

C2UW

Push Button Switch

Wireless Hand Switches

- Operability that's highly flexible and has a high degree of freedom has been realized.
There is no need to worry about staining, disconnection, and entangling of cables.
- Comes with sub-buttons so that functions such as the sighting function, etc. can also be added.
- The main switch has a two-level output.
- An easy-to-grip design based on ergonomics
- The same design is also available in wired type.







RoHS Compliant



Be sure to read *Safety Precautions* on page 8.

Model

Model Number Structure

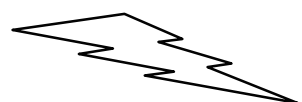
	Type	Shape	Model	Area
Wireless	Hand switch		C2UW-LP-I DA	Japan, America, Canada, Europe (EU) Korea, Australia, India, Brazil (as of August 2018) * Contact your OMRON representative for the latest countries to have acquired wireless certification.
	Holder		C2UW-LU DA	
	Wire harness for wireless holder		C2UW-WH-1M	
Wired	Hand switch		C2UW-DS DA	---

Note:A separate model has been prepared for medical equipment. Contact your OMRON representative for details.

System Configuration



Wireless hand switch
C2UW-LP-I DA



The operation signal is sent from the hand switch.
The holder receives the signal and sends it to the main body.



Wireless holder
C2UW-LU DA



Wire harness for wireless holder
C2UW-WH-1M



Customer's
equipment

C2UW

Mechanical Characteristics

Item			C2UW-LP-I DA	C2UW-LU DA	C2UW-DS DA
Standard			Bluetooth 4.0 Low Energy SIG certification acquired Note: Countries that have acquired certification (as of August 2018)		---
Frequency			2.4 GHz zone (2.402 GHz to 2.480 GHz)*		
Communications range			Approx. 10 m		
Response time			When the switch is pressed: 70 msec (max.) When the switch is released: 50 msec (max.) Note: When the touch sensor is set to Enabled.		
No. of connections			Max. 1	Max. 2 (Up to two units can be connected to one hand switch)	
Allowable operating frequency			60 times/min. or less		
Shock	Malfunction		300 m/s² max.		
Vibration	Destruction		Frequency 10 Hz to 55 Hz, Double amplitude 1.5 mm		
Durability	Mechanical	Main switch	400,000 times or more (60 times/min.)	---	400,000 times or more (60 times/min.)
		Sub-switch	400,000 times or more (60 times/min.)	---	400,000 times or more (60 times/min.)
Cord tensile strength			---	100 N·1 min.	29.4 N·1 min.
Operating temperature range			0°C to +40°C (no icing or condensation)		
Operating humidity range			90% RH or less (at +5°C to 35°C)		
Weight			Approx. 70 g (no battery)	Approx. 120 g	Approx. 170 g (hand switch) Approx. 65 g (holder)

Note: The above-described values are initial values.

* The use of this product may result in generation of wave interference. Also, the surrounding environment may cause electromagnetic hindrance.

Ratings

Wireless Hand Switch C2UW-LP-I DA

Ratings	
Rated voltage	3 V
Permissible voltage range	2.1 to 3 V

* Battery: Use a primary lithium battery manufactured by a regular manufacturer that is compatible with the CR17345/CR123A standard.

Absolute maximum rating (Ta = 25°C)	
Power supply voltage	-0.3 VDC or higher, 3.6 VDC or lower

Wireless Holder C2UW-LU DA

Ratings	
Rated voltage	12 to 24 V
Permissible voltage range	10.8 to 26.4 V DC

Current consumption		
Current consumption	Typ.	Max.
	100 mA	400 mA

Absolute maximum rating (Ta = 25°C)				
Input terminal	---		Applied voltage	
	Between VIN and GND		-0.3 VDC or higher, 3.6 VDC or lower	
	---		Continuous load current (average)	
	Between IN_COM and IN_READY1		50 mA	
	Between IN_COM and IN_READY2		50 mA	
Output terminal	---		Continuous load current (Peak AC/DC)	Load voltage (Peak AC/DC)
	Between OUT_COM and OUT_SLV_SW1		500 mA	60 V
	Between OUT_COM and OUT_SLV_SW2			
	Between OUT_COM and OUT_SLV_SW3			

