



12mm Size Insulated Shaft Type EC12 Series

Standard Type

Actuator length	8.5mm (Hollow shaft)
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Torque	Standard 3 to 20mN·m
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Number of detent	24
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Number of pulse	24
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Operating direction	Vertical
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Operating temperature range	-10°C to +70°C
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Electrical performance	Ratings	0.5mA 5V DC
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Output signal	Two phase A and B
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Max./min. operating current(Resistive load)	5mA/0.5mA
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Insulation resistance	10MΩ min. 50V DC
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Voltage proof	50V AC for 1 minute
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Mechanical performance	Detent torque	3 to 20mN·m
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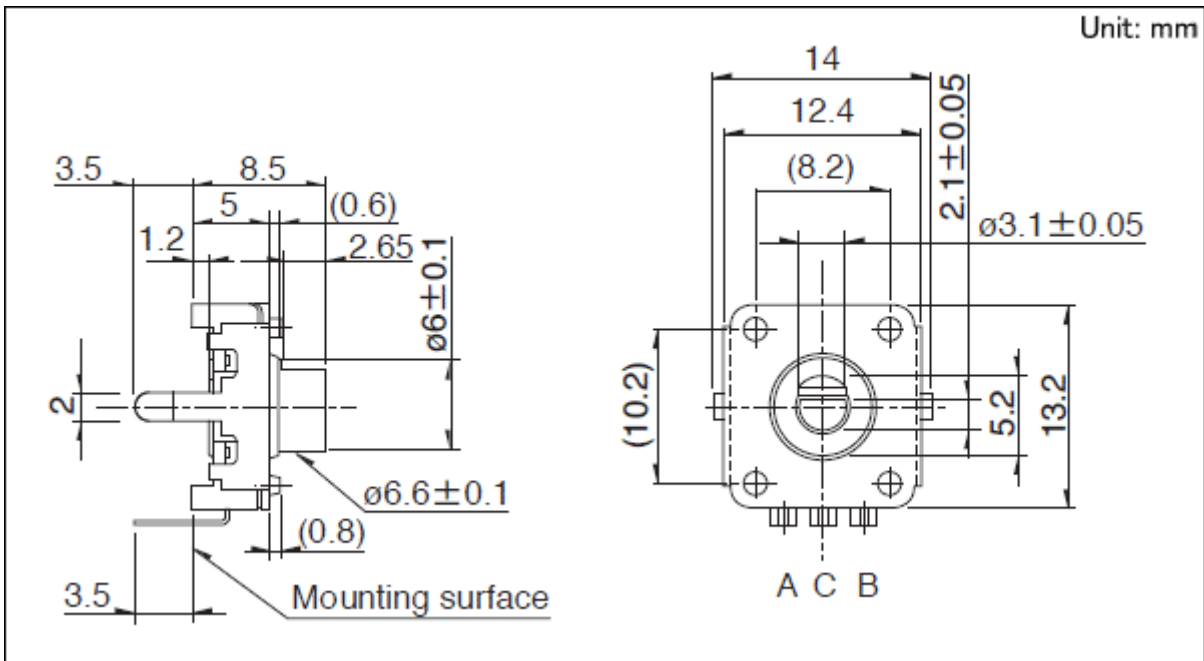
Push-pull strength	80N
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Durability	Operating life	30,000 cycles
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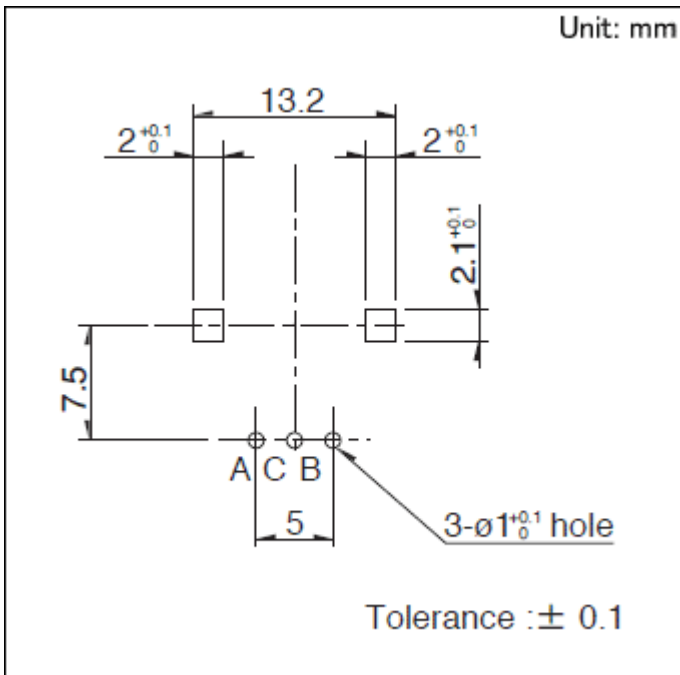
Minimum order unit (pcs.)	Japan	3,000
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Export	3,000
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Dimensions

