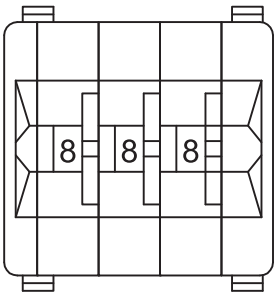
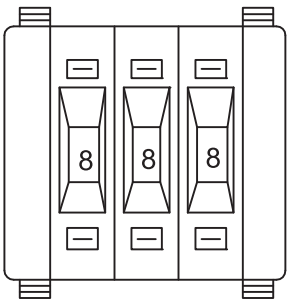
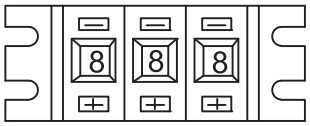
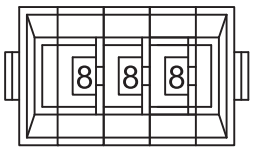








SPECIFICATIONS:

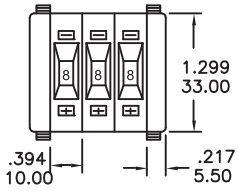
ELECTRICAL CAPACITY:
a.Operating Voltage: 50VAC/28VDC maximum.
b.Switching Current: 100mA maximum.
c.Carrying Current: 1A maximum(500mA max. for small size series).
Contact Resistance: (Per Method 307 of Mil-STD-202)
200mΩmaximum.
INSULATION RESISTANCE: (Per Method 302 of Mil-STD-202).
a.Between common terminal and any output: 10MΩminimum.
b.Between each output and non-current-carrying part: 1,000MΩminimum.
DIELECTRIC STRENGTH: (Per Method 301 of Mil-STD-202).
a.Between common terinal and any output: 800VAC 1 min.
b.Between each output and non-current-carrying part: 1,000VAC 1 min.
OPERATING TEMPERATURE: -20˚C to + 65˚C.
Life:
a.Mechanical: 200,000 detent operations.
b.Electrical: 100,000 detent operations.

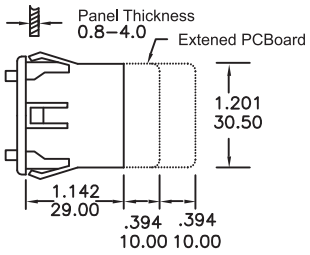
MATERIALS:

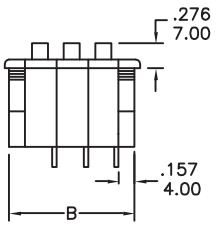
HOUSING, BLANKS ENDCAPS, WHEELS, PUSHKEY: Thermoplastic.
MOVING CONTACTS: Precious metal on phosphor bronze.
PRINTED CIRCUIT BOARDS: Hard gold plated over nickel plated on 0.79mm thickness epoxy laminate.

Specifications and Dimensions subject to change

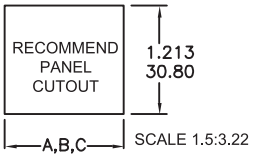
PF21





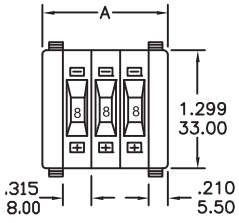


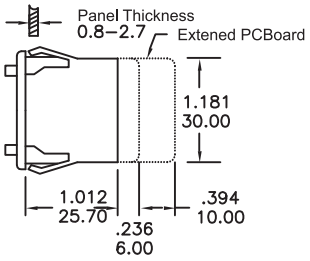
PANEL MOUNTING

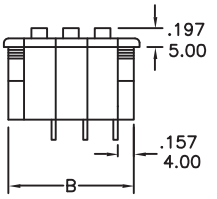


A = 10.00(.394) * N + 11.00(.433)
B = 10.00(.394) * N + 8.00(.315)
C = 10.00(.394) * N + 8.30(.327)
N = Number of Sections