Output circuit rating (Ta = 25°C)		
Output terminal	Typ.	Max.
Max. output ON resistance	1 Ω	2 Ω
Leakage current for an open circuit	---	1 μA

Wired Hand Switch C2UW-DS DA

Ratings		
Main switch	14 V DC	10 mA
	30 V DC	0.1 A
Sub-switch	24 V DC	50 mA

(Opening/closing frequency: 400,000 times)

(Opening/closing frequency: 200,000 times)

(Opening/closing frequency: 400,000 times)

Operation Characteristics (Initial Value Characteristics)

Common for Wireless Hand Switch C2UW-LP-I DA and Wired Hand Switch C2UW-DS DA

	Item	Abbreviation	Unit	Standard value
Main switch	Operating force 1	OF1	N	4.7 ± 1.5
	Operating force 2	OF2	N	12.6 ± 3.0
	Pretravel 1	PT1	mm	* (2.25)
	Pretravel 2	PT2	mm	* (10.75)
	Total travel	TT	mm	* (15.5)
Sub-switch	Operating force	OF	N	** Max. 4
	Pretravel	PT	mm	* (0.25)

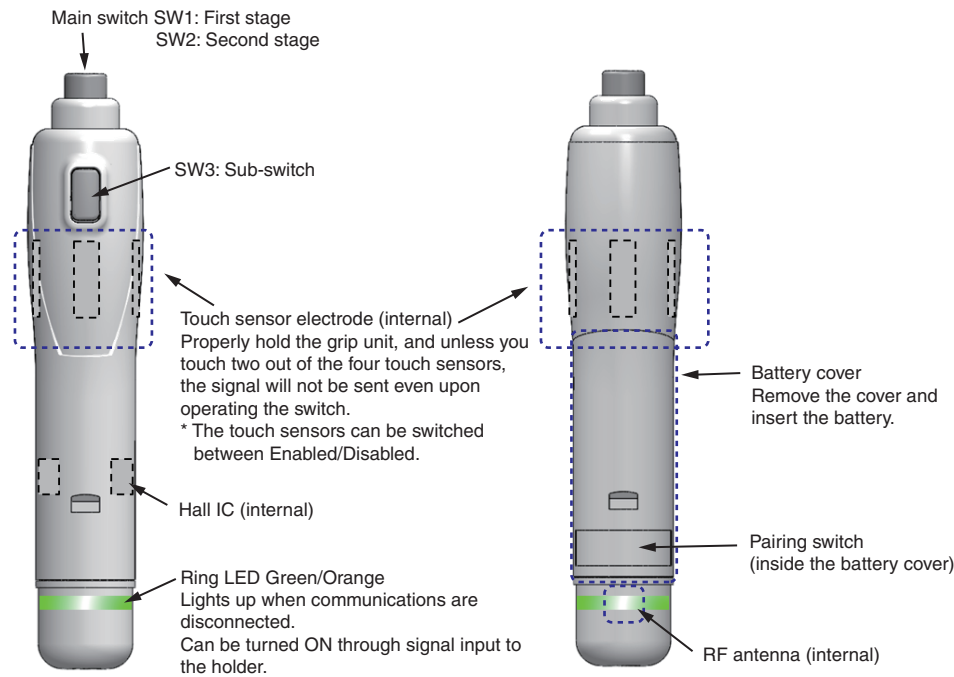
* Reference value

** During central operation

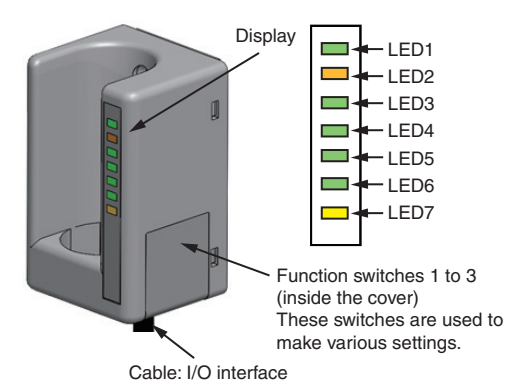
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Nomenclature (For the setting method and other details, refer to the user manual.)

