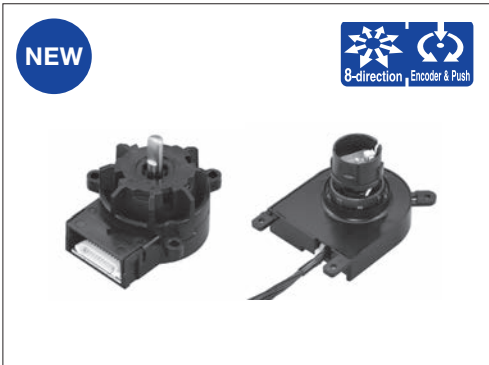


Firm operating feel and high robustness ideal for integrated control of automotive equipment



### 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</p>	



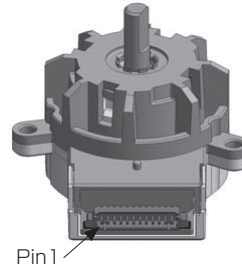
■ Circuit Diagram/Output Relation Chart/Pin Configuration/8 Direction Codes  
Single-shaft Type (RKJXW1)

■ 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

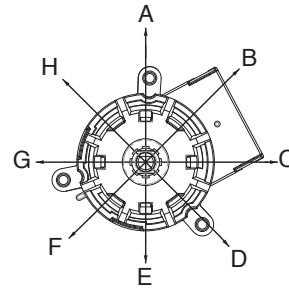
“(ON)” indicates that the switch is either On or Off at the time of the operation.  
Discern the direction of operation when two switches are On.  
Ignore any additional switches which may be switched On.  
Example:  
Operation in direction A  
1st signal: S4 On > Standby  
2nd signal: S3 On > Discern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



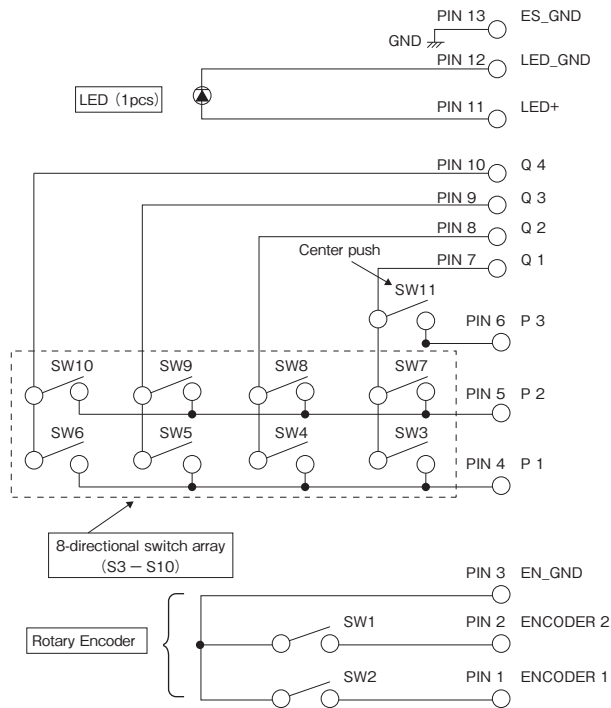
- Pin No.
- 1 Photointerrupter Anode
  - 2 Photointerrupter Cathode
  - 3 Output d (S11, S9, S5)
  - 4 Input A (S11)
  - 5 Output a (S4, S8)
  - 6 Output b (S3, S7)
  - 7 Input B (S4, S3, S10, S9)
  - 8 Input C (S8, S7, S6, S5)
  - 9 Output c (S10, S6)
  - 10 Photointerrupter A Emitter (S1)
  - 11 Photointerrupter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

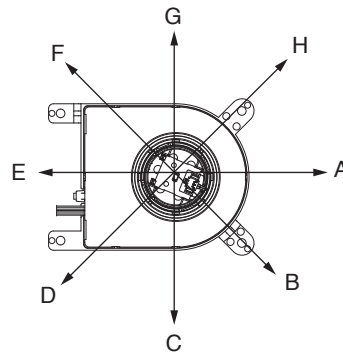
■ Pin Configuration



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

Variable Resistor Type

Switch Type

# 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					
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 Switch Type Multi Control Devices Cautions . . . . . 462

**Note** ● Indicates applicability to all products in the series.