Product Range

Rotary Switches

- **Wire hooking versions:**
  MRC Series
- **PCB versions:**
  MRJ and 6000 Series

Main features:

- Adjustable stop on 1, 2 and 3 pole
- Different output coding
- Wiping contacts
- Metal shaft
- with or without knob
- PCB terminal versions
- Splashproof versions

MRC Series, 500m Amp . . . . . .page I2

MRJ Series, 0.4 VA . . . . . .page I5

6000 Series . . . . . .page I8

Catalogue No. 8-1773450-9
Issued 09/2008

Dimensions are in mm and inches and are shown for reference purposes only.

Specifications subject to change.

MRC Series, 500m Amp

Features

- **36° throw**
- **Adjustable stop on 1, 2, and 3 pole**
- **Insert molded terminals**
- **Wiping contacts**

Typical performance characteristics

Contact timing . . . . . non-shorting
Contact rating . . . . . 500 mA @ 125 VAC or 28 VDC resistive
Electrical life . . . . . up to 10,000 cycles @ full contact rating
. . . . . up to 25,000 cycles @ 150 mA @125 VAC
. . . . . or 250 mA @ 28 VDC
Contact resistance, initial . . . . . 50 mOhms max.
Insulation resistance. . . . . 100 MOhms min.
Dielectric strength . . . . . 1,000 Vrms @ sea level
Rotation torque . . . . . 9.8 Ncm max
Plunger/actuator travel . . . . . 36°

Environmental specification

Operating temperature . . . . . -20°C to 80°C
Storage temperature . . . . . -20°C to 100°C
Solder heat resistance . . . . . manual: 270°C for 3 seconds
. . . . . wave: 245°C for 3 seconds

Material specifications

Contacts. . . . . silver
Case material . . . . . aluminum
Actuator material . . . . . brass
Terminals/fixed contacts. . . . . silver plated brass
Terminal seal . . . . . insert molded, DAP base
Bushing . . . . . nickel plated brass

Product key

Typical product key: **MRC** **110** **04**

Type
MRC Rotary switches, 500m Amp

Number of poles, positions
110 1 pole, 2 to 10 positions
25 2 poles, 2 to 5 positions
33 3 poles, 2 to 3 positions
42 4 poles, 2 positions (fixed)

Knob
S shaft, no knob
blank knob included

Material
04 RoHS compliant

Catalogue No. 8-1773450-9
Issued 09/2008

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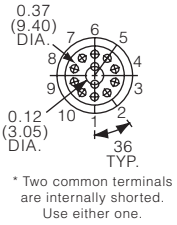
Specifications subject to change.

MRC Series, 500m Amp (Continued)

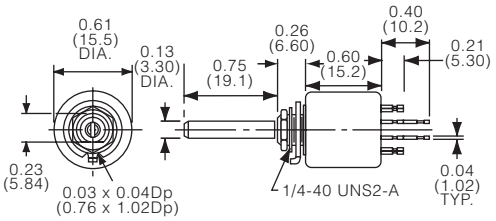
Number of poles, positions

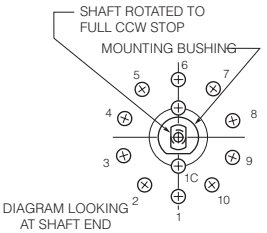
110 1 pole, 2-10 positions, shaft without knob

MRC110S04



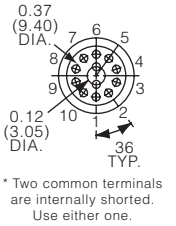
* Two common terminals are internally shorted. Use either one.



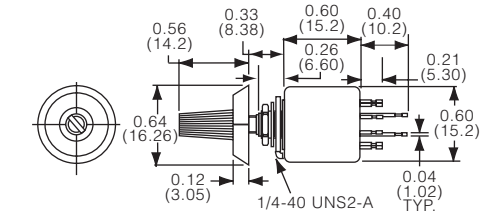


110 1 pole, 2-10 positions, with knob

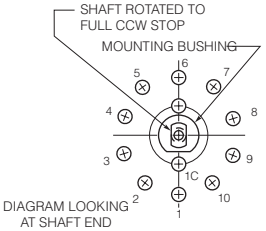
MRC11004



* Two common terminals are internally shorted. Use either one.

