

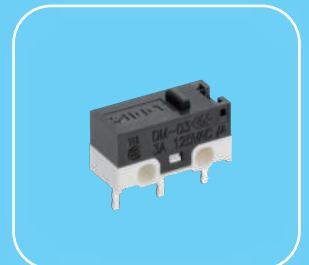
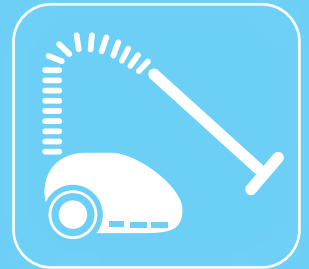


ZIPPY TECHNOLOGY CORP.

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Guide Book 2020-2021



MICRO SWITCHES SM1 SERIES



117

MICRO SWITCHES SM1(N/G) SERIES



122

MICRO SWITCHES SW2 SERIES



127

MICRO SWITCHES V3 SERIES Full-Disconnection-Gap > 3mm



131

MICRO SWITCHES V3 SERIES Micro-Disconnection-Gap < 3mm



135

MICRO SWITCHES V3 SERIES Full-Disconnection-Gap > 3mm



139

MICRO SWITCHES VA1 SERIES



143

MICRO SWITCHES VA2 SERIES



147

MICRO SWITCHES VK SERIES



152

MICRO SWITCHES VM SERIES



156

MICRO SWITCHES VMN SERIES



160

ROTARY SWITCHES AN SERIES



164

ROTARY SWITCHES ANL SERIES



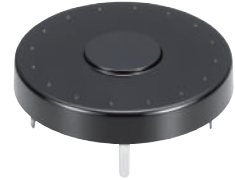
165

ROTARY SWITCHES ANO SERIES



166

ROTARY SWITCHES ANM SERIES



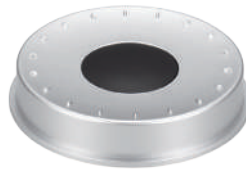
167

ROTARY SWITCHES ANQ SERIES



168

ROTARY SWITCHES KC SERIES



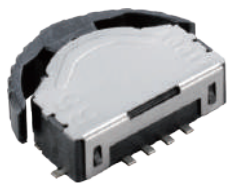
169

ROTARY SWITCHES KCL SERIES



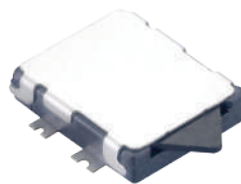
170

SLIDE SWITCHES B5 SERIES



171

SLIDE SWITCHES D4 SERIES



172

SIDE MINI SWITCHES BS SERIES



173

PUSH SWITCHES P1 SERIES



174

PUSH SWITCHES P2 SERIES



175

PUSH SWITCHES P3 SERIES



176

ROTARY SWITCHES



AN SERIES

SPECIFICATIONS

Operating Force

Rotation - Max.50 gf-cm
 Push - 220 ± 40 gf

Contact Resistance (initial)

Max. 300 mΩ
 Measured by ohm meter - open voltage < 1VDC, driver current -100 mA

Insulation Resistance (at 100 VDC/min.)

Min. 100 MΩ

Operating Temperature Range

0°C to 40°C (with no icing)

Vibration

10~55 Hz, displacement 0.75 mm (p-p)

Electrical Service Life

Rotation - Min. 200,000 operations
 C.W. 100,000 & C.C.W 100,000 operations
 Push - Min. 1,000,000 operations

