

# Hand held radio remote control system PHRC series



The PH series of radio remote control systems are wireless units that are operable with one hand. These units can perform both the ON/OFF control and the proportional control which are required for construction vehicles and industrial machinery. The transmitter is held in the hand for ease of operation, and the ON/OFF switch and trigger lever used for proportional control signals can be operated simultaneously. For instance, users can operate the trigger lever using their index fingers while operating one of the toggle switches using their thumbs at the same time. Specified low-power type of radio signals is used for long-range applications, obviating the need for any license in Japan and making it possible to use the system immediately.

## Features

1. The transmitter has a streamlined design with a built-in antenna, it can be held in the hand and operated by one hand.
2. The system is compliant with the specified low-power uses stipulated under the Japanese Radio Law, obviating the need for any license in Japan and enabling immediate operation. The communication range is more than 100 meters under favorable ambient conditions.
3. A maximum of 13 ON/OFF operations can be performed, and two sets of proportional control operations (triggers) can be performed.
4. Operation is easy: while a switch of the transmitter is being pressed, the relay of the receiver that corresponds to the switch is activated. By operating the triggers, a current proportionate to the trigger angle is output from the receiver, enabling proportional valves to be driven directly.
5. Stable communication is assured through the use of the MCA (multi-channel access) system that automatically selects the frequencies.
6. The safety-oriented design ensures that all operations will be shut down when radio interference or other high levels of noise have been received.
7. The transmitter has an auto power-off function which automatically shuts off the power and conserves the battery charge when the transmitter is not in use.
8. Either primary batteries (x4) or secondary batteries (x4) can be used.
9. Either the 12V or 24V voltage from a regular car battery can be used as the power supply of the receiver.

## Model Code

### ● System (transmitter + receiver + accessories)

U-PHRC-100-10

### ● Transmitter

PHRC-TX-100-10

### ● Receiver

PHRC-RX-100-10

U-PHRC-\*\*-100-10

1 2 3 4 5

1 System designation (not needed with a discrete unit)

2 Series designation

3 Individual (not needed with a system)

TX: Transmitter

RX: Receiver

4 Specifications no.

5 Design no.

# Specifications

## Transmitter specifications

Transmit frequencies	429 MHz band, 40 frequencies
Modulation system	FSK-FM (radio signal format: F1D)
Wireless standard complied with	ARIB STD-T67
Control system	Digital code transmission system
No. of operation signals	ON/OFF: 13 signals Proportional control: 1 signal
Function switches	Toggle switches (3 positions): 4 switches Tact switches: 5 switches Trigger (proportional control): 1 trigger
Operable range	Approx. 100 m (under favorable ambient conditions; measured using the method employed by Tokyo Keiki)
Antenna	Built-in antenna
Power requirements	"AA" dry batteries x 4 (alkaline batteries recommended)
Continuous usage time	Approx. 30 hours (measured using the method employed by Tokyo Keiki)
Power display	Monitor lamp (red)
Water resistance	JIS C 0203-1994 S1
Working temperature range	-10 °C~+60 °C
Storage temperature range	-10 °C~+60 °C
Weight	Approx. 650 g (including batteries)

## System configuration

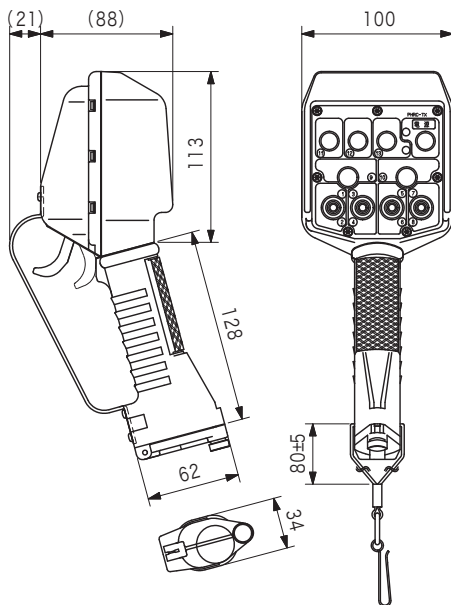
Product	Qty
Transmitter (including battery holder)	1
Receiver	1
Receiving antenna	1
Cable for receiving antenna (4 m)	1
Stand for receiving antenna	1

## Receiver specifications

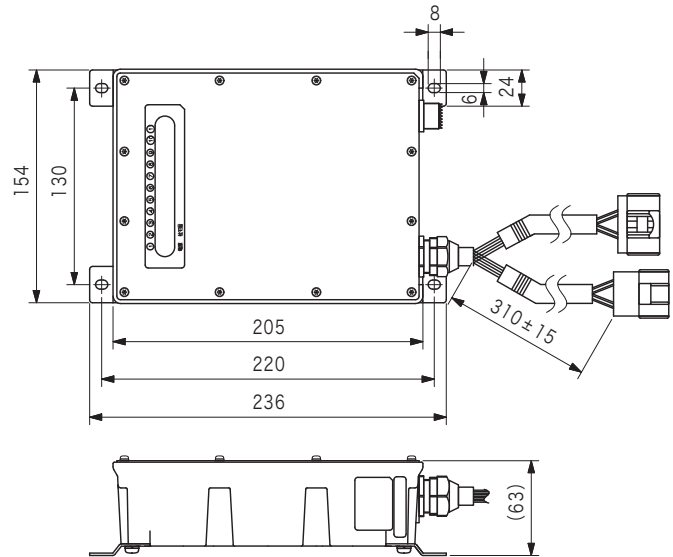
Receive frequencies	429 MHz band, 40 frequencies
No. of outputs	ON/OFF outputs Supply voltage outputs: 11 outputs Relay contact ground outputs: 2 outputs Proportional valve drive current outputs: 2 outputs
Output specifications	ON/OFF outputs Resistive load 3 A Inductive load 3 A (COS $\phi=0.4$ )  Proportional valve drive current outputs Proportional output 1: Maximum current 1000 mA Jump current 0 mA Dither frequency 120 Hz Proportional output 2: Maximum current 750 mA Jump current 350 mA Dither frequency 120 Hz Consult Tokyo Keiki concerning the specifications values.
Operation response time	Within 0.1 sec.
Operation error prevention	Verification using station codes (16 bits) Check sum verification
Antenna	1/4 $\lambda$ whip antenna (flexible)
Supply voltage	DC 9 V~31 V
Power display	Monitor lamp (green)
Current consumption	Max. 600 mA or less (excluding load current)
Vibration resistance	JIS D 1601-1995 Class 3B Vibration frequency range category 100 Vibration acceleration grade category 45
Water resistance	JIS D 0203-1994 R1
Working temperature range	-10 °C~+60 °C
Storage temperature range	-25 °C~+75 °C
Weight	Approx. 1.1 kg

# Dimensions

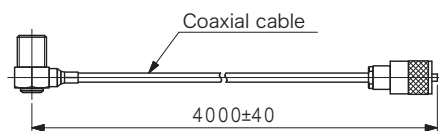
### ● Transmitter



### ● Receiver



### ● Cable for receiving antenna



### ● Receiving antenna