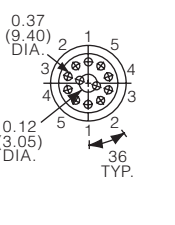


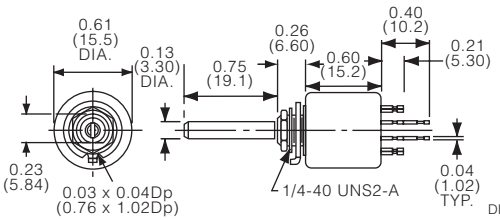
Knob not sold separately

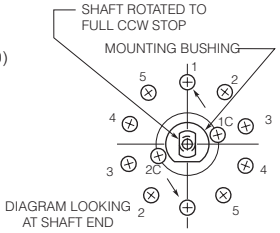


25 2 pole, 2-5 positions, shaft without knob

MRC25S04

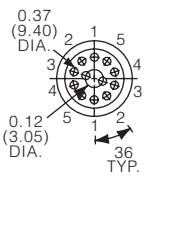


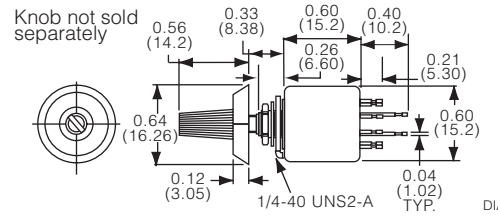


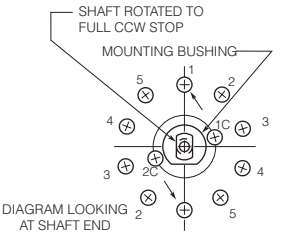


25 2 pole, 2-5 positions, with knob

MRC2504

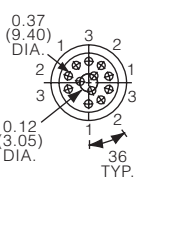


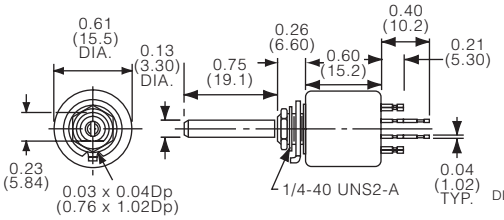


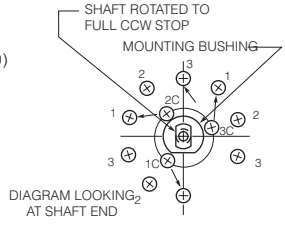


33 3 pole, 2-3 positions, shaft without knob

MRC33S04







Catalogue No. 8-1773450-9
Issued 09/2008

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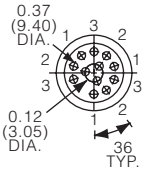
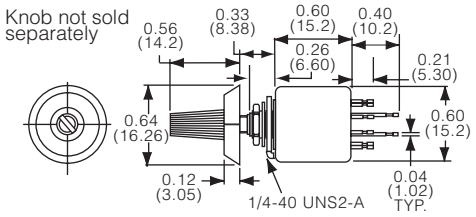
Specifications subject to change.

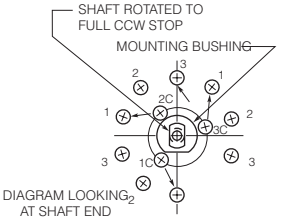
MRC Series, 500m Amp (Continued)