Electrical Operating Frequency

Rotation - 30 operations per minute
 Push - 120 operations per minute

RATING

1mA 10VDC

APPLICATIONS

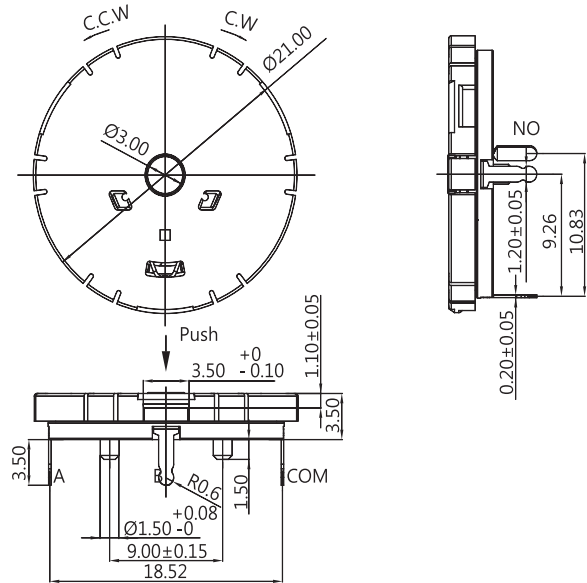
Remote control, Tablet, Keyboard, Audio, Mp3 player, Notebook,
 Mobile phone, Mobility TV, Home appliances

ORDERING INFORMATION

A	N	P	1	S	2	S	P	Z			
SERIES PREFIX	C O D E	RATING CURRENT	C O D E	OPERATING TORQUE	C O D E	TYPE	C O D E	OPERATING FORCE	C O D E	TERMINAL TYPE	ROHS CODE
	P1	1mA 10VDC	S	Rotation Max.50gf-cm	2	COVER IS NOT THROUGH Rotation Life :200,000 operations (C.W. 100,000 & C.C.W 100,000operations)	S	Push 220±40gf	P	PCB TERMINAL	
			H	Rotation Max.60gf-cm	3	COVER IS NOT THROUGH Rotation Life :2,000,000 operations (C.W. 1,000,000 & C.C.W 1,000,000operations)					

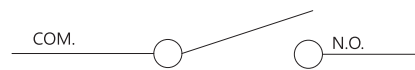
DIMENSIONS

Unless otherwise specified, a tolerance of ±0.4mm applies to all dimensions.



CONTACT CONFIGURATION

Push



Rotation

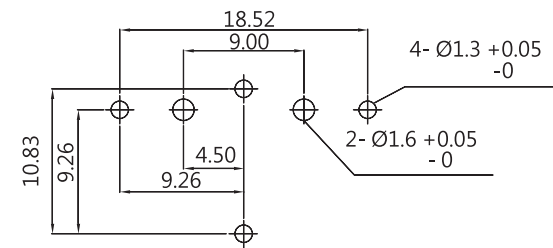
ANGLE NO.	ANGLE						
	-90°	-60°	-30°	0°	30°	60°	90°
A-A-C	ON	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF
B-B-C	ON	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF

CW ← → CCW

Numbers of detent : 24

Pulse/Rotation : 12 pulse/360°

MOUNTING HOLES



ROTARY SWITCHES



ANL SERIES

SPECIFICATIONS

Operating Force

Rotation – Max. 50gf-cm

Push - 220 ± 40 gf

Contact Resistance (initial)

Max. 300mΩ

Measured by ohm meter –Open Voltage <1VDC, Driver current -100mA

Insulation Resistance (at 100VDC/minute)

Min. 100MΩ

Operating Temperature Range

0°C to 40°C (with no icing)

Vibration

10~55 Hz, displacement 0.75 mm (p-p)

Electrical Service Life

Rotation – Min. 200,000 operations

C.W. 100,000 & C.C.W 100,000operations

Push – Min. 1,000,000 operations

Electrical Operating Frequency

Rotation – 30 operations per minute

Push – 120 operations per minute

RATING

1mA 10VDC

APPLICATIONS

Remote control, Tablet, Keyboard, Audio, Mp3 player, Notebook,

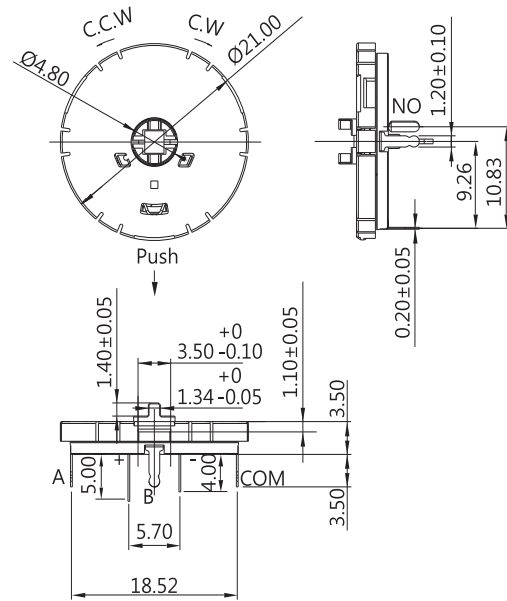
Mobile phone, Mobility TV, Home appliances