Wireless Hand Switch C2UW-LP-I DA



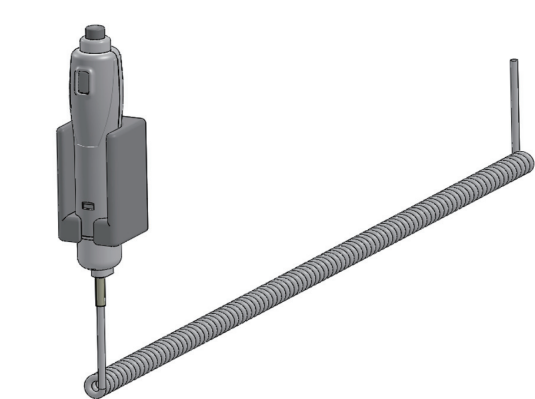
Wireless Holder C2UW-LU DA



Wireless holder Description of display items

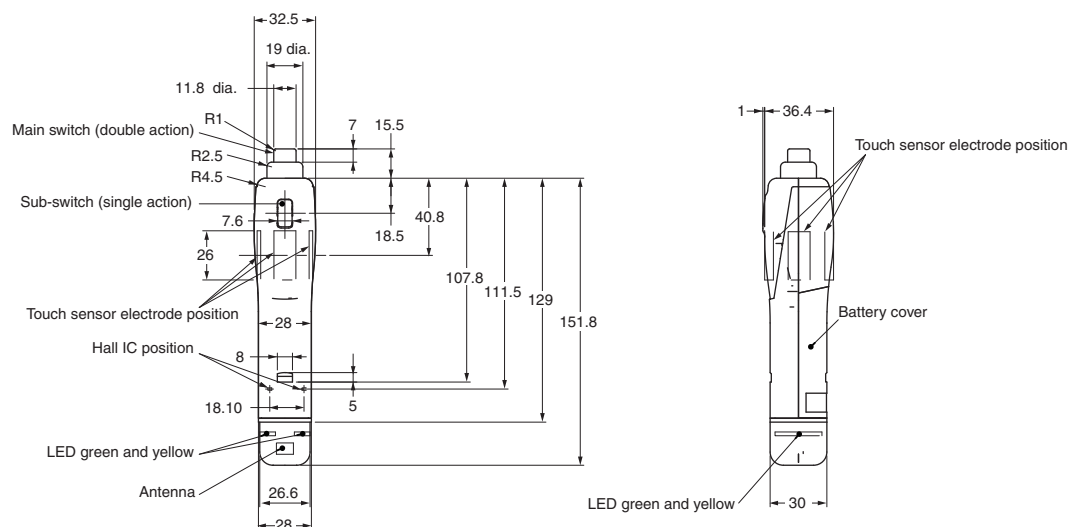
LED1 (Green)	POWER ON	This LED lights up when power is supplied to the wireless holder, and the internal circuit starts.
LED2 (Orange)	LOW BATTERY	This LED receives the battery status of the wireless hand switch through communications, and displays it. It flashes when the battery voltage of the wireless hand switch becomes 2.5 V or less. It lights up when the battery voltage of the wireless hand switch becomes 2.1 V or less. Immediately replace the battery.
LED3 (Green)	LINK	This LED lights up when wireless communications are established. It turns off if the status of the wireless hand switch is in the following cases: (1) When pairing has not been performed (2) When power is not being supplied (3) When the distance between the wireless hand switch and the wireless holder is large and wireless communications cannot be established (4) When the sleep mode has been set (when the take-away prevention function has timed out, or the holder has been set)
LED4 (Green)	TOUCH SENSOR	This LED lights up when the touch sensor has been set to Enabled.
LED5 (Green)	BUZZER	This LED lights up when the take-away prevention function has been set to Enabled.
LED6 (Green)	INPUT INDICATOR1	This LED lights up when SW1 of the wireless hand switch is operated.
LED7 (Yellow)	INPUT INDICATOR2	This LED lights up when SW2 of the wireless hand switch is operated.

