</tr>
<tr>
<td>Wireless specification</td>
<td>2.4GHz Zigbee</td>
<td></td>
</tr>
<tr>
<td>Corresponding receiver</td>
<td>WDR-LE-Z2</td>
<td></td>
</tr>
</tbody>
</table>

### Options

- **Serial Cable**
  - WDX-SC01

- **Solid Color**
  - LR6-E-R/Y/G/B/C

- **Clear Globe**
  - LR6-E-RZ/YZ/GZ/BZ

- **Buzzer Unit**
  - LR6-BW

- **Pole**
  - POLE-800A21 800mm
  - POLE-300A21 300mm
  - POLE-100A21 100mm

- **Upper Bracket**
  - SZP-004W

- **Wall mount Bracket**
  - SZK-003W
  - SZK-001U
To ensure correct use of these products, read the “Instruction Manual” prior to use. Failure to follow all safeguards can result in fire, electric shock, or other accidents. Specifications are subject to change without notice.

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