ORDERING INFORMATION

A	N	L	-	P	1	S	-	2	S	P	B	-	Z
SERIES PREFIX	C O D E	RATING CURRENT	C O D E	OPERATING TORQUE	C O D E	OPERATING FORCE	C O D E	TERMINAL TYPE	C O D E	LED COLOR	ROHS CODE		
	P1	1mA 10VDC	S	Rotation Max.50gf-cm	S	Push 220 ± 40gf	P	PCB TERMINAL	B	BULE			
									W	WHITE			
									R	RED			
									G	GREEN			
	C O D E	TYPE											
	2	COVER IS NOT THROUGH Rotation Life :200,000 operations (C.W. 100,000 & C.C.W 100,000operations)											

DIMENSIONS

Unless otherwise specified, a tolerance of ±0.4mm applies to all dimensions.

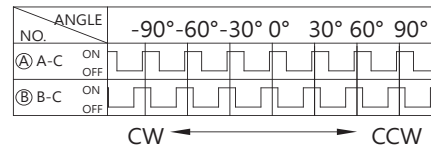


CONTACT CONFIGURATION

PUSH



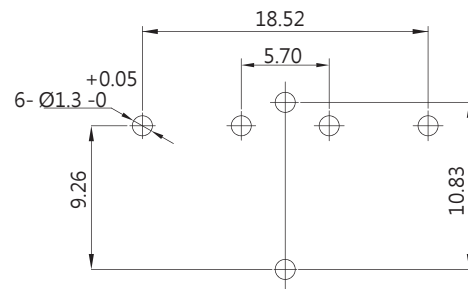
Rotation



NUMBERS OF DETENT : 24

PULSE/ROTATION : 12 PULSE/360°

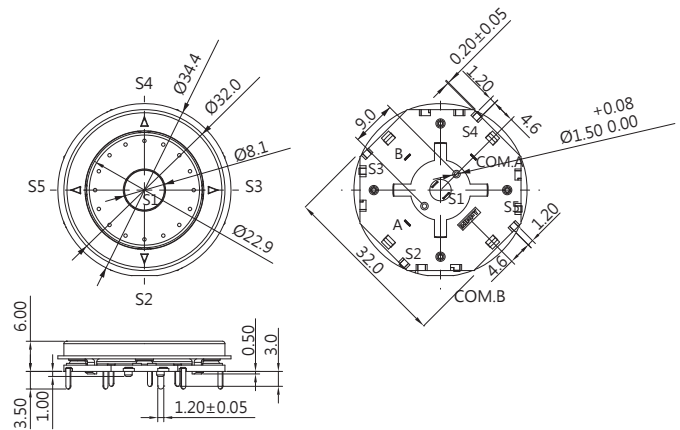
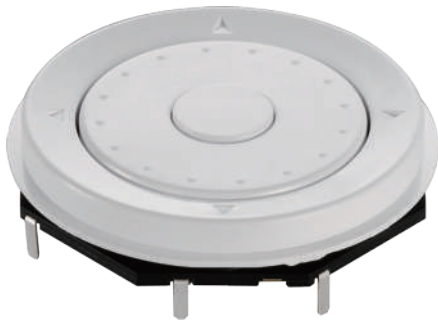
MOUNTING HOLES



ROTARY SWITCHES

DIMENSIONS

Unless otherwise specified, a tolerance of $\pm 0.4\text{mm}$ applies to all dimensions.