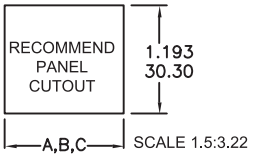
PF31







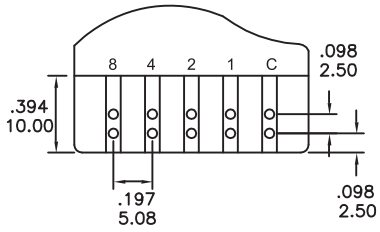
PANEL MOUNTING



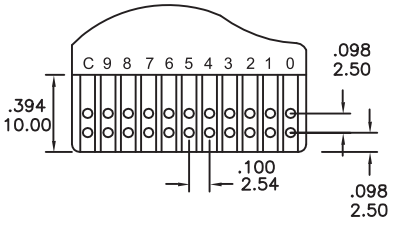
A = 8.00(.315) * N + 11.00(.433)
B = 8.00(.315) * N + 8.00(.315)
C = 8.00(.315) * N + 8.30(.327)
N = Number of Sections

TERMINATION OPTIONS

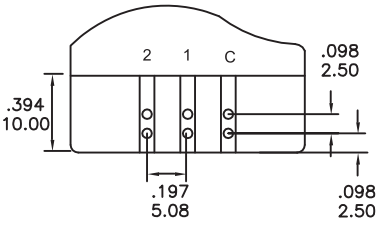
M1 BCD



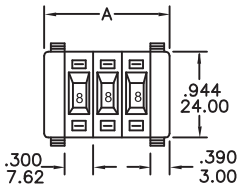
M2 DECIMAL

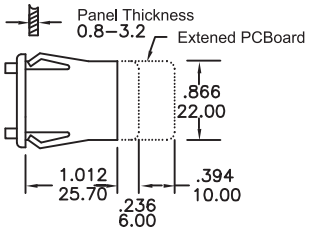


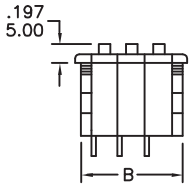
M3 REPEATING



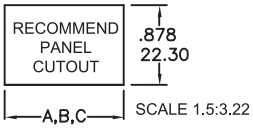
PF44







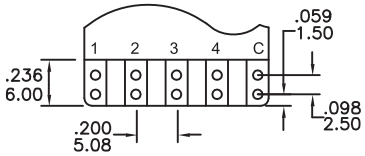
PANEL MOUNTING



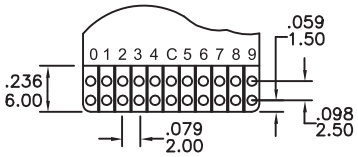
A = 7.62(.300) * N + 6.00(.236)
B = 7.62(.300) * N + 3.00(.118)
C = 7.62(.300) * N + 3.30(.130)
N = Number of Sections

TERMINATION OPTIONS

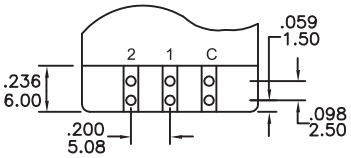
M1 BCD



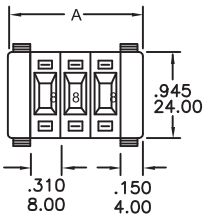
M2 DECIMAL

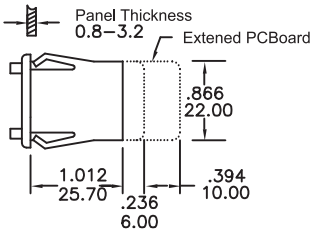


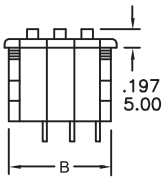
M3 REPEATING



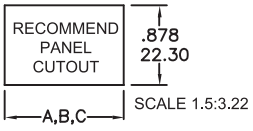
PF49







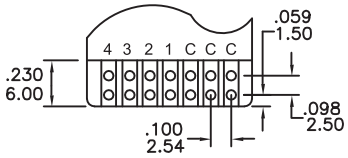
PANEL MOUNTING



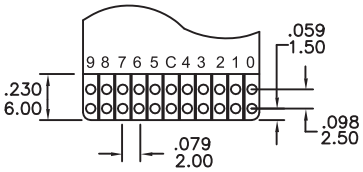
A = 8.00(.315) * N + 11.00(.433)
B = 8.00(.315) * N + 8.00(.315)
C = 8.00(.315) * N + 8.30(.327)
N = Number of Sections