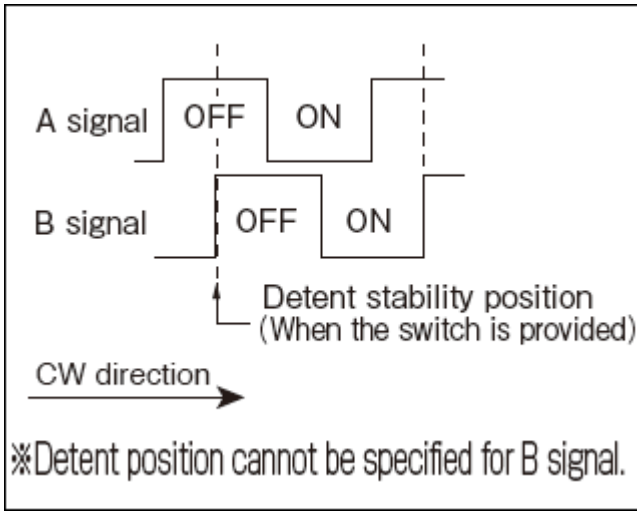


Mounting Hole Dimensions

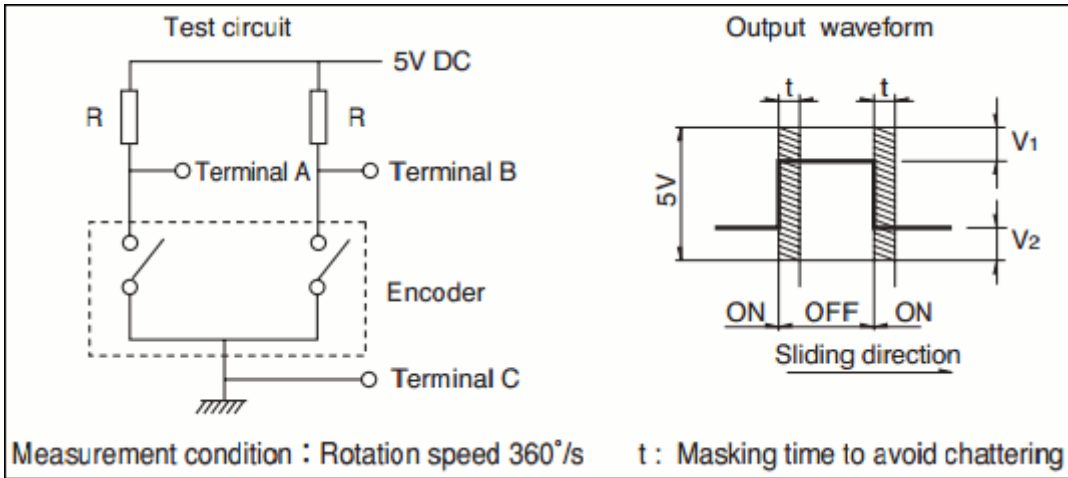


Viewed from mounting face.

