DIP Switch | KD/KM/KW Series | DIP Rotary | Through Hole • SMD | 10/16 Position Real/ Compliment

Driver Type

Mini-shaft Type

Mini-shaft + Indicator Type

Wheel Type

Outline of the Series

This is the flagship DIP switch series from OTAX Corporation, a global leader in DIP switch production.

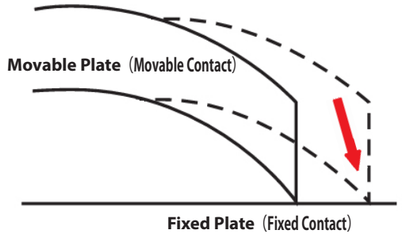
Features of the Series

This rotary digital code switch is designed for PCB mounting and features a knife-edge, high-pressure contact mechanism combined with a steel ball detent system, providing excellent contact stability and long operating life.

Its fully sealed construction ensures smooth rotation and allows for cleaning processes.

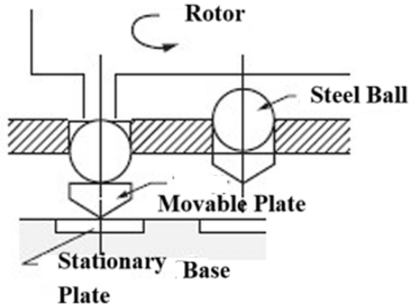
Four types of actuators are available — driver type, mini-shaft type, mini-shaft with indicator, and wheel type — along with both vertical and horizontal mounting orientations to meet a wide range of customer needs.

■ Knife-edge High-pressure Contact



The knife-shaped tip of the movable contact penetrates into the fixed contact, providing a contact structure that is highly resistant to surface contamination and foreign particles.

■ Stable and Sure Contact Mechanism by Steel Balls



Common Specifications

Ratings	0.4VA DC20V Max.
Contact Resistance	50 mΩ Max. (Initial value)
Withstanding Voltage	AC300V 1 Minute
Insulating Resistance	1,000MΩ Min.
Electrical Life	20,000 steps
Operating Temperature Range	-30℃～ +85℃
Storage Temperature Range	-30℃～ +85℃
Storage Humidity Range	85%RHMax.、no condensation
Operating Force	98mN・m Max.
Number of Re-flow	2 times Max.

Specifications of Materials

Part Name	Materials	Finish
Case	PPS	Black
Frame	PPS	Black
Terminals	Copper Alloy	Gold Flash
Rotor（Driver Type）	Heat-resistant Polyamide	Color: Refer to the Appendix
O-ring	FPM、NBR（Indicator Type）	
Movable Plate（Movable Contact）	Copper Alloy	Gold Flash
Leaf Spring	SUS	
Fixed Plate（Fixed Contact）	Copper Alloy	Gold Flash
Steel Ball	SUJ2	
Mini-shaft	PBT	Color: Refer to the Appendix
Wheel	PBT	Color: Refer to the Appendix

* For products other than those listed above or for custom items, please contact us.

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DIP Switch | KD/KM/KW Series | DIP Rotary | Through Hole • SMD | 10/16 Position Real/ Compliment

Product Designations

K	D	R	1	0	2	S	
	Shape of Operational-part	Encoding	Number of Steps/ Operational-part			Type of Terminals	Direction of Operational-part

Series Name

Shape of Operational-part	Symbol
Driver	D
Mini-shaft	M
Wheel	W

Code	Symbol
Real	R
Compliment	C

Poles	Symbol
10-position/ Driver	102
10-position/ Mini-shaft • Wheel	104
10-position/ Indicator	104-3
16-position/ Driver • Mini-shaft • Wheel	162
16-position/ Indicator	162-3

Type of Terminals	Symbol
Through Hole Mounting	(none)
SMD	S

* SMD type are available only for Driver-type with vertual operational part.

