

PICO-D SERIES SUBMINIATURE PUSHWHEEL SWITCHES



FEATURES

- Small panel mounting pushwheel switches.
- Models available with ESD protection - consult factory
- Snap action detent with audible click
- Black housing and drum with white printing
- Gangable front mounting models with spacers and side covers
- Gold wiping action contacts
- PC board options include solderable lands

PICO-D SPECIFICATIONS

Panel mounting hole:	
Height	.590"(15mm)
Width	.300"(7.62mm)
Installed depth with pc board:	
Short	.945"(24mm)
Long	1.358"(34.5mm)
Insertion from front	yes
Insertion from rear	no

CODES

Code	positions	marking	
111 Decimal	10	0-9	see truth tables
131 BCD	10	0-9	see truth tables
137 BCD comp	10	0-9	see truth tables
301 Hexadecimal	16	0-9, A-F(0-15)	see truth tables
307 Hexadec.Comp.	16	0-9, A-F(0-15)	see truth tables
400 change-over	10	+, -, +, -, etc..	see truth tables

ELECTRICAL DATA

Operating voltage:	40 V max.
Contact load, static:	0.5 A max.
Contact load, dynamic:	100 mA max.
Contact resistance (type AK):	less than 100 mOhm

TECHNICAL DATA

Operating temperature range:	-20°C to 60°C
Electric life, min. switching cycles	100,000
Actuation force, approx (oz.):	11
Weight, approx. (grams):	2
Character height:	10 digit .122" (3.1mm)
	16 digit .094" (2.4mm)
Audible click	yes
Vibration DIN EN 60068-2-6	yes
Shock DIN EN 60068-2-27	yes

MATERIALS

Body:	PPO
PC board:	FR 4 DIN 40802 IEC 249-2, Contact surface gold over nickel on copper
Sliding contact:	Gold over nickel on copper alloy

STANDARD COLORS

Housing, Drum, Printing	
2 = black 3 = white	2,2,3

Other special features are available upon request including:

- Factory set stops
- Red digits
- Decimal point
- Special codes or printing
- Gray housing
- See sockets at end of Pushwheel section.

PICO-D SERIES SUBMINIATURE PUSHWHEEL SWITCHES

TRUTH TABLES

CODE 131 BCD					
	C	1	2	4	8
0	●				
1		●			
2			●		
3		●	●		
4				●	
5		●			●
6		●	●	●	
7		●	●	●	●
8	●				●
9	●	●			

CODE 137 BCD COMP.					
	C	$\bar{1}$	$\bar{2}$	$\bar{4}$	$\bar{8}$
0	●	●	●	●	●
1	●		●	●	●
2		●		●	●
3	●			●	●
4	●	●			●
5	●		●		●
6	●	●			●
7	●				●
8	●	●	●	●	
9	●		●	●	

CODE 400 CHANGE-OVER			
	C	A+	A-
+	●	●	
-	●		●
+	●	●	
-	●		●
+	●	●	
-	●		●
+	●	●	
-	●		●

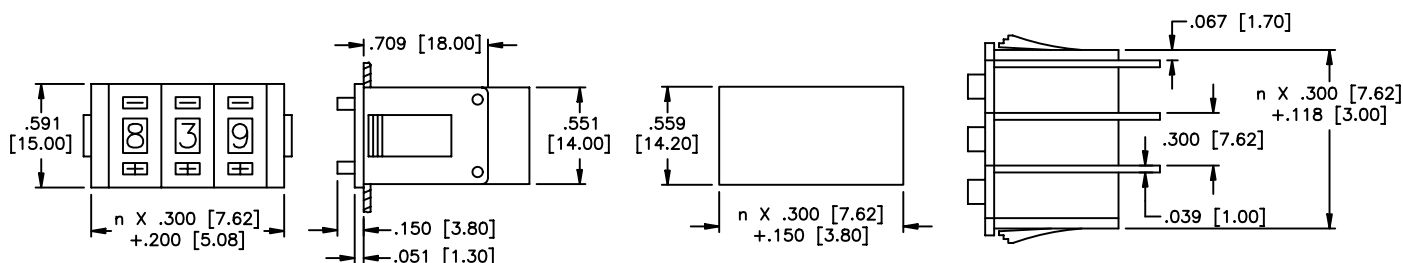
CODE 301 HEXADECIMAL					
	1	2	4	8	C
0					●
1	●				●
2		●			●
3	●	●			●
4			●		●
5	●		●		●
6		●	●		●
7	●	●	●		●
8				●	●
9	●			●	●
A		●		●	●
B	●	●		●	●
C			●	●	●
D	●		●	●	●
E		●	●	●	●
F	●	●	●	●	●

CODE 307 HEXADEC. COMP.					
	C	$\bar{1}$	$\bar{2}$	$\bar{4}$	$\bar{8}$
0	●	●	●	●	●
1	●		●	●	●
2		●		●	●
3	●			●	●
4	●	●			●
5	●		●		●
6	●	●			●
7	●				●
8	●	●	●	●	
9	●		●	●	
A	●	●		●	
B	●		●	●	
C	●	●	●		
D	●		●		
E	●	●			
F	●				

CODE 111 DECIMAL											
	C	0	1	2	3	4	5	6	7	8	9
0	●	●									
1	●		●								
2	●			●							
3	●				●						
4	●					●					
5	●						●				
6	●							●			
7	●								●		
8	●									●	
9	●										●

MECHANICAL OUTLINE WITH PANEL CUT-OUT & MOUNTING

n = number of switches



PIN CONNECTIONS

307 code available with **AK** pc option only.