ANO SERIES

SPECIFICATIONS

Operating Force

Rotation-Max. 60 gf-cm

5 way switch-Max. 300 gf

Contact Resistance(initial)

Max. 300 m Ω

Measured by ohm meter - open voltage < 1VDC, driver current -100 mA

Insulation Resistance(at 100 VDC/ minute)

Min. 100 M Ω

Operating Temperature Range

0°C to 40°C (with no icing)

Vibration

10~55 Hz, displacement 0.75 mm (p-p)

Electrical Service Life

Rotation-Min. 200,000 operations

(C.W. 100,000 & C.C.W. 100,000 operations)

Push-Min. 1,000,000 operations

Electrical Operating Frequency

Rotation-30 operations per minute

Push-120 operations per minute

RATING

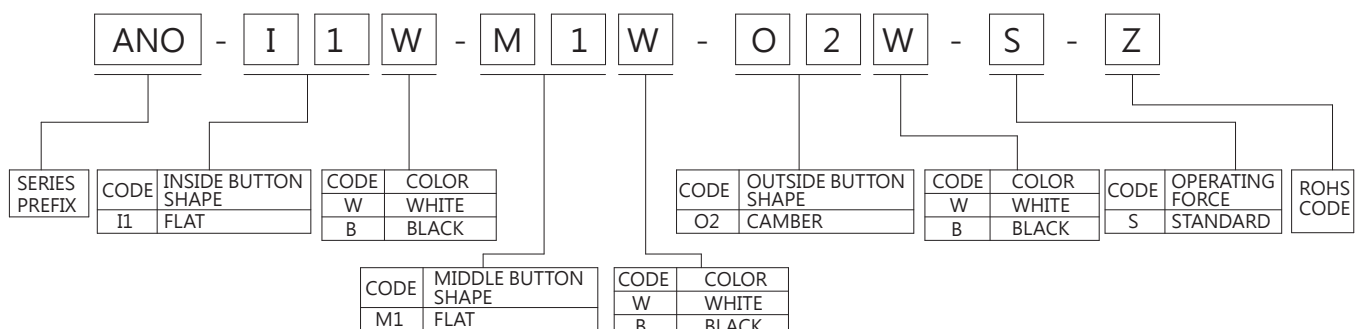
1mA 10VDC

APPLICATIONS

Remote control, Tablet, Keyboard, Audio, Mp3 player, Notebook,

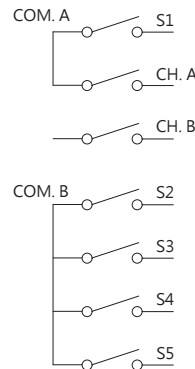
Mobile phone

ORDERING INFORMATION



CONTACT CONFIGURATION

Functional Block Diagram



Rotational Output Waveform

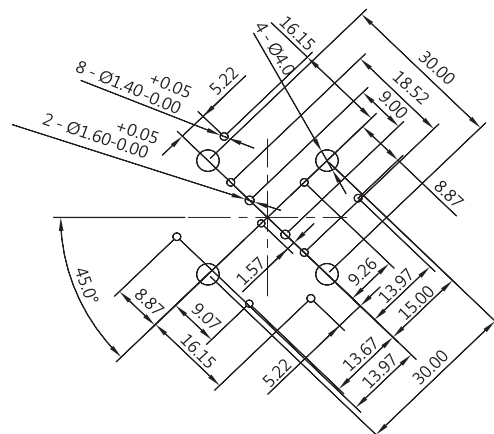
ANGLE NO.	-90°	-60°	-30°	0°	30°	60°	90°
CH. A	ON	OFF	ON	OFF	ON	OFF	ON
CH. B	ON	OFF	ON	OFF	ON	OFF	ON

CW ← → CCW

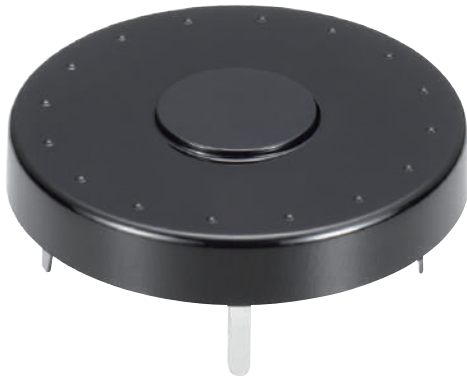
Numbers of detent : 24

Pulse/Rotation : 12 pulse/360°

MOUNTING HOLES



ROTARY SWITCHES



ANM SERIES

SPECIFICATIONS

Operating Force

Rotation - Max.60 gf-cm
 Push - Max. 300 gf

Contact Resistance (initial)