TERMINATION OPTIONS

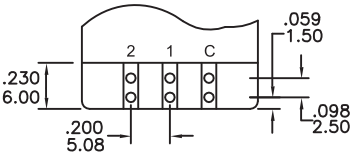
M1 BCD



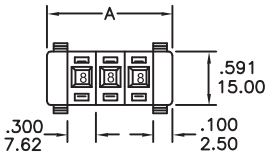
M2 DECIMAL

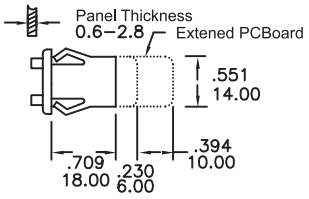


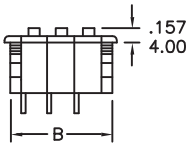
M3 REPEATING



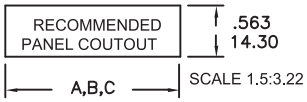
PF52





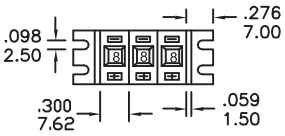


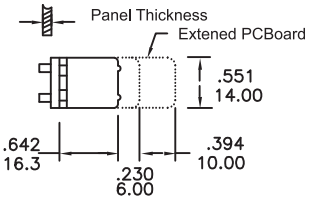
PANEL MOUNTING

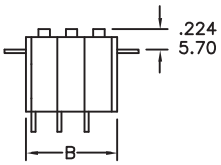


A = 7.62(.300) * N + 5.00(.197)
B = 7.62(.300) * N + 3.00(.118)
C = 7.62(.300) * N + 3.30(.130)
N = Number of Sections

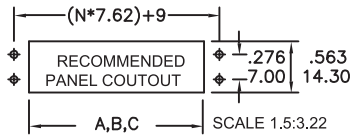
PR52







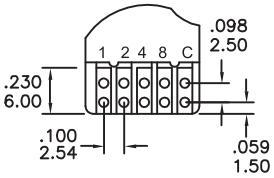
PANEL MOUNTING



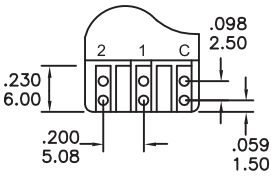
A = 7.62(.300) * N + 15.00(.591)
B = 7.62(.300) * N + 3.00(.118)
C = 7.62(.300) * N + 3.30(.130)
N = Number of Sections

TERMINATION OPTIONS

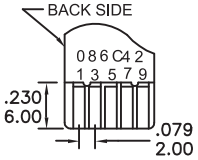
M1 BCD



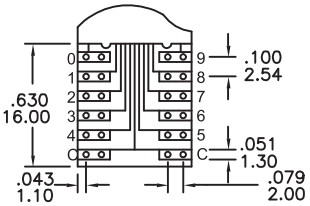
M2 REPEATING



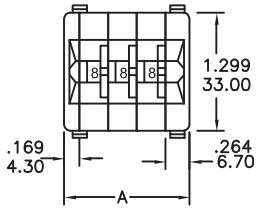
M3 DOUBLE SIDED PCB DECIMAL

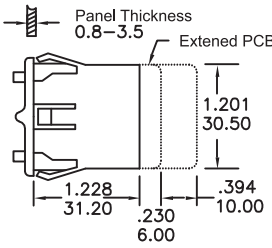


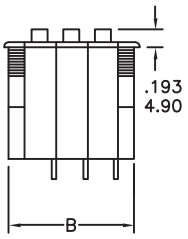
M4 DECIMAL



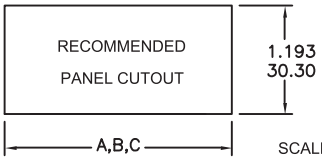
TF31







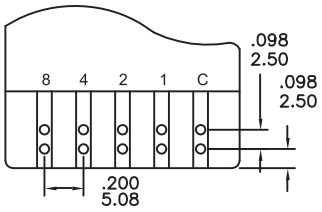
PANEL MOUNTING



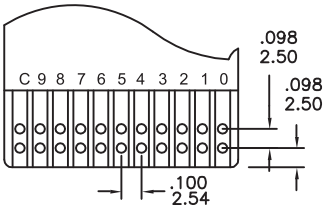
A = 8.00(.315) * N + 11.00(.433)
B = 8.00(.315) * N + 8.00(.315)
C = 8.00(.315) * N + 8.30(.327)
N = Number of Sections