Wired Hand Switch C2UW-DS DA

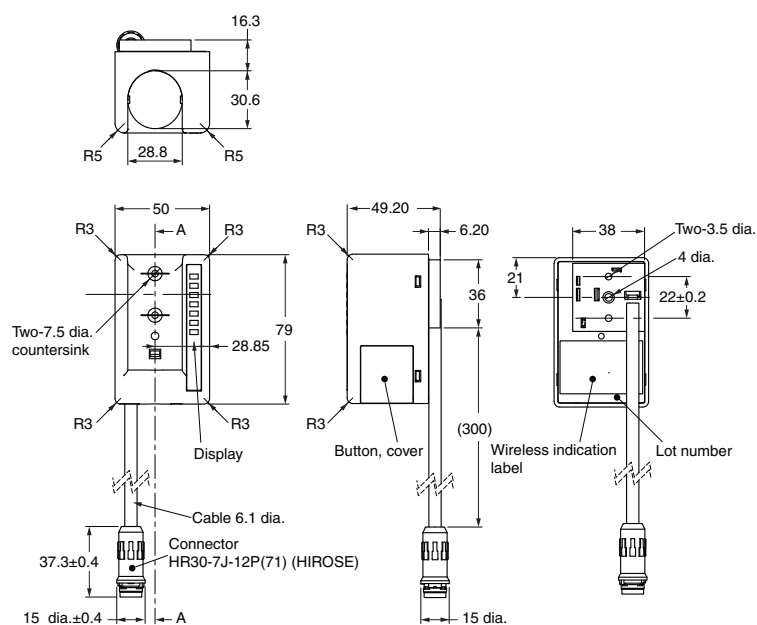


Dimensions

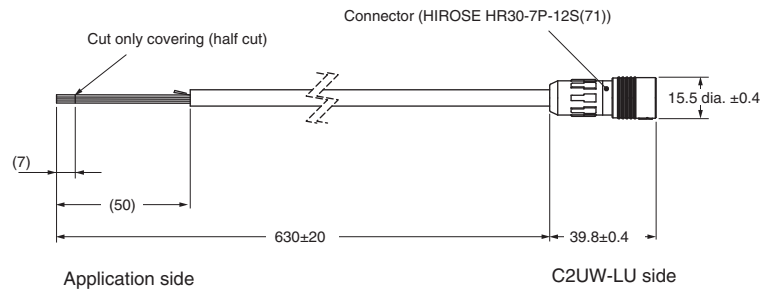
Wireless Hand Switch C2UW-LP-I DA



Wireless Holder C2UW-LU DA

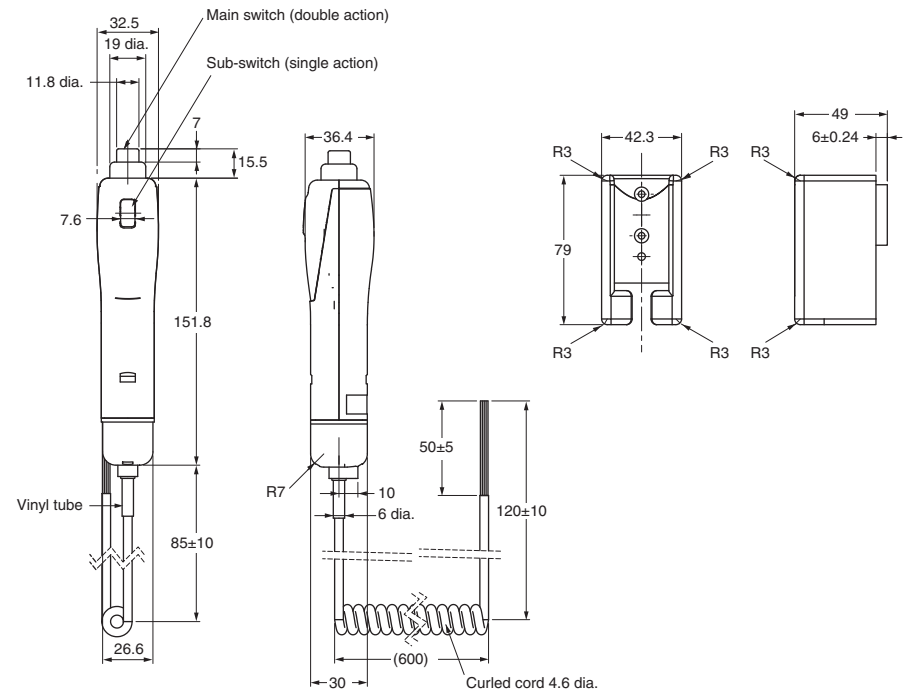


Cable C2UW-WH-1M



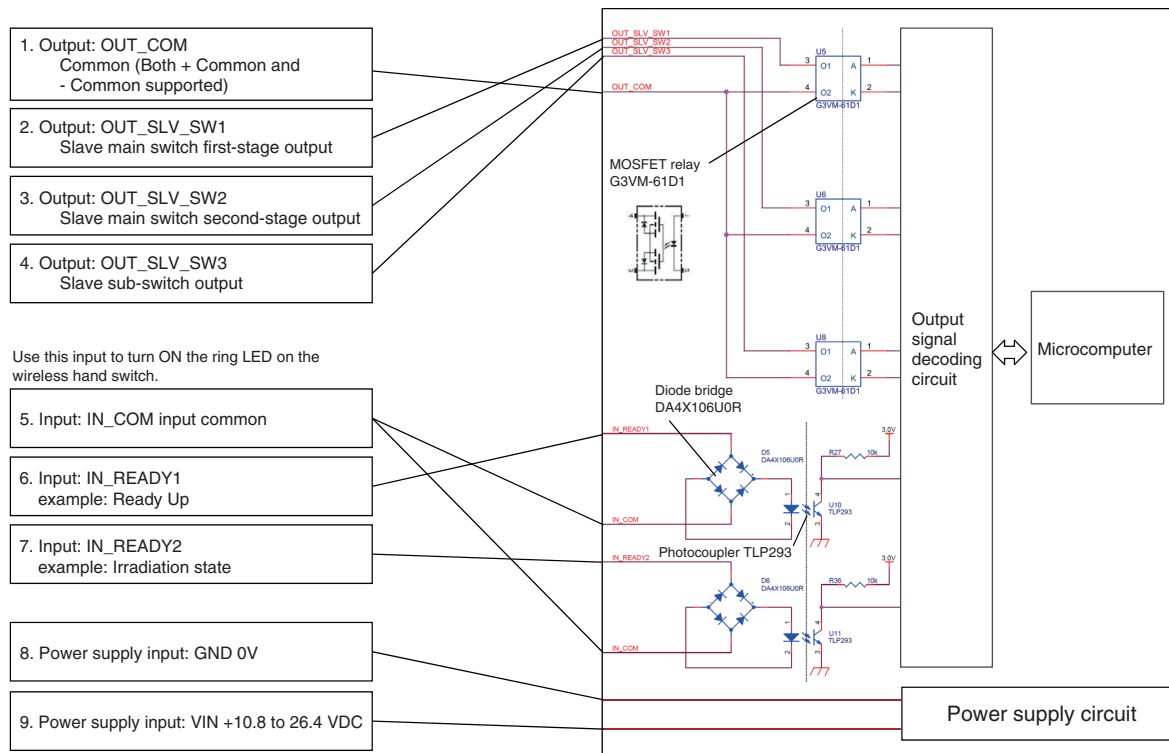
Terminal number	Code	Name	Wire color	Input/output	Description
1	OUT_COM	Output common	Black stamp on orange wire	Output	MOSFET relay (G3VM-61D1 manufactured by OMRON) output. Output common GND connection/sink output, or output common power supply connection/source output. * In order to satisfy the current rating, connect a current limiting resistance if necessary, with reference to the MOSFET specifications.
2	OUT_SLV_SW1	Main switch First-stage output	Red stamp on orange wire	Output	
3	OUT_SLV_SW2	Main switch Second-stage output	Black stamp on gray wire	Output	
4	OUT_SLV_SW3	Sub-switch output	Red stamp on gray wire	Output	
5	IN_COM	Input common	Black stamp on white wire	Input	The LEDs on the wireless hand switch light up. Diode full bridge (DA4X106U0R manufactured by Panasonic) circuit + photocoupler (TLP293 manufactured by TOSHIBA) * In order to satisfy the current rating, connect a current limiting resistance if necessary, with reference to the specifications of each element.
6	IN_READY1	External input signal 1	Red stamp on white wire	Input	
7	IN_READY2	External input signal 2	Black stamp on yellow wire	Input	
8	GND	Power supply grounding	Red stamp on yellow wire	Input	0 VDC
9	VIN	Power supply input	Black stamp on pink wire	Input	10.8 to 26.4 V DC