Max. 300mΩ
 Measured by ohm meter - open voltage <1VDC, Driver current -100mA

Insulation Resistance (at 100VDC/minute)

Min. 100MΩ

Operating Temperature Range

0°C to 40°C (with no icing)

Vibration

10~55 Hz, displacement 0.75 mm (p-p)

Electrical Service Life

Rotation – Min. 200,000 operations
 C.W. 100,000 & C.C.W 100,000operations
 Push – Min. 1,000,000 operations

Electrical Operating Frequency

Rotation – 30 operations per minute
 Push – 120 operations per minute

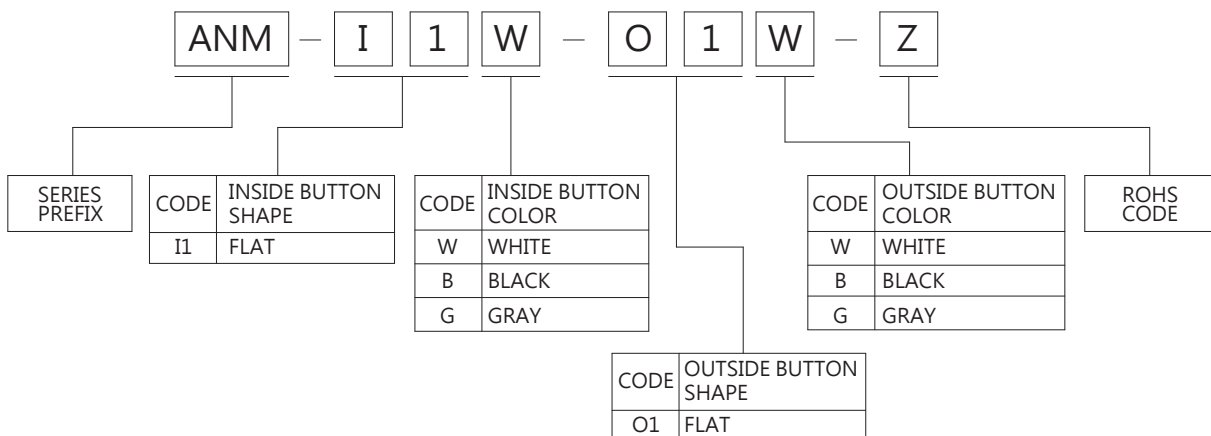
RATING

1mA 10VDC

APPLICATIONS

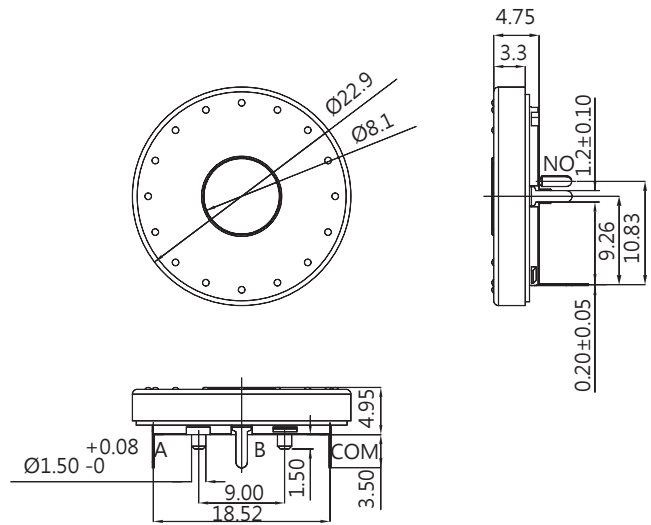
Remote control, Tablet, Keyboard, Audio, Mp3, NB, Mobile Phone

ORDERING INFORMATION



DIMENSIONS

Unless otherwise specified, a tolerance of ±0.4mm applies to all dimensions.