TERMINATION OPTIONS

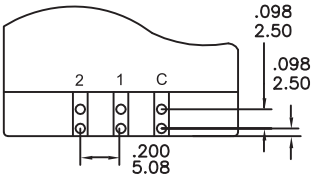
M1 BCD

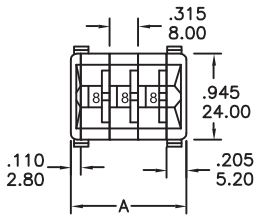


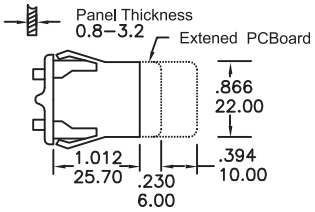
M2 DECIMAL

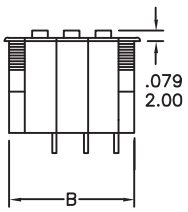


M3 REPEATING

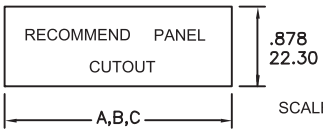








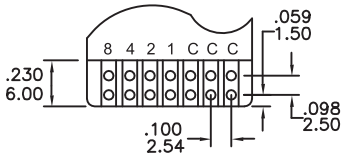
PANEL MOUNTING



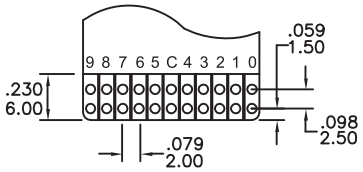
A = 8.00(.315) * N + 8.00(.315)
B = 8.00(.315) * N + 6.00(.236)
C = 8.00(.315) * N + 6.30(.248)
N = Number of Sections

TERMINATION OPTIONS

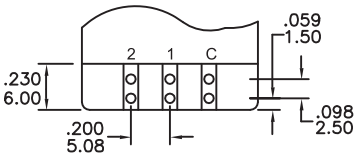
M1 BCD



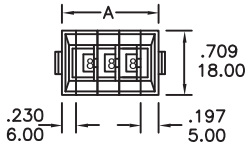
M2 DECIMAL

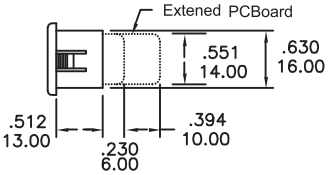


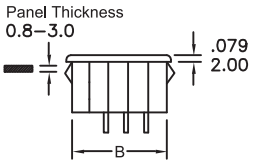
M3 REPEATING



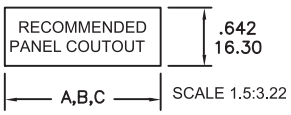
TF51





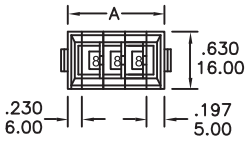


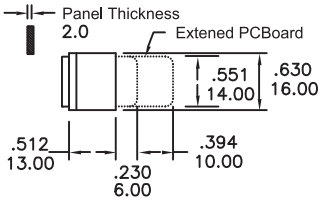
PANEL MOUNTING

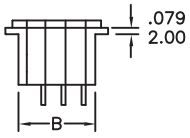


A = 6.00(.236) * N + 10.00 or 8.00(.394 or .315)
B = 6.00(.236) * N + 8.00 or 6.00(.315 or .236)
C = 6.00(.236) * N + 8.30 or 6.30(.327 or .248)
N = Number of Sections

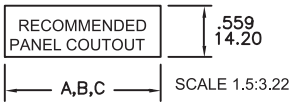
TR51







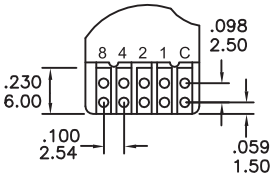
PANEL MOUNTING



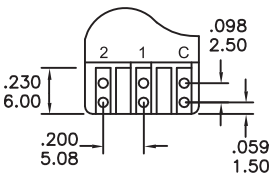
A = 6.00(.236) * N + 8.00(.315)
B = 6.00(.236) * N + 6.00(.236)
C = 6.00(.236) * N + 6.30(.248)
N = Number of Sections

