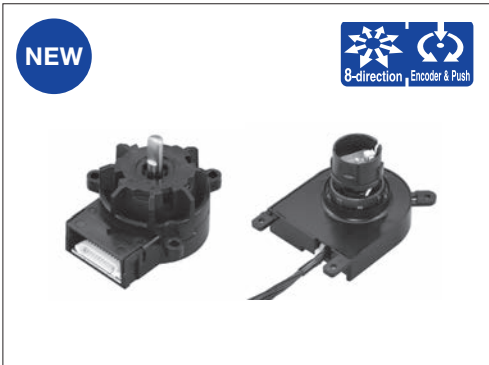


Firm operating feel and high robustness ideal for integrated control of automotive equipment



Typical Specifications (Stick Switch)

Items		RKJXW1	RKJXW2 (Inner-shaft)
Rating(max.) (Resistive load)		10mA 5V DC	
Contact resistance	8-direction	1kΩ max.	
	Center-push		
Travel	8-direction	2±0.8mm	3±1mm
	Center-push	1.4±0.5mm	1.4±0.5mm
Operating life	8-direction	Total with 8-direction 30,000 cycles	
	Center-push	30,000 cycles	100,000 cycles

Typical Specifications (Encoder)

Items	RKJXW1	RKJXW2 (Outer-shaft)
Rating(max.) (Resistive load)	10mA 5V DC	
Operating life	30,000 cycles	

Product Line

Product No.	Shaft	Stick Switch			Encoders			Minimum order unit (pcs.)		Drawing No.
		Maximum resolution	Operating force		Detent torque	Number of detent	Number of pulse	Japan	Export	
Direction (N)	Center Push (N)									
RKJXW1014002	1	8	2.5±1.5	3±1.5	30±20mN·m	30	15	100	100	1
RKJXW2014001	2		3.5±2		40±16mN·m			50	50	2

Packing Specifications Tray

Product No.	Number of packages (pcs.)		Export package measurements (mm)
	1 case / Japan	1 case / export packing	
RKJXW1014002	100	100	360×270×230
RKJXW2014001	50	50	420×370×225

Dimensions

No.	Photo	Style	Unit:mm
1		<p>Connector no. : Molex 53261-1271 Pin 1</p>	

Multi Control Devices Variable Resistor Type Switch Type

RKJXW 8-directional Stick Switch (with Encoder / Center-push Function)