Direction of Operational-part	Symbol
Vertical	(none)
Horizontal	H

Color of Operational Part/ Product Names

Operational-part	Code	10-position			16-position		
		Color of Operational Part		Product Name	Color of Operational Part		Product Name
Driver	Real	Black	■	KDR102 □□	Black	■	KDR162 □□
	Compliment	Amber	■	KDC102 □□	White	□	KDC162 □□
Mini-shaft	Real	Black	■	KMR104 □	Black	■	KMR162 □
	Compliment	White	□	KMC104 □	White	□	KMC162 □
Wheel	Real	Black	■	KWR104 □	Black	■	KWR162 □
	Compliment	White	□	KWC104 □	White	□	KWC162 □
Mini-shaft + Indicator	Real	Black	■	KMR104-3 □	Black	■	KMR162-3 □
	Compliment	Black	■	KMC104-3 □	Black	■	KMC162-3 □

Q'ty contained in a Box/Magazine

Product Name	Q'ty in 1 Box	Details
KDR/KDC	1,500 pcs	45 x 33 Magazine + 15 x 1 Magazine
KMR/KMC	1,000 pcs	35 x 28 Magazine + 20 x 1 Magazine
KWR/KWC	1,500 pcs	45 x 33 Magazine + 15 x 1 Magazine
KDR □ H/KDC □ H	1,500 pcs	45 x 33 Magazine + 15 x 1 Magazine
KWR □ H/KWC □ H	1,000 pcs	35 x 28 Magazine + 20 x 1 Magazine
KMR □ H/KMC □ H	600 pcs	20 x 30 Magazine

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Code Diagrams

shows the position upon delivery.

■ Binary Coded Decimal
Real Code

	Position								
	0	1	2	3	4	5	6	7	8	9
1		●		●		●		●		●
2			●	●			●	●		
4					●	●	●	●		
8									●	●

■ Binary Coded Hexadecmal
Real Code

	Position															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1		●		●		●		●		●		●		●		●
2			●	●			●	●			●	●			●	●
4					●	●	●	●					●	●	●	●
8									●	●	●	●	●	●	●	●

■ Binary Coded Decimal
Compliment Code

	Position									
	0	1	2	3	4	5	6	7	8	9
1	●		●		●		●		●	
2	●	●			●	●			●	●
4	●	●	●	●					●	●
8	●	●	●	●	●	●	●	●		

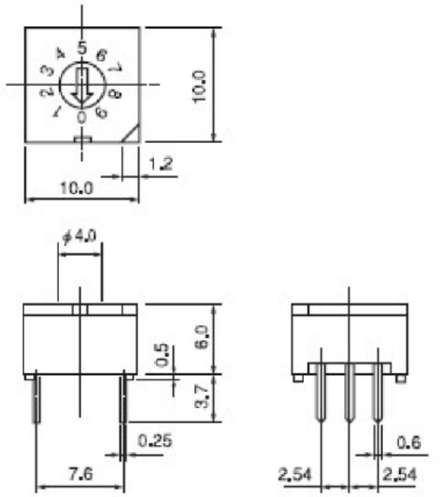
■ Binary Coded Hexadecmal
Compliment Code

	Position															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	●		●		●		●		●		●		●		●	
2	●	●			●	●			●	●			●	●		
4	●	●	●	●					●	●	●	●				
8	●	●	●	●	●	●	●	●								