111 code available with **AL** pc option only.

- The switching mode is shorting - i.e. - even during actuation, at least one output is connected to input C.

	1	2	4	8	C
131	$\bar{2}$	$\bar{8}$	C	$\bar{1}$	$\bar{4}$
137	C	1	2	4	8
301	$\bar{C}$	$\bar{1}$	$\bar{2}$	$\bar{4}$	$\bar{8}$
307	-	+			C

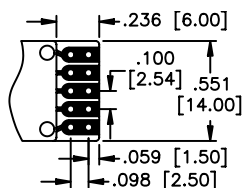
						9 8 7 6 5				
						● ● ● ● ●				
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301	C	1	2	4	8
131	$\bar{2}$	$\bar{8}$	C	$\bar{1}$	$\bar{4}$
137					

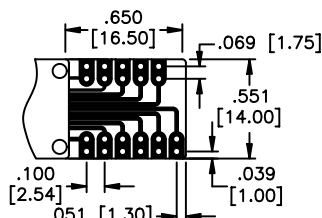
PICO-D SERIES SUBMINIATURE PUSHWHEEL SWITCHES

PRINTED CIRCUIT OPTIONS

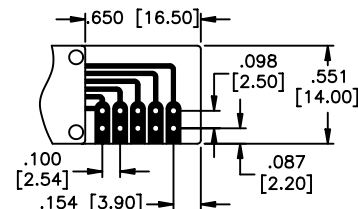
PC boards have .039" (1mm) holes and are suitable for soldering or socket connection (with the exception of LED illumination option).



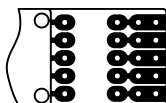
AK short pc board



AL long pc board for decimal version (solder terminal)

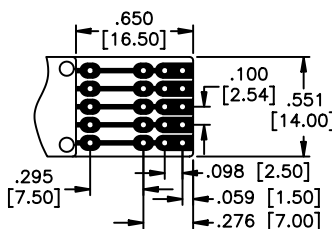


ALU long pc board

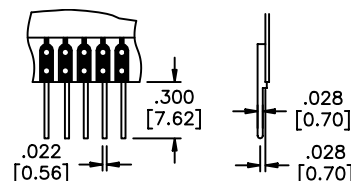


ALD long (interrupted) pc board

Dimensions are the same as **AL**.
Space allows customer to add resistors, diodes, etc.



AL long pc board



LS pc board w/solder pins

Ordering information: Below is an order format that enables you to 'build your own switch' and specify the correct switch model number by simply selecting from available options shown and filling in the boxes. Consult factory for fully assembled switches.

'BUILD YOUR OWN SWITCH' ORDER FORMAT

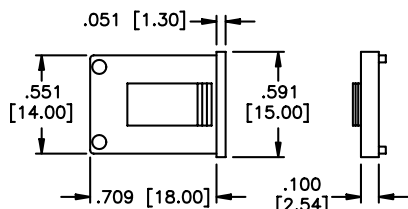
Series model	Code	PC board	Terminations	Standard colors
P I C O D				
	1 1 1 Decimal 1 3 1 BCD 1 3 7 BCD comp. 3 0 1 Hexadecimal 3 0 7 Hexadecimal comp. 4 0 0 Change-over	A K Short A L Long A L U Long (rt. angle) A L D Long (interrupted)	(NONE) L S with pc solder pins	2 Black housing & drum, white lettering.

Note: For code 111, only model **PICOD111AL2** is available.

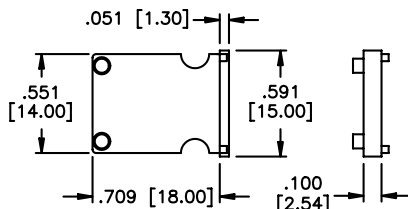
Example of complete model no.: **PICOD131AL2**

ACCESSORIES

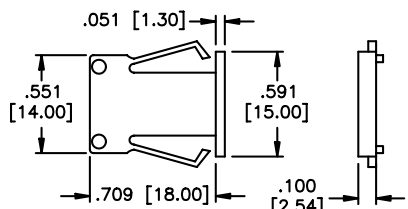
Order separately



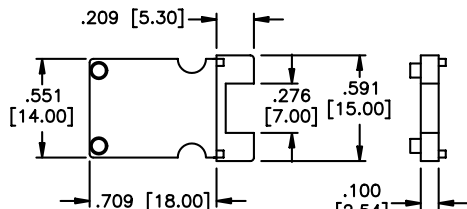
PICODP2 Pair of side covers



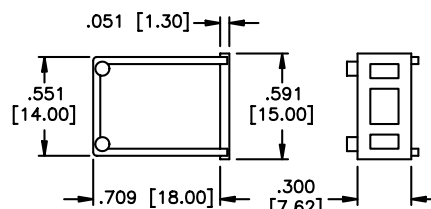
PICODA2 Spacer



PICODPK2 Pair of side covers



PICODAH2 Spacer



PICODL2 Dummy housing

PICODL2 Dummy switches

These are empty plastic housings with the same dimensions as PICOD model (see outline). Use to fill hole where switch is not needed.

PICORD Switches for rear mounting available on request.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Apem:](#)

[PICOD1311AKLS2](#) [PICOD1311AL2](#) [PICOD1311ALDLS2](#) [PICOD1311ALLS2](#)