■ Dimensions

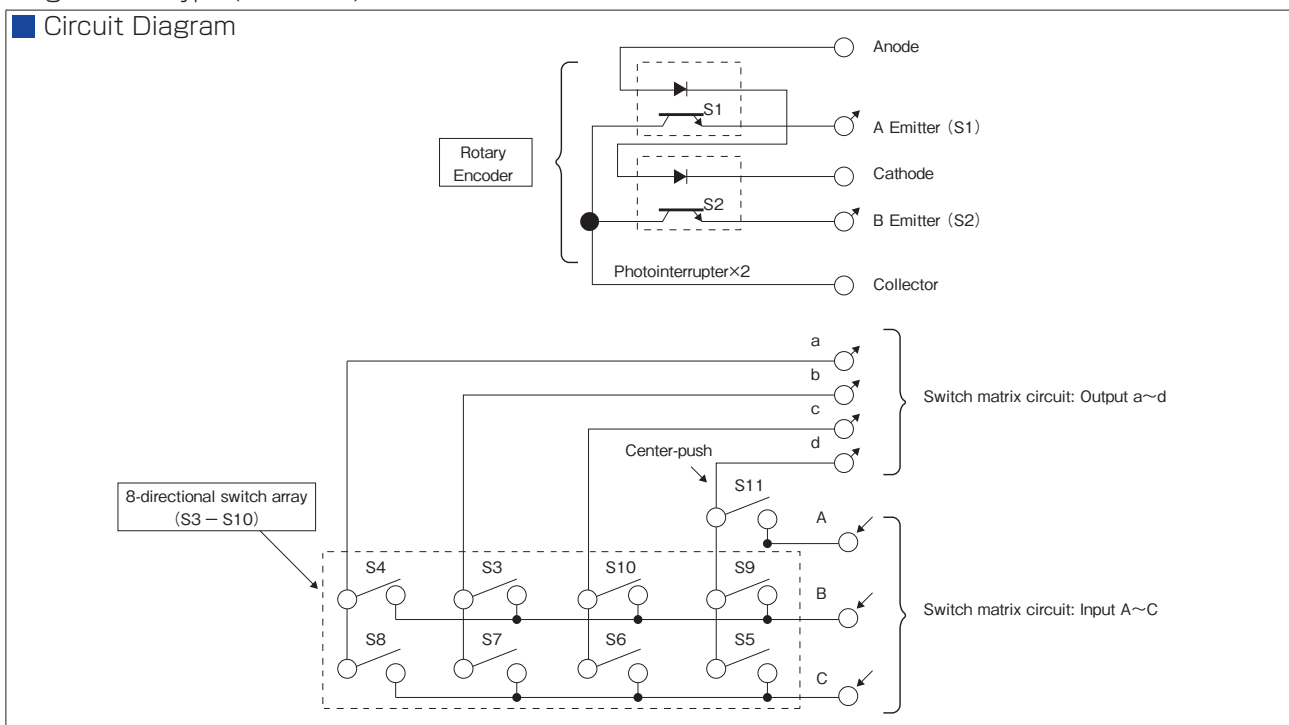
Unit:mm

No.	Photo	Style
2		<p>RKJXW2</p>

8-directional Stick Switch / Specifications

■ Circuit Diagram/Output Relation Chart/Pin Configuration/8 Direction Codes Single-shaft Type (RKJXW1)

■ Circuit Diagram



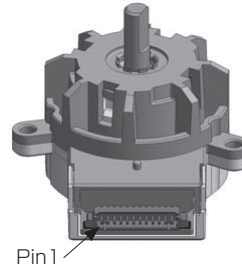
■ Circuit Diagram/Output Relation Chart/Pin Configuration/8 Direction Codes
Single-shaft Type (RKJXW1)

■ Output Relation Chart

		Switch No.							
		S3	S4	S5	S6	S7	S8	S9	S10
Direction	A	ON	ON	(ON)					(ON)
	B	(ON)	ON	ON	(ON)				
	C		(ON)	ON	ON	(ON)			
	D			(ON)	ON	ON	(ON)		
	E				(ON)	ON	ON	(ON)	
	F					(ON)	ON	ON	(ON)
	G	(ON)					(ON)	ON	ON
	H	ON	(ON)					(ON)	ON

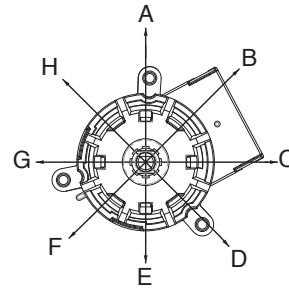
“(ON)” indicates that the switch is either On or Off at the time of the operation.
Discern the direction of operation when two switches are On.
Ignore any additional switches which may be switched On.
Example:
Operation in direction A
1st signal: S4 On > Standby
2nd signal: S3 On > Discern as direction A
3rd signal: S10 On > Ignore this signal (discern as direction A)
4th signal: S5 On > Ignore this signal (discern as direction A)

■ Pin Configuration



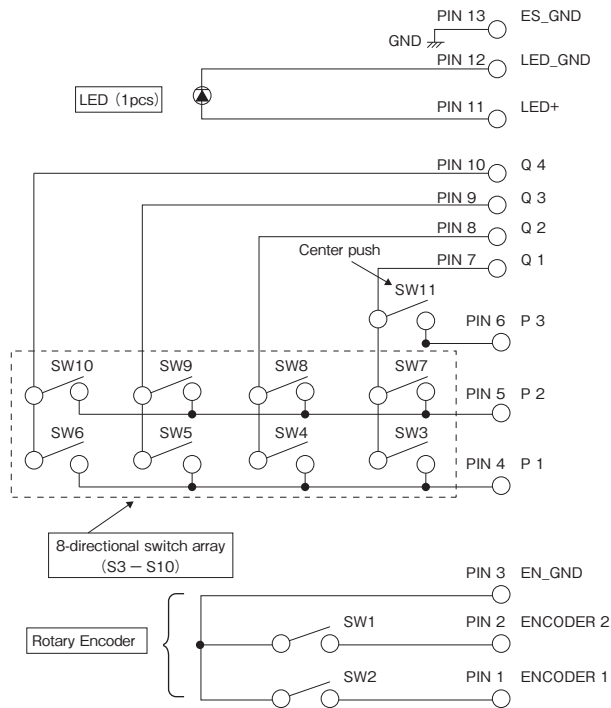
- Pin No.
- 1 Photointerrupter Anode
 - 2 Photointerrupter Cathode
 - 3 Output d (S11, S9, S5)
 - 4 Input A (S11)
 - 5 Output a (S4, S8)
 - 6 Output b (S3, S7)
 - 7 Input B (S4, S3, S10, S9)
 - 8 Input C (S8, S7, S6, S5)
 - 9 Output c (S10, S6)
 - 10 Photointerrupter A Emitter (S1)
 - 11 Photointerrupter B Emitter (S2)
 - 12 Photointerrupter Collector