CONTACT CONFIGURATION

Push



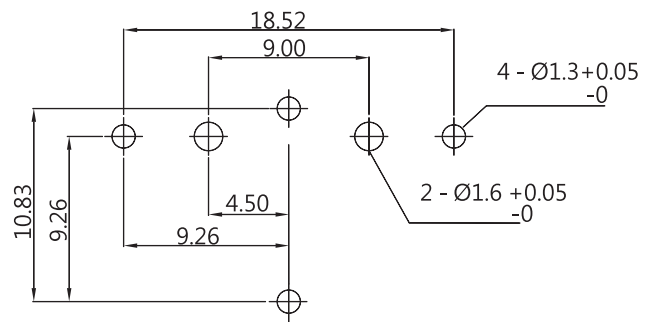
Rotation

NO.	ANGLE	ANGLE						
		-90°	-60°	-30°	0°	30°	60°	90°
A-A-C	ON	ON	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
B-B-C	ON	OFF	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

CW ← → CCW

Numbers of detent : 24
 Pulse/Rotation : 12 pulse/360°

MOUNTING HOLES

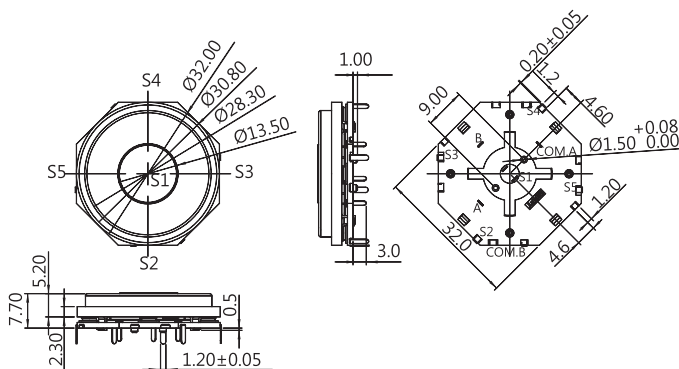


ROTARY SWITCHES



DIMENSIONS

Unless otherwise specified, a tolerance of $\pm 0.4\text{mm}$ applies to all dimensions.



ANQ SERIES

SPECIFICATIONS

Operating Force

- Rotation - Max. 60 gf-cm
- 5 way switch - Max. 300 gf

Contact Resistance (initial)

- Max. $300\text{m}\Omega$
- Measured by ohm meter - open voltage $< 1\text{VDC}$, Driver current -100mA

Insulation Resistance (at 100VDC/minute)

- Min. $100\text{M}\Omega$

Operating Temperature Range

- 0°C to 40°C (with no icing)

Vibration

- $10\sim 55\text{ Hz}$, displacement 0.75 mm (p-p)

Electrical Service Life

- Rotation - Min. 200,000 operations
- C.W. 100,000 & C.C.W 100,000 operations
- Push - Min. 200,000 operations

Electrical Operating Frequency

- Rotation - 30 operations per minute
- Push - 120 operations per minute

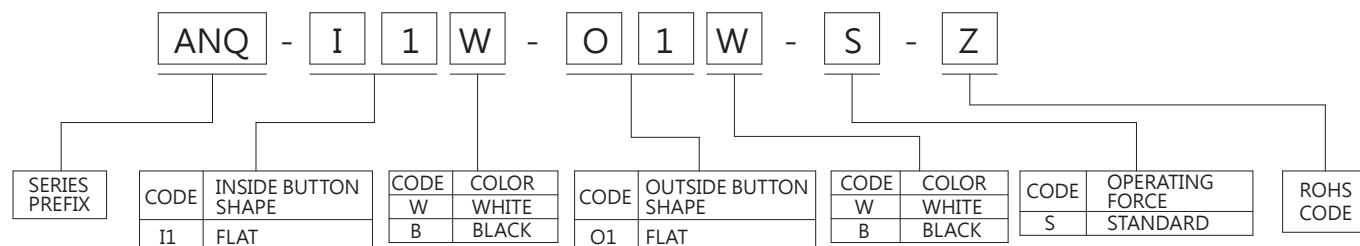
RATING

- $1\text{mA } 10\text{VDC}$

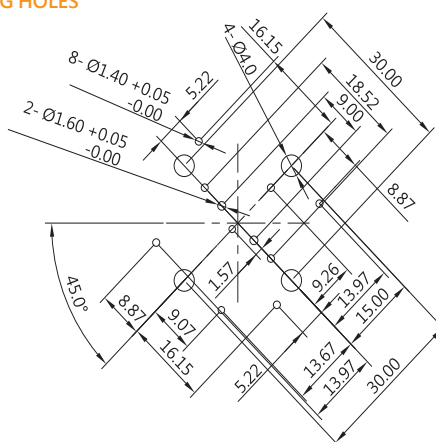
APPLICATIONS

- Remote control, Tablets, Keyboard, Audio, Mp3 player, Notebook, Mobile phone, Control Panel