Standard Dimensions

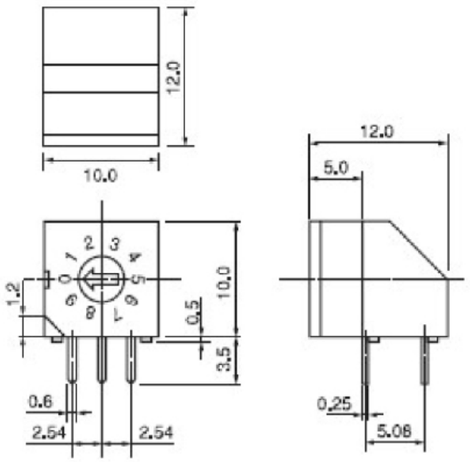
Driver Type/ Vertical

KD □□□□



Driver Type/ Horizontal

KD □□□□ H



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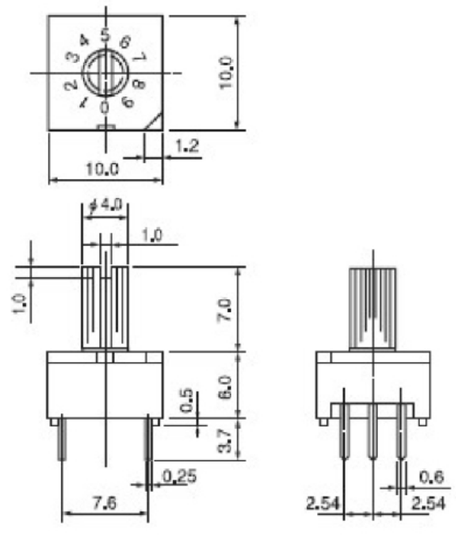
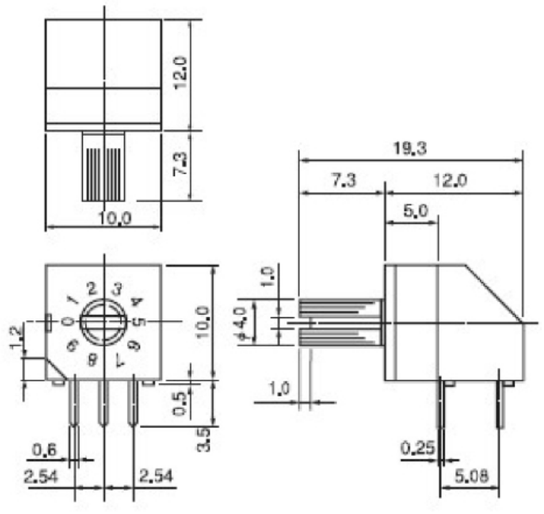
Mini-shaft Type/ Vertical

KM □□□□



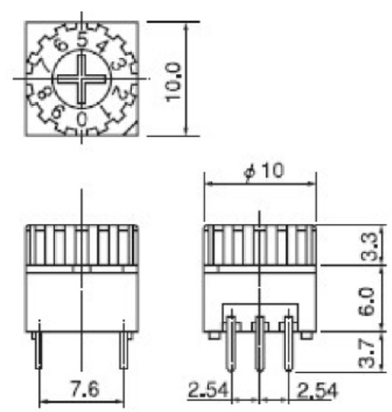
Mini-shaft Type/ Horizontal

KM □□□□ H



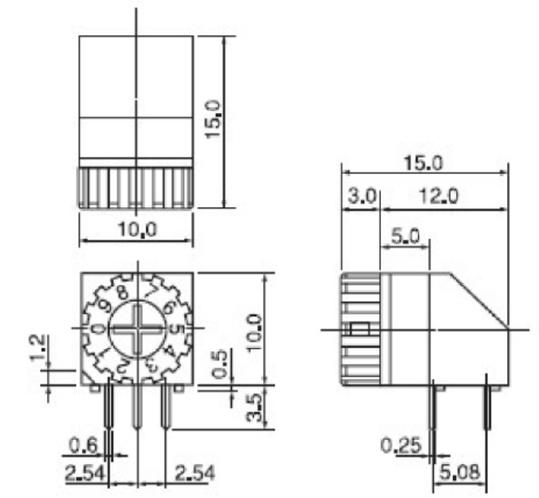
Wheel Type/ Vertical

KW □□□□



Wheel Type/ Horizontal

KW □□□□ H



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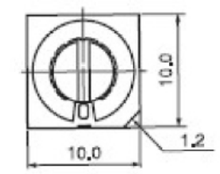
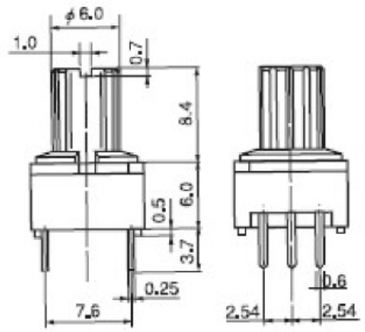
Mini-shaft ＋ Indicator/ Vertical

KM □□□□ -3

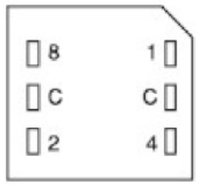
The Selected Code can be easily seen.