Output Wave



Sliding Noise



$V_1 = V_2 = 1.5V$ max.

At $R = 10k\Omega$ Chattering: 3ms max. Bounce: 2ms max.

Packing Specifications

Tray

Number of packages 1 case / Japan 3,000
(pcs.)

1 case / export 3,000
packing

Export package measurements (mm) 525×369×204

Soldering Conditions

Reference for Dip Soldering

Preheating Soldering surfacetemperature 100°C max.

Heating time 1 min. max.

Dip soldering Soldering temperature 260±5°C

Soldering time 3±1s

No. of solders	2 time max.
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Reference for Hand Soldering

Tip temperature	350°C max.
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Soldering time	3s max.
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No. of solders	1 time
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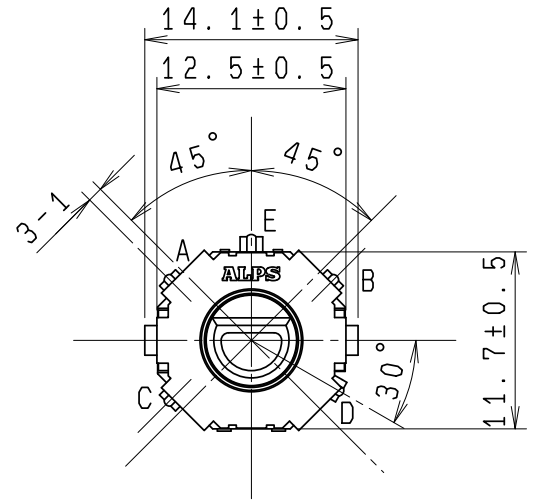
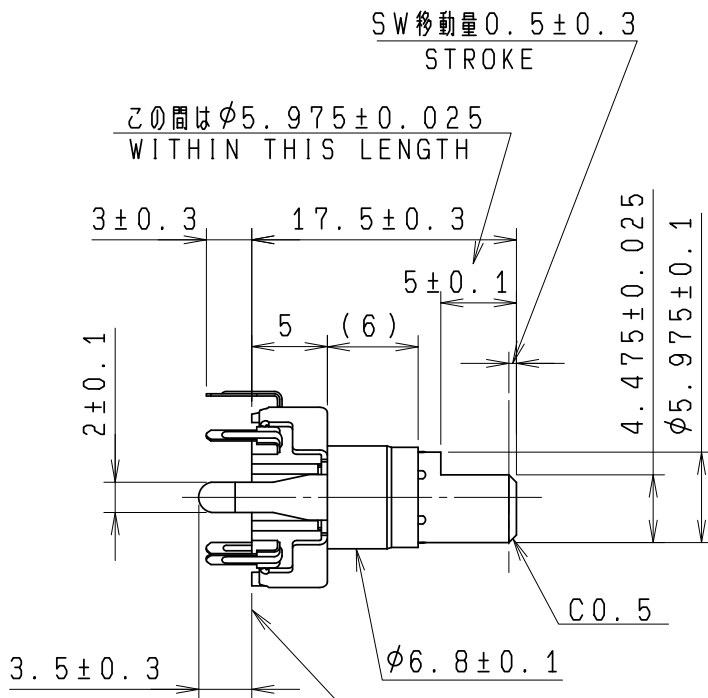
Notes are common to this series/models.

1. This site catalog shows only outline specifications. When using the products, please obtain formal specifications for supply.
2. Please place purchase orders per minimum order unit (integer).
3. Products other than those listed in the above chart are also available. Please contact us for details.
4. Nuts and washers are not included. If required, please contact us.
5. This products can be used in vehicles. (EC12D only)

Although these products are designed to perform over a wide operating temperature range, please ensure that you receive and read the formal delivery specifications before use.