TERMINATION OPTIONS

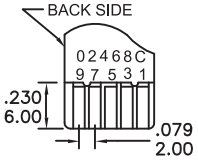
M1 BCD



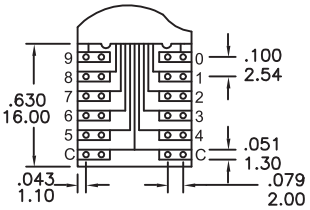
M2 REPEATING



M3 DOUBLE SIDED PCB DECIMAL

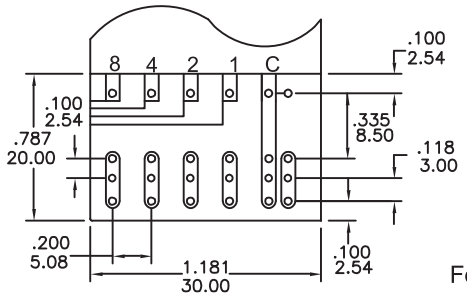


M4 DECIMAL



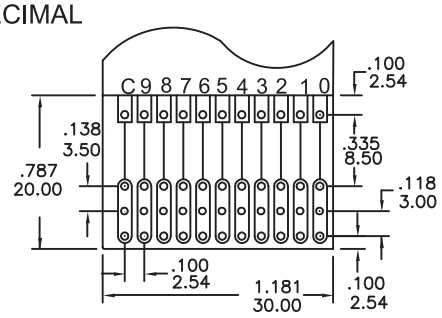
TERMINATION OPTIONS

M4 BCD

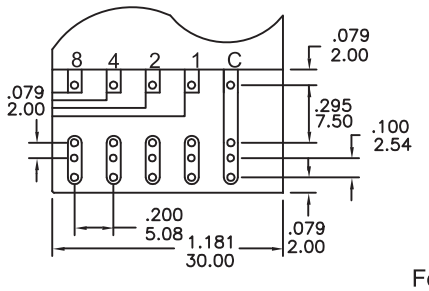


For PF21 Only

M5 DECIMAL

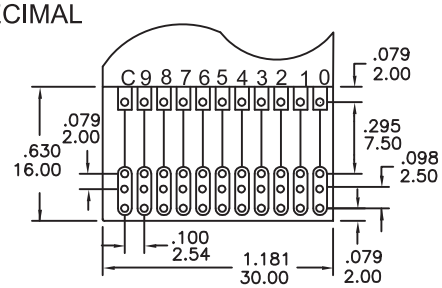


M4 BCD

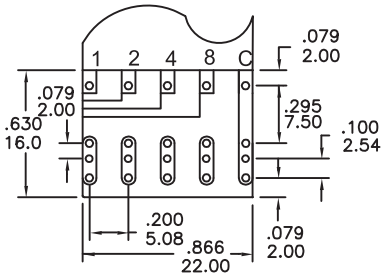


For PF31 TF31 Only

M5 DECIMAL

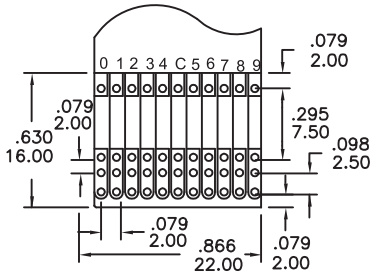


M4 BCD

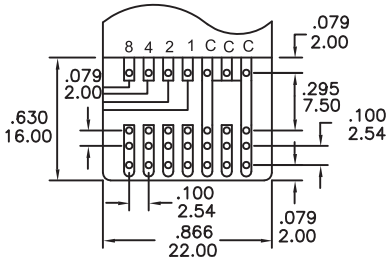


For PF44 Only

M5 DECIMAL

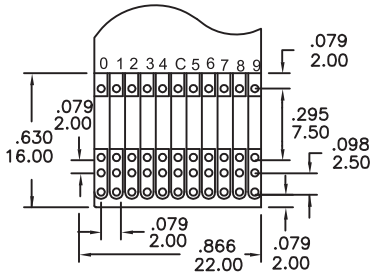


M4 BCD

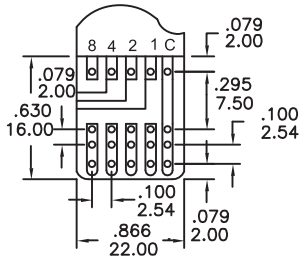


For PF49 TF41 Only

M5 DECIMAL

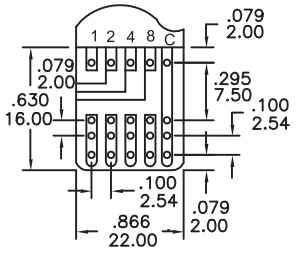


M4 BCD



For TR51 TF51 Only

M5 BCD



For PF52 PR52 Only

FUNCTION CODES

10
BCD-7 POSITION

WHEEL	C connected to terminals			
	1	2	4	C
0				●
1	●			●
2		●		●
3	●	●		●
4			●	●
5	●		●	●
6		●	●	●

11
BCD-8 POSITION

WHEEL	C connected to terminals			
	1	2	4	C
0				●
1	●			●
2		●		●
3	●	●		●
4			●	●
5	●		●	●
6		●	●	●
7	●	●	●	●

12
BCD-10 POSITION

WHEEL	C connected to terminals				
	1	2	4	8	C
0					●
1	●				●
2		●			●
3	●	●			●
4			●		●
5	●		●		●
6		●	●		●
7	●	●	●		●
8				●	●
9	●			●	●

13
BCD-16 POSITION

WHEEL	C connected to terminals				
	1	2	4	8	C
0					●
1	●				●
2		●			●
3	●	●			●
4			●		●
5	●		●		●
6		●	●		●
7	●	●	●		●
8				●	●
9	●			●	●
10		●		●	●