ORDERING INFORMATION

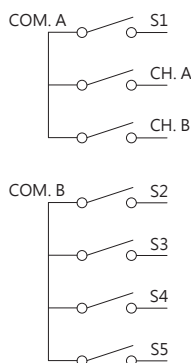


MOUNTING HOLES

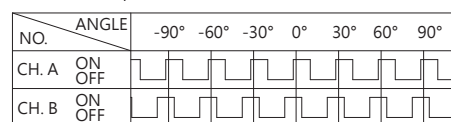


CONTACT CONFIGURATION

Functional Block Diagram



Rotational Output Waveform

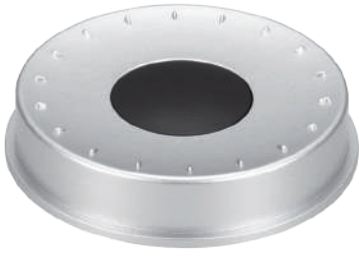


CW ← → CCW

Numbers of detent : 24

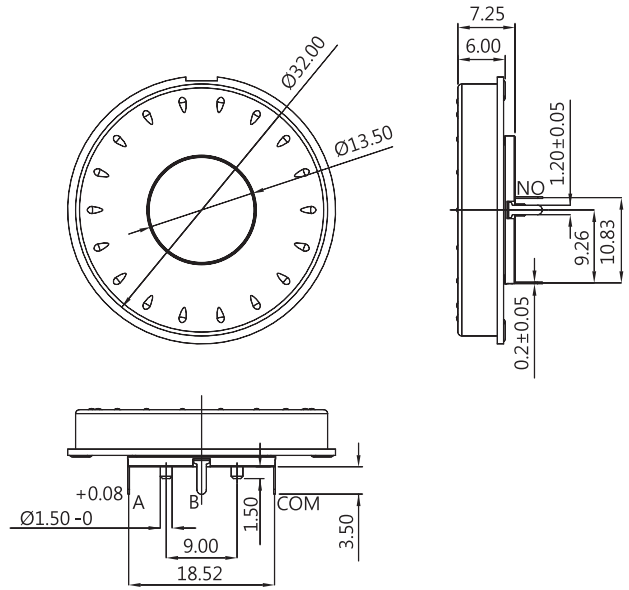
Pulse/Rotation : 12 pulse/360°

ROTARY SWITCHES



DIMENSIONS

Unless otherwise specified, a tolerance of $\pm 0.4\text{mm}$ applies to all dimensions.



KC SERIES

SPECIFICATIONS

Operating Force

Rotation - Max. 60 gf-cm

Push - Max. 300 gf

Contact Resistance (initial)

Max. 300m Ω

Measured by ohm meter - open voltage < 1VDC, Driver current - 100mA

Insulation Resistance (at 100VDC/minute)

Min. 100M Ω

Operating Temperature Range

0°C to 40°C (with no icing)

Vibration

10~55 Hz, displacement 0.75 mm (p-p)

Electrical Service Life

Rotation - Min. 200,000 operations

C.W. 100,000 & C.C.W 100,000 operations

Push - Min. 1,000,000 operations

Electrical Operating Frequency

Rotation - 30 operations per minute

Push - 120 operations per minute

RATING

1mA 10VDC

APPLICATIONS

Remote control, Tablet, Keyboard, Audio, Mp3, NB, Mobile Phone

ORDERING INFORMATION

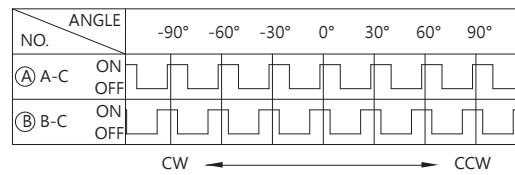
K	C	-	I	1	B	-	O	1	G	-	Z
SERIES PREFIX		CODE	INSIDE BUTTON SHAPE	CODE	INSIDE BUTTON COLOR	CODE	OUTSIDE BUTTON SHAPE	CODE	OUTSIDE BUTTON COLOR	ROHS CODE	
		I1	FLAT	B	BLACK	O1	FLAT	G	GRAY		
				G	GRAY			B	BLACK		
				A	IRON GARY			A	IRON GARY		