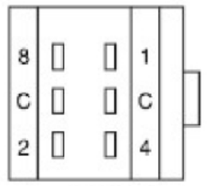


Terminal Diagrams, Mounting Hole Dimensions

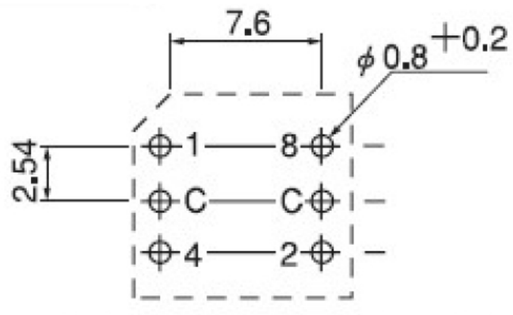
Both Real and Compliment have the same allocation. The below charts are seen from the buttom.



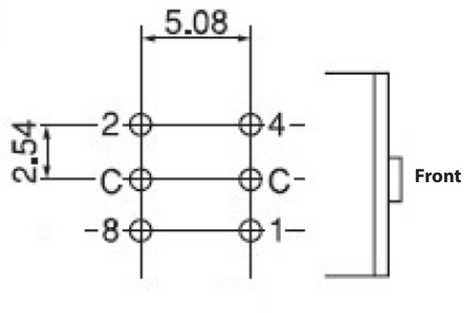
Vertical



Horizontal



Vertical：As seen from the top



Horizontal：As seen from the top。

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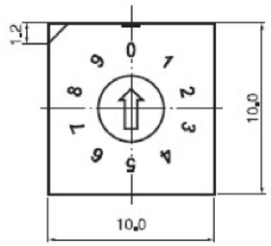
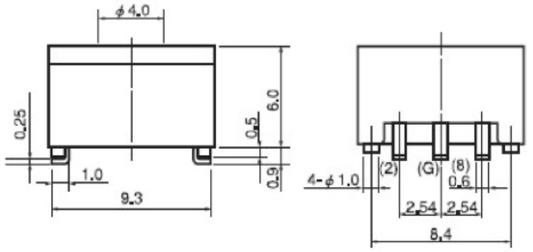
Driver Type、SMD（Vertical）

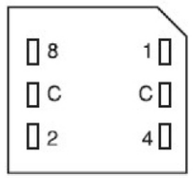
KD □□□□ S

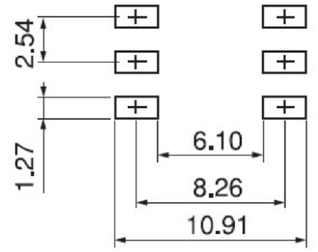




Terminal Diagrams, Mounting Land Dimensions

Both Real and Compliment have the same allocation. The below charts are seen from the buttom.





Soldering Conditions

＊ Regarding the Soldering Conditions, please refer to the separate data sheet.（Hand Soldering Condition is A.）

Cautions on Handling Products

1. Alcohol-based, petroleum-based, ketone-based, and chlorine-based cleaning solvents can be used.
2. Reflow soldering conditions may vary depending on the size and assembly density of the printed circuit board in the actual production process. Please refer to the separate datasheet for the recommended temperature profile, and confirm the surface temperature and soldering condition of the mounted component before use.
3. At the time of delivery, the rotor of the real code type is set to position “0” for both 10- and 16-position models. For the complement code type, the initial rotor position is “7” for the 10-position model and “F” for the 16-position model. Please maintain these positions throughout the mounting, soldering, and cleaning processes.

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