■ 8 Direction Codes



Dual-shaft Type (RKJXW2)

■ Circuit Diagram



Multi Control Devices
Variable Resistor Type
Switch Type

Output Relation Chart/Pin Configuration/8 Direction Codes Dual-shaft Type (RKJXW2)

Output Relation Chart

		Switch No.							
		SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10
Direction	A	ON	ON	(ON)					(ON)
	A/B	ON	ON	ON					
	B	(ON)	ON	ON	(ON)				
	B/C		ON	ON	ON				
	C		(ON)	ON	ON	(ON)			
	C/D			ON	ON	ON			
	D			(ON)	ON	ON	(ON)		
	D/E				ON	ON	ON		
	E				(ON)	ON	ON	(ON)	
	E/F					ON	ON	ON	
	F					(ON)	ON	ON	(ON)
	F/G						ON	ON	ON
	G	(ON)					(ON)	ON	ON
	G/H	ON						ON	ON
H	ON	(ON)					(ON)	ON	
H/A	ON	ON						ON	

“(ON)” indicates that the switch is either On or Off at the time of the operation.

Discern the direction of operation when two switches are On. Ignore any additional switches which may be switched On.

Example:

Operation in direction A

1st signal: S4 On > Standby

2nd signal: S3 On > Discern as direction A

3rd signal: S10 On > Ignore this signal (discern as direction A)

4th signal: S5 On > Ignore this signal (discern as direction A)

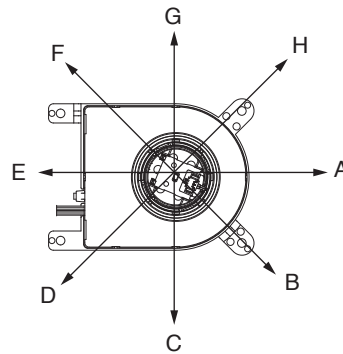
Pin Configuration



Pin No.











1	Encoder 1	7	Q1
2	Encoder 2	8	Q2
3	Encoder GND	9	Q3
4	P1	10	Q4
5	P2	11	LED+
6	P3	12	LED GND
		13	ES GND

8 Direction Codes



Multi Control Devices

List of Varieties

Type		Switch type				
Series		RKJXT1F	RKJXM		RKJXW	
			RKJXM1	RKJXM2	RKJXW1	RKJXW2
Photo						
Dimensions (typical value) (mm)	W	17	11	19.5	36	61
	D				48.5	70
	H	10.5	6.6	5.45	26.5	17
Number of operating shafts		Single-shaft		Dual-shaft	Single-shaft	Dual-shaft
Shaft material		Metal		The inner shaft : Metal The outer shaft : Resin	Metal	Resin
Directional resolution		4-direction	8-direction			
Directional operating feeling (tactile feeling)		With				
Lever return mechanism		With				
Center-push switch		With				
Encoder		With	Without	With		
Operating temperature range		-40°C to +85°C				
Operating life	Directional operation	total with 4-direction 50,000 cycles	total with 8-direction 100,000 cycles		30,000 cycles for each direction	
	Center-push				30,000 cycles	100,000 cycles
	Encoder	15,000 cycles	—	15,000 cycles	30,000 cycles	
Automotive use		●	●	●	●	●
Life cycle (availability)						
Rating (max.) (Resistive load)		10mA 5V DC				
Electrical performance	Output voltage	—	—	—	—	—
	Encoder resolution	15pulses/360°	—	15pulses/360°		
	Insulation resistance	100MΩ min. 250V DC				10MΩ min. 50V DC
	Voltage proof	250V AC for 1min.			360V AC for 2s	60V AC for 2s
Mechanical performance	Directional operating force	40±25mN·m	Direction A, B, C, D 30±20mN·m		2.5±1.5N	3.5±2N
			Direction AB, BC, CD, DA 25±20mN·m			
	Push operating force	5.2±2.6N	7.4±3N		3±1.5N	
	Encoder detent torque	15±8mN·m	—	12±8mN·m	30±20mN·m	40±16mN·m
	Terminal strength	5N for 1min.	—	—	—	—
Actuator strength	Push / pull directions Operating direction	100N (Push/Pull)	100N (Push), 50N (Pull)		100N (Push/Pull)	100N (Push), — (Pull)
		0.4N·m	0.3N·m		50N	100N
Environmental performance	Cold	-40°C 500h				
	Dry heat	85°C 500h				
	Damp heat	60°C, 90 to 95%RH 500h				
Page		443	445		447	

Switch Type Multi Control Devices Soldering Conditions 461
 Switch Type Multi Control Devices Cautions 462

Note ● Indicates applicability to all products in the series.