Wired Hand Switch C2UW-DS DA

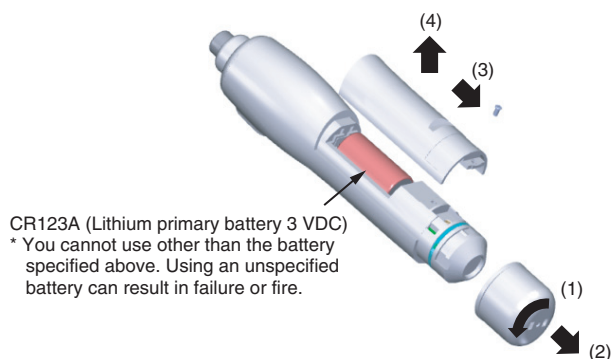


Connections

Holder Input/Output Section Circuit



Recommended Battery



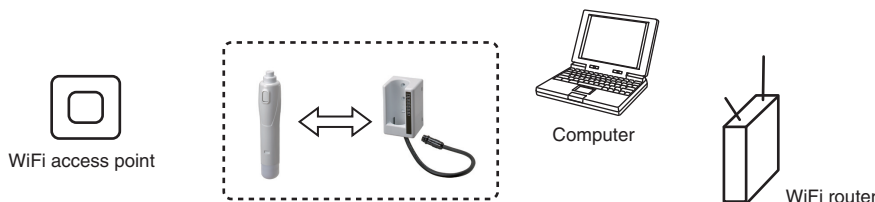
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Precautions for the Wireless Unit

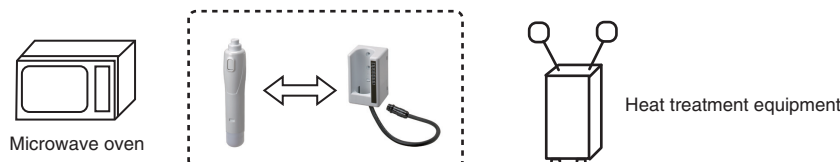
Using the product in the following environment may result in a communications error.

Be sure to check the wireless environment beforehand.

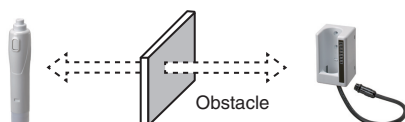
1. A wireless device using 2.4 GHz



2. Microwave oven or heat treatment equipment using micro waves



3. Obstacles between the hand switch and holder



Safety Precautions

Be sure to use the product properly while also referencing the “Common Precautions”.

Precautions for Safe Use

● **Electrical rating**

- Use the product at the specified electrical rating. If the switch is used in excess of the electrical rating range, not only the durability of the switch may be shortened, but dangers such as generation of heat and burn-out may occur. Be sure to use the switch within the range of the rated voltage and rated current, including the instantaneous voltage and current during opening/closing.

