

Low-profile and Hollow Shaft Surface Mount Type Encoder SRGP30

Highly compatible type for multifunctional sets, available with a TACT switch in the hollow.



Car Use

Features

- Compact, low-profile and reflow-solderable.
- Hollow, pulse-type switches are space saving.

Applications

- For switching modes of car audio systems
- For operating compact mobile products, including VCR/cameras, silicon audio systems, headphone stereos, and card radios
- For operating communication devices including mobile phones

Typical Specifications

Items		Specifications
Rating (max.) (Resistive load)		10mA 5V DC
Output voltage		1V max. at 1mA 5V DC (Resistive load)
Operating life	Without resistor	50,000 cycles min.
	With resistor	50,000 cycles min.

Products Line

Torque	Number of detent	Resolution	Soldering	Minimum packing unit (pcs.)	Products No.
$5 \pm 2.5 \text{mN} \cdot \text{m}$	18	9	Reflow	400	SRGP300100

Power

Push

Slide

Rotary

Encoders

Jog Shuttle

Telephone-hook

Detector

Vibration Sensors

Dual-in-line Package Type

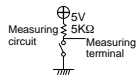
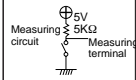
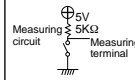
Multi Control Devices

TACT

Incremental Type

Absolute Type

Products Specifications

Items		Type	SRGP30	SRGP40	EC21A	SRGP20	EC28B	SRGPWJ	EC60A	
Operating temperature range			-40°C to +85°C	-10°C to +60°C	-40°C to +85°C	-10°C to +60°C	-40°C to +85°C	-10°C to +60°C	-30°C to +80°C	
Rating			10mA 5V DC	1mA 5V DC	10mA 5V DC				0.5mA 5V DC	
Electrical performance	Output voltage		1V max.at 5V DC,1mA (resistive load) 	2.5V max.at 5V DC,1mA (resistive load)	1V max.at 5V DC,1mA (resistive load) 	2.5V max.at 5V DC,1mA (resistive load)	1V max.at 5V DC,1mA (resistive load) 	2.5V max.at 5V DC,0.5mA (resistive load)		
	Insulation resistance		100MΩ min. 100V DC	100MΩ min. 250V DC	100MΩ min. 100V DC	100MΩ min. 250V DC	100MΩ min. 100V DC	10MΩ min. 50V DC		
	Voltage proof		100V AC for 1 min.	300V AC for 1 min.	100V AC for 1 min.	300V AC for 1 min.	100V AC for 1 min.	50V AC for 1 min.		
Mechanical performance	Rotational torque		5±2.5mN·m	2±1mN·m	16±7mN·m	7±3mN·m	5 ± ₃ mN·m 7±5mN·m 12±7mN·m 20±10mN·m	13±4mN·m/ 6.5±4mN·m	40±20mN·m	
		Robustness of terminal	—				5N for 1 min.			3N for 10s
		Robustness of actuator	Pushing direction	20N		100N	40N	100N	40N	100N
			Pulling direction	20N		100N	40N	100N	40N	50N
	Vibration	10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively								
	Solderability	230±5°C, 3±0.5s								
	Resistance to soldering heat	Manual soldering	350±5°C, 3s max.		300±10°C, 3 ⁺¹ s				350±5°C, 3s max.	
Dip soldering		—		260±5°C, 5±1s				260°C 5s max.		
Reflow soldering		150°C 2min max., 230°C 20s max.	150°C 150s max., 230°C 40s max. peak 260°C max.	—						
Durability	Operating life without load	50,000 cycles	100,000 cycles	50,000 cycles				30,000 cycles		
	Operating life with load	50,000 cycles	100,000 cycles	50,000 cycles				30,000 cycles		
Environmental performance	Cold	-40±2°C for 96h	-20±2°C for 96h	-40±2°C for 240h	-20±2°C for 96h	-40±2°C for 240h	-20±2°C for 96h	-40±3°C for 240h		
	Dry heat	85±2°C for 96h		85±2°C for 240h	85±2°C for 96h	85±2°C for 240h	85±2°C for 96h	85±3°C for 240h		
	Damp heat	40±2°C, 90 to 95%RH for 96h		60°C±2°C, 90 to 95% RH for 240h	40±2°C, 90 to 95% RH for 96h	60°C±2°C, 90 to 95% RH for 240h	40±2°C, 90 to 95% RH for 96h	40°C±2°C, 90 to 95% RH for 240h		

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