CONTACT CONFIGURATION

Push



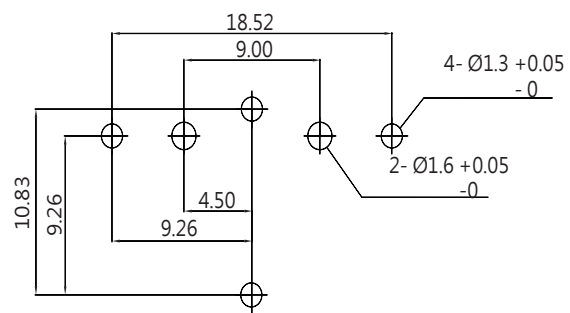
Rotation



Numbers of detent : 24

Pulse/Rotation : 12 pulse/360°

P.C.B MOUNTING HOLES



ROTARY SWITCHES



KCL SERIES

SPECIFICATIONS

Operating Force

Rotation – Max. 60gf-cm

Push – Max. 300 gf

Contact Resistance (initial)

Max. 300mΩ

Measured by ohm meter –Open Voltage<1VDC, Driver current -100mA

Insulation Resistance (at 100VDC/minute)

Min. 100MΩ

Operating Temperature Range

0°C to 40°C (with no icing)

Vibration

10~55Hz, displacement 0.75 mm (p-p)

Electrical Service Life

Rotation – Min. 200,000 operations

C.W. 100,000 & C.C.W 100,000operations

Push – Min. 1,000,000 operations

Electrical Operating Frequency

Rotation – 30 operations per minute

Push – 120 operations per minute

RATING

1mA 10VDC

APPLICATIONS

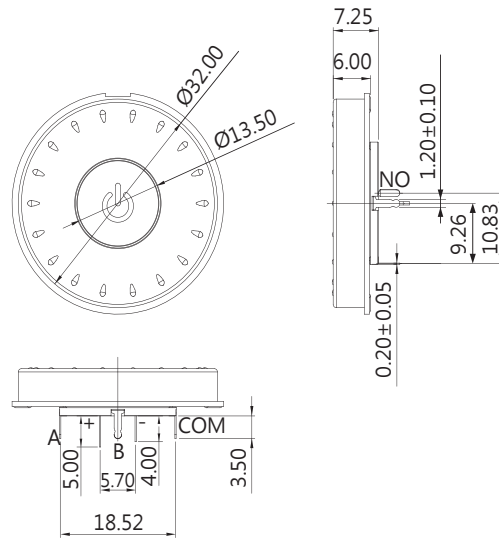
Remote control , Tablet , Keyboard , Audio , Mp3, NB, Mobile Phone

ORDERING INFORMATION

K	C	L	—	I	B	1	B	—	O1	G	—	Z		
SERIES PREFIX				INSIDE BUTTON COLOR		INSIDE BUTTON MARKING		LED COLOR		OUTSIDE BUTTON SHAPE		OUTSIDE BUTTON COLOR		ROHS CODE
				IB	BLACK	1		B	BULE	O1	FLAT	G	GRAY	
							W	WHITE						
							R	RED						
							G	GREEN						

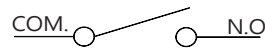
DIMENSIONS

Unless otherwise specified, a tolerance of ±0.4mm applies to all dimensions

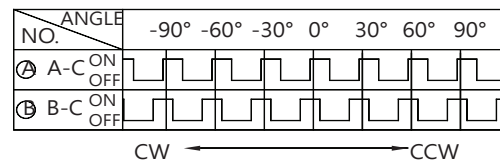


CONTACT CONFIGURATION

Push



Rotation



Numbers of detent : 24
Pulse/Rotation : 12
pulse/360°

MOUNTING HOLES