11	●	●		●	●
12			●	●	●
13	●		●	●	●
14		●	●	●	●
15	●	●	●	●	●

14
BCD-16 POSITION

WHEEL	C connected to terminals				
	1	2	4	8	C
0					●
1	●				●
2		●			●
3	●	●			●
4			●		●
5	●		●		●
6		●	●		●
7	●	●	●		●
8				●	●
9	●			●	●
A		●		●	●
B	●	●		●	●
C			●	●	●
D	●		●	●	●
E		●	●	●	●
F	●	●	●	●	●

22
DECIMAL-10 POSITION

WHEEL	C connected to terminals										
	0	1	2	3	4	5	6	7	8	9	C
0	●										●
1		●									●
2			●								●
3				●							●
4					●						●
5						●					●
6							●				●
7								●			●
8									●		●
9										●	●

31
BCD-10-COMPLEMENT POS.

WHEEL	C connected to terminals				
	$\overline{1}$	$\overline{2}$	$\overline{4}$	$\overline{8}$	C
0	●	●	●	●	●
1		●	●	●	●
2	●		●	●	●
3			●	●	●
4	●	●		●	●
5		●		●	●
6	●			●	●
7				●	●
8	●	●	●		●
9		●	●		●

51
+/- REPEATING

WHEEL	C connected to terminals		
	1	2	C
+	●		●
-		●	●
+	●		●
-		●	●
+	●		●
-		●	●
+	●		●
-		●	●
+	●		●
-		●	●

52
0/1 REPEATING

WHEEL	C connected to terminals		
	1	2	C
0	●		●
1		●	●
0	●		●
1		●	●
0	●		●
1		●	●
0	●		●
1		●	●
0	●		●
1		●	●

53
0/5 REPEATING

WHEEL	C connected to terminals		
	1	2	C
0	●		●
5		●	●
0	●		●
5		●	●
0	●		●
5		●	●
0	●		●
5		●	●
0	●		●
5		●	●

COLOR OPTIONS

Colors / Parts \ No.	1	2	3	4	5	6	7	8	9	0
Housing	B	B	B	G	G	G	I	I	I	Others
Wheel	B	B	R	B	B	R	B	B	R	
Character	W	W	W	W	W	W	W	W	W	
Push key	B	I	B	B	G	B	I	B	I	

B: Black
G: Gray
I: Ivory
R: Red
W: White

HOW TO ORDER

Series	Model No.	Termination	Function Code	Color
900				