33 3 pole, 2-3 positions, with knob

MRC3304

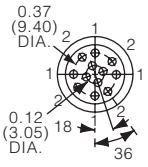


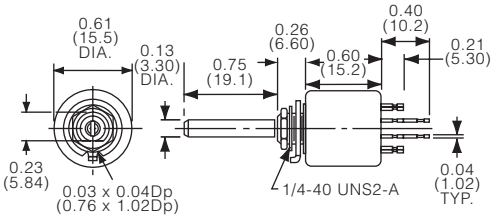


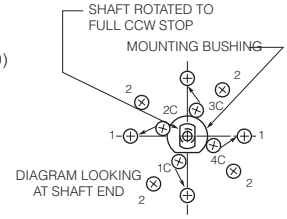


42 4 pole, 2 positions, shaft without knob

MRC42S04

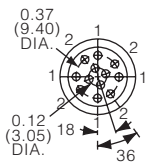


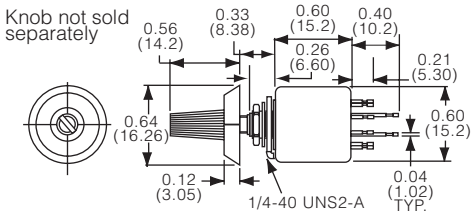


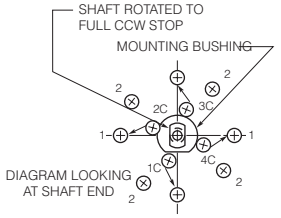


42 4 pole, 2 positions, with knob

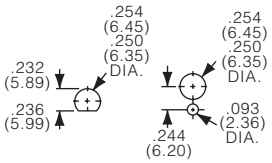
MRC4204







Mounting



Product key	Poles	Positions	Knob	Part Number
MRC11004	1 pole	2 to 10	yes	1825495-1
MRC110S04			no	1825496-1
MRC2504	2 pole	2 to 5	yes	1825497-1
MRC25S04			no	1825498-1
MRC3304	3 pole	2 to 3	yes	1825499-1
MRC33S04			no	1825500-1
MRC4204	4 pole	2 (fixed)	yes	1825501-1
MRC42S04			no	1825502-1

Catalogue No. 8-1773450-9
Issued 09/2008

Dimensions are in mm and inches and are shown for reference purposes only.
Specifications subject to change.
www.tycoelectronics.com

MRJ Series, 0.4 VA

Features

- **30° throw**
- **PC mount**
- **Splashproof versions**

Typical performance characteristics

Contact timing . . . . . non-shorting
Contact rating . . . . . 0.4 VA max. @ 20 VDC or peak VAC
Electrical life . . . . . up to 10,000 cycles @ full contact rating
. . . . . up to 30,000 cycles @ 0.1 mA,12 VDC
Contact resisitance, initial . . . . . 30 mOhms max.
Insulation resistance . . . . . 10,000 MOhms min.
Dielectric strength . . . . . 1,000 Vrms @ sea level
Rotation torque . . . . . 100 Nmm (14 inch oz) max.
Plunger/actuator travel . . . . . 30°C

Environmental specification

Operating temperature . . . . . -20°C to 70°C
Storage temperature . . . . . -20°C to 70°C
Solder heat resistance . . . . . 285°C ± 3°C for 15 seconds

Material specifications

Contacts . . . . . gold plate over nickel plate
Case material . . . . . zinc die cast
Actuator material . . . . . brass
Terminals/fixed contacts . . . . . gold plated
Terminal seal . . . . . molded-in epoxy base
Process seal . . . . . MRJB and MRJE

Product key

Typical product key: **MRJ** **B** **112** **04**

Type
MRJ Rotary switches, 0.4 VA

Actuator shaft
blank standard shaft
E standard shaft, splashproof
B screwdriver slot, splashproof

Number of poles, positions
standard
112 1 pole, 2 to 12, adjustable or continuous rotation
26 2 poles, 2 to 6, adjustable
34 3 poles, 2 to 4, adjustable
43 4 poles, 2 to 3, adjustable
splashproof
112 1 pole, 12 continuous rotation (splashproof)
26 2 poles, 6 fixed (splashproof)
34 3 poles, 4 fixed (splashproof)
43 4 poles, 3 fixed (splashproof)