Precautions for Correct Use

● **Wiring**

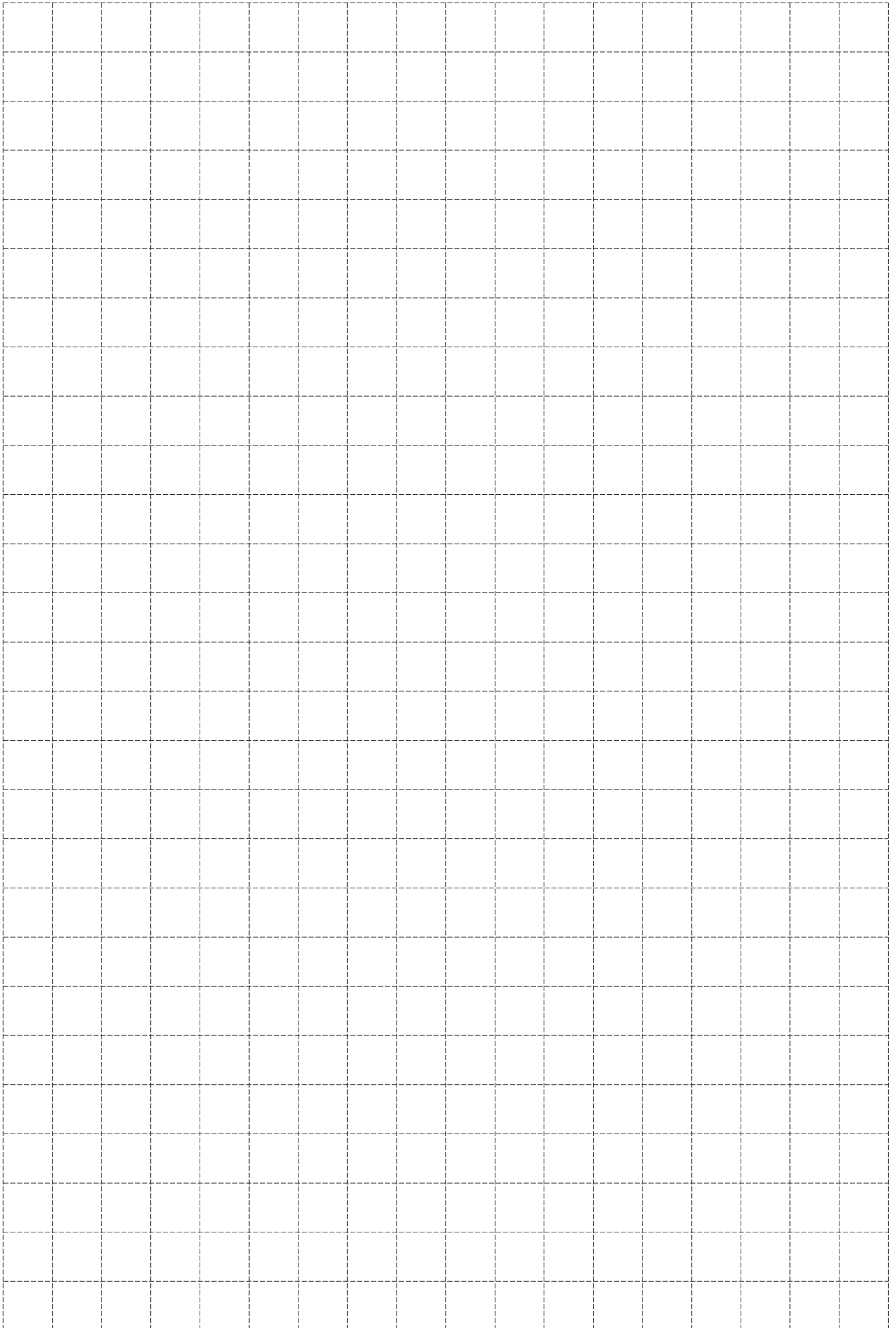
- When performing soldering, be sure to quickly perform the process at 60 W within three seconds.

● **Washing**

- Since this switch does not have a leak-proof structure, it cannot be washed. If you wash the switch, the soldering flux and impurities on the board may enter inside along with the washing liquid, causing damage to the switch.

● **Usage and storage environment**

- Do not use or store the product at a location exposed to the corrosive gases such as hydrogen sulfide gas or the sea breeze, or a location exposed to oil or direct sunlight.
- Do not use or store the product at a location containing dust to an extent that can be visually seen. Doing so can result in a contact failure.
- If the product is stored under other than the specified storage environment conditions, or if dew formation occurs, or if the product falls, or if the product is stored for a long term exceeding one year, inspect at least the operating characteristics, contact resistance, insulation resistance, and withstand voltage.



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