(SW01) ENCODER
(SW02) PUSH ON SW

軸角度は任意とする。
SHAFT ANGLE IS OPTIONAL.



取付寸法図 許容差 ±0.1
(挿入側より見た図)

斜線部は配線禁止エリアを示す

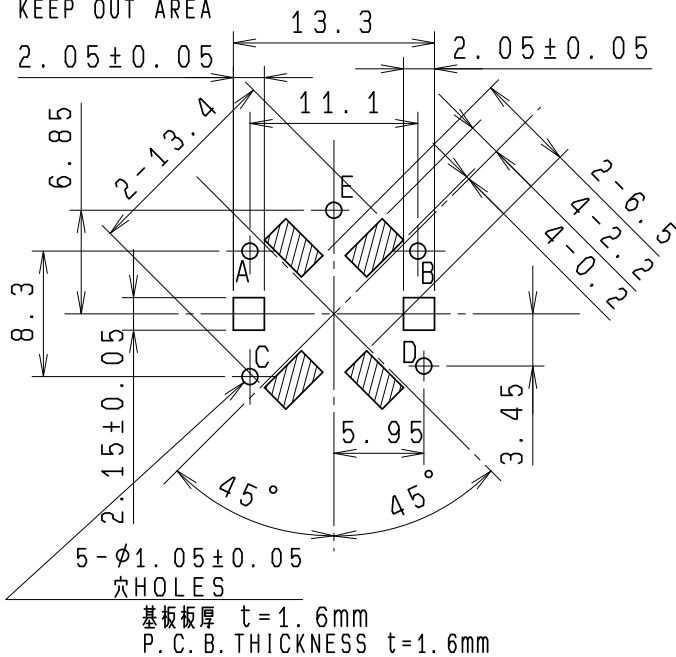
P. W. B. MOUNTING DETAIL

TOLERANCE ±0.1

VIEWED FROM MOUNTING SIDE

SHADE PORTIONS ARE

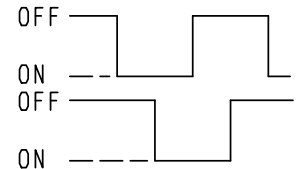
KEEP OUT AREA



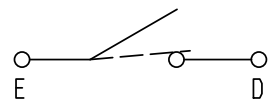
(SW01) 出力信号
ENCODER OUTPUT SIGNAL

時計方向回転
C. W. ROTATION

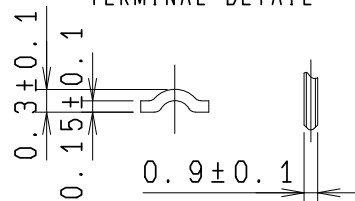
A-C端子間
TERMINAL A-C
ON OFF
B-C端子間
TERMINAL B-C
ON OFF



(SW02) 回路図
SWITCH CIRCUIT
DIAGRAM



基板挿入部端子形状詳細
TERMINAL DETAIL



指定なき部分の許容差
TOLERANCES UNLESS OTHERWISE SPEC

$L \leq 4$	±0.2
$4 < L \leq 16$	±0.3
$16 < L \leq 63$	±0.4
$63 < L \leq 250$	±0.5
$250 < L$	±0.7
角度 ANGULAR DIMENSION	±5°

PART NO.	MATERIAL	SPEC/NAME	FINISH	30C/15P (SW02) 3N 重クリック品
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					ALPSALPINE CO., LTD.		
NO.	SYMB	DATE	APPD	CHKD	DSGD	UNIT	DOCUMENT NO.
	OR	2007-12-17	Y, K S, M K, Y			mm	LE2124D06
					DSGD	SCALE	NO.
					K. YOKOYAMA	2 : 1	
					CHKD		TITLE
					S. MIZOBUCHI		12形1軸 PUSH ON SW付エンコーダ*組立図
					APPD		DOCUMENT NO.
					Y. KANZAKI		