


Highly reliable remote control for light industrial applications

## Telecontrol System for the 426 MHz band

# KST426W / KSR426W

 Dustproof Waterproof

Waterproof remote unit

Waterproof output receiver unit

Circuit Design introduces the KS Series, a new remote control aimed at civil works, building construction, car ramps, agricultural and welfare applications. These units were designed for easy to use operation in tough environments.

The waterproof remote unit (KST426W) is a low power radio conforming to ARIB STD-T67 standards. With Technical Standards Certification, there is no need for user to apply for licence.

The unit is designed for IP55 waterproof rating and is available with 2 buttons, 3 buttons or 4 buttons depending on application.

The waterproof output unit (KSR426W) has 4 switch outputs and can be paired with up to 100 remote units (KST426W). Four different output modes can be selected depending on the application and unit is also waterproofed for use outdoors.

The UART serial interface allows you to manage linked transmitters, select output mode, set frequency channel, get RSSI value etc. Also available is a Windows application tool to manage ID codes in the receiver and monitor RSSI across all frequency channels (air monitor function).

Waterproof remote unit



2 button

3 button



4 button

Waterproof output unit  
(antenna sold separately)



## Features

- Acquisition of Technical Standards Conformity
- Conforms to ARIB STD-T67 Telecontrol standard
- Dustproof and Waterproof (rated to IP55)
- Non-waterproof KSR426 available
- Communication range 300 to 400 m

### KST426W / Waterproof remote unit

- 2 x AAA battery
- Customisable button labeling
- Easy grip design
- Button diameter: 12mm
- Waterproof solid housing

### KSR426W / Waterproof output receiver unit

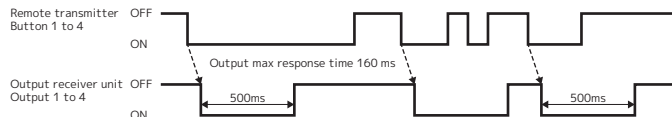
- 4 x PhotoMOS relay outputs for driving heavy loads.
- Choose upto 4 different modes for output operation
- Register IDs of upto 100 KST426W transmitters
- Individual settings can be performed via UART serial interface
- Air Monitor, ID setting tool

## Example uses

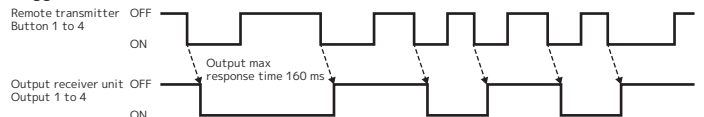
- Remote switching applications in civil works, building construction, forestry
- Remote control of temporary traffic lights, agricultural machinery, various industrial applications and electrically operated shutters and blinds

