PICO-D SERIES SUBMINIATURE PUSHWHEEL SWITCHES





SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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	$\overline{1}$	$\overline{2}$	$\overline{4}$	$\overline{8}$
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	$\overline{1}$	$\overline{2}$	$\overline{4}$	$\overline{8}$
0	●	●	●	●	●
1	●		●	●	●
2	●	●		●	●
3	●			●	●
4	●	●	●		●
5	●		●		●
6	●	●			●
7	●				●
8	●	●	●	●	
9	●		●	●	
A	●	●		●	
B	●			●	
C	●	●	●		
D	●		●		
E	●	●			
F	●				

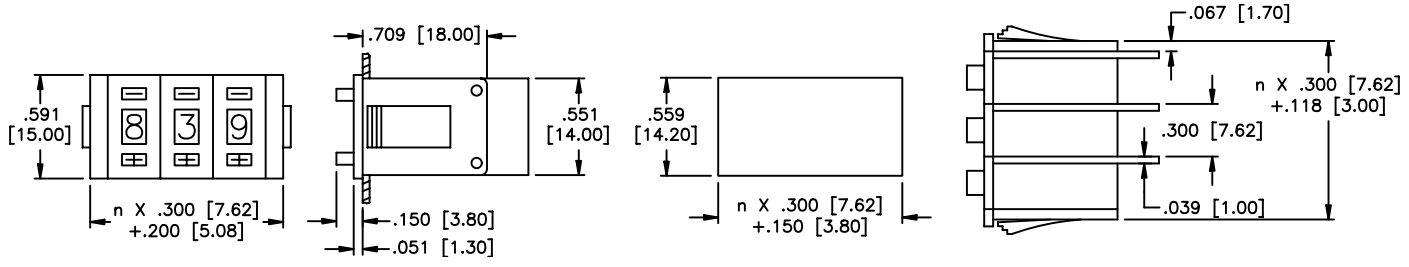
CODE 111 DECIMAL

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

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MECHANICAL OUTLINE WITH PANEL CUT-OUT & MOUNTING

n = number of switches



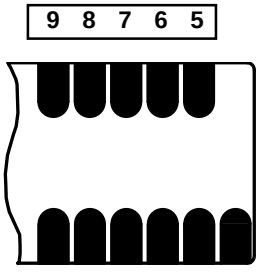
PIN CONNECTIONS

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

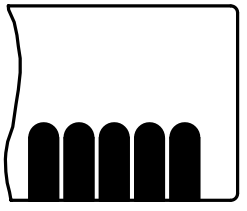
● The switching mode is shorting - i.e. - even during actuation, at least one output is connected to input C.



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



111	0	1	2	3	4	C



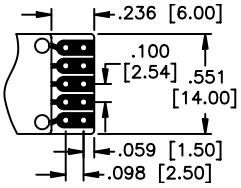
301	C	1	2	4	8
131	1	2	4	8	C
137	$\overline{2}$	$\overline{8}$	C	$\overline{1}$	$\overline{4}$

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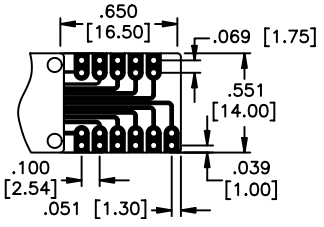
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

PRINTED CIRCUIT OPTIONS

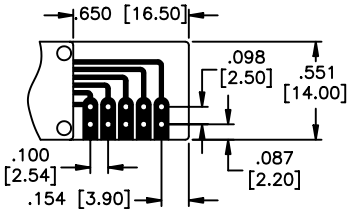
PC boards have .039" (1mm) holes and are suitable for soldering or socket connection (with the exception of LED illumination option).



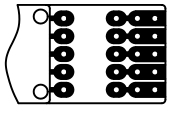
AK short pc board



AL long pc board for decimal version (solder terminal)

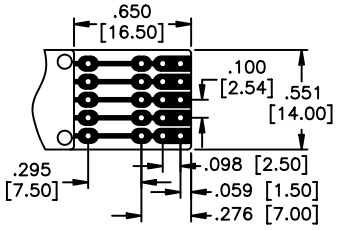


ALU long pc board

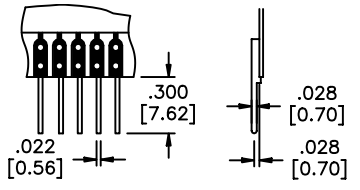


ALD long (interrupted) pc board

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				2

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

Code	
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

PC board	
A K	Short
A L	Long
A L U	Long (rt. angle)
A L D	Long (interrupted)

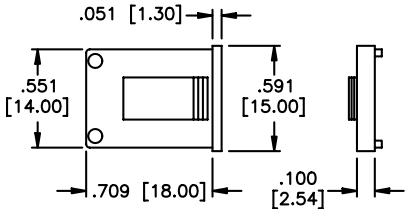
Terminations	
(NONE)	
L S	with pc solder pins

Standard colors: Black housing & drum, white lettering.

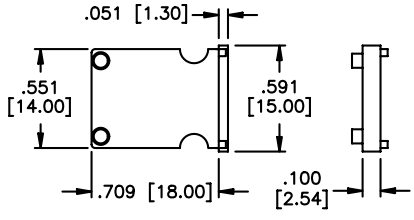
Example of complete model no.: PICOD131AL2

ACCESSORIES

Order separately



PICODP2 Pair of side covers

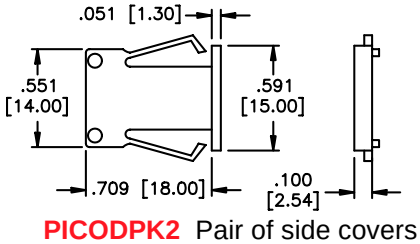


PICODA2 Spacer

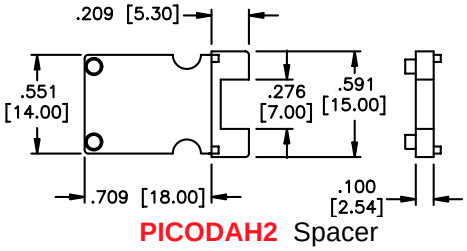
PICODL2 Dummy switches

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

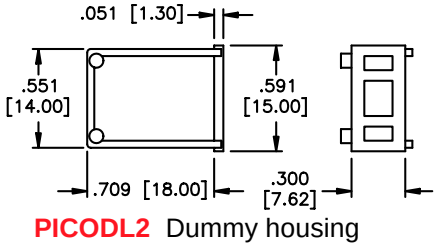
PICORD Switches for rear mounting available on request.



PICODPK2 Pair of side covers



PICODAH2 Spacer



PICODL2 Dummy housing