Material
04 RoHS compliant

Catalogue No. 8-1773450-9
Issued 09/2008

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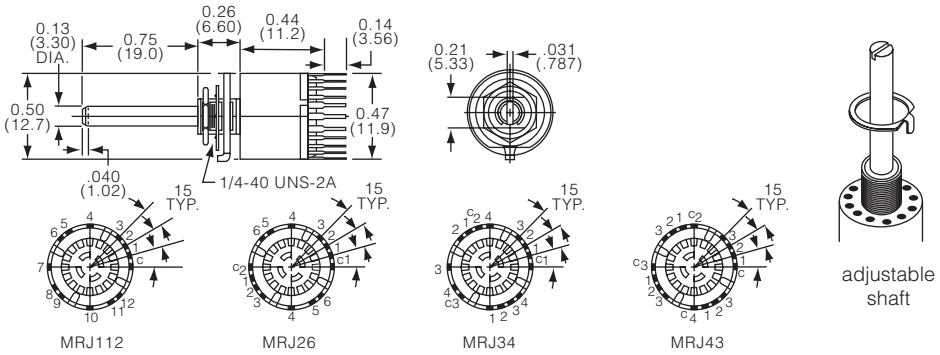
Specifications subject to change.

MRJ Series, 0.4 VA (Continued)

Actuator shaft

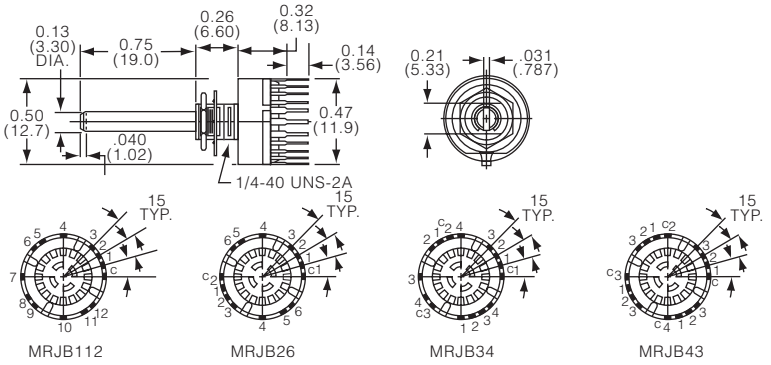
blank **standard shaft, adjustable**

MRJ2604



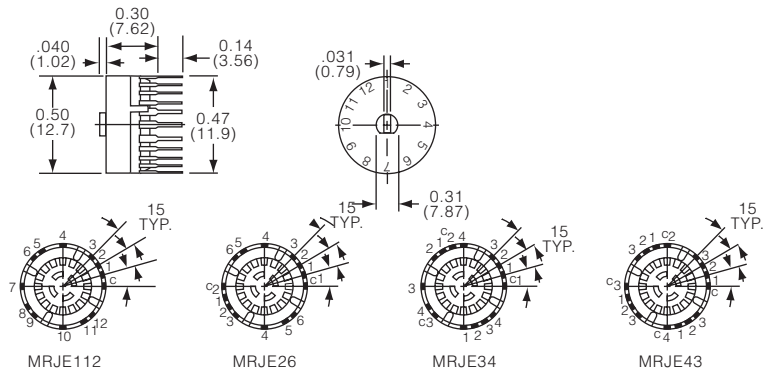
E **standard shaft, plashproof**

MRJE2604

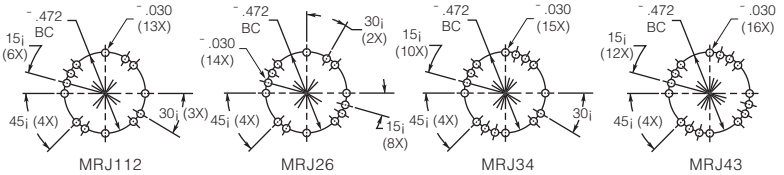


B **screwdriver slot, splashproof**

MRJB2604

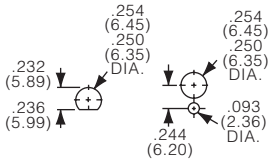


Mounting



MRJ Series, 0.4 VA (Continued)

Mounting



Product key	Actuator shaft	Poles	Positions	Pos. conditions	Part Number
MRJ11204	standard shaft	1 pole	2 to 12 or 12	adjustable or cont. rot.	1825535-1
MRJ2604		2 pole	2 to 6	adjustable	1825535-2
MRJ3404		3 pole	2 to 4		1825535-3
MRJ4304		4 pole	2 to 3		1825535-4
MRJB11204	standard shaft	1 pole	12	continous rotation	1825536-1
MRJB2604	splashproof	