## Output mode

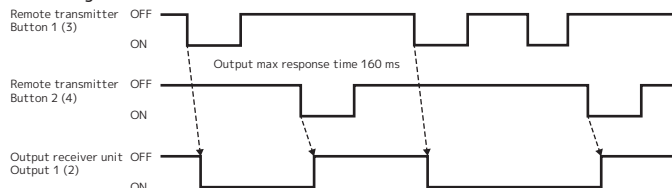
### One shot mode



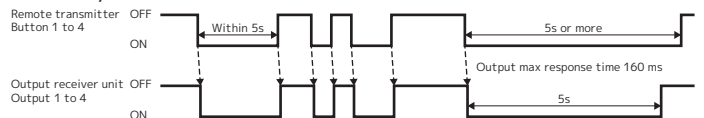
### Toggle mode



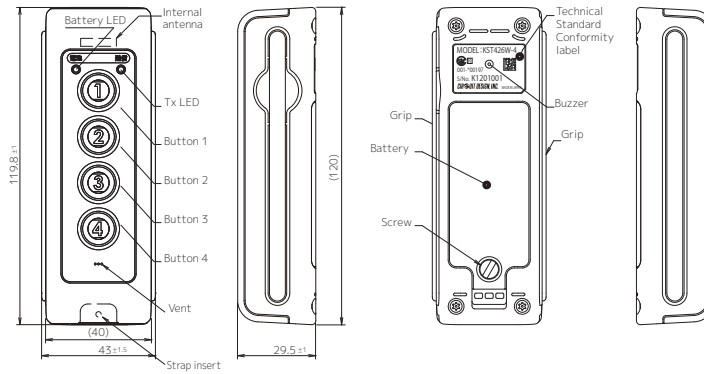
### Switching mode



### Momentary mode

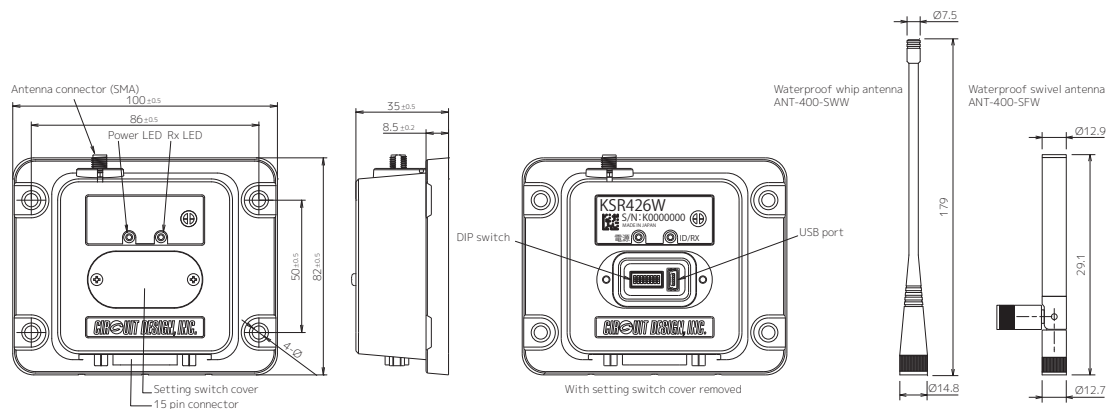


## Main specification



## Waterproof remote unit KST426W

| Parameter                     | Specification   | Remark                                 |
|-------------------------------|---|--|
| Applicable Standard Frequency | ARIB STD-T67  | Technical Standards Certification      |
| Frequency                     | 1CH: 426.0250 MHz , 3CH: 426.0500 MHz<br>6CH: 426.0875 MHz , 10CH: 426.1375 MHz | Select frequency on ordering           |
| Transmission system           | One way (with time limit)   |  |
| Modulation / Bitrate          | FSK 2400 bps  |  |
| Transmit time limit           | Transmission within 5s, with 2s   | If within 5s, re-transmission possible |
| RF Output                     | ≤1.6 mW E.I.R.P   |  |
| Error Check                   | CRC16   | Hamming Distance of 6                  |
| No. of buttons                | KST426W-2: 2 buttons, KST426W-3: 3 buttons<br>KST426W-4: 4 buttons              |  |
| Tones                         | Individual button tones   | Can be disabled on request             |
| Operating response            | ≤160ms  |  |
| ID code length                | 8   | Equal to product serial no             |
| Transmit antenna              | Internal chip antenna   |  |
| Battery type                  | 2 x AAA   |  |
| Battery life                  | 2 years ( 50000 Tx cycles)  | 1s Tx, 2s pause.                       |
| Operating temp range          | -20 C to +60 C  |  |
| Waterproof, handling etc.     | IP55  |  |
| External dimensions           | 120 x 43 x 29.5 mm  | Excluding protrusions                  |
| Weight                        | 130 g   |  |
| Price                         | 15,000 JPY  |  |



## Waterproof output unit KSR426W (KSR426)

| Parameter                | Specification  | Remark  |
|--------------------------|--|---|
| Receive frequency        | 1CH: 426.0250 MHz , 3CH: 426.0500 MHz<br>6CH: 426.0875 MHz , 10CH: 426.1375 MHz                        |   |
| Output modes             | 4 (One-shot, Toggle, Switching, Momentary)   |   |
| Outputs                  | 4 x PhotoMOS relay outputs   | Max 48V, 100mA, DC  |
| No. of ID registrations. | 100  |   |
| Supply voltage           | DC 6 to 16 V   |   |
| Supply current           | 75 mA (6 V), 35 mA (16 V)  | All PhotoMOS relays ON / no load                          |
| Serial mode              | Tx ID: registration, deletion, confirmation<br>Receive Output Mode select<br>RSSI output (Air Monitor) |   |
| Operating temp. range    | -20 C to +60 C   |   |
| Dustproof, Waterproof    | KSR426W: IP55  | Using dedicated harness<br>* KSR426:non-waterproof        |
| External dimensions      | 100 × 82 × 35.5 mm   | Excluding protrusions                                     |
| Weight                   | 175 g  |   |
| Accessories              | Specified cable harness x1   |   |
| Antenna                  | Available separately   | Waterproof type : 2000 JPY<br>Swivel Waterproof: 2500 JPY |
| Price                    | KSR426W: 27,000 JPY KSR426: 24,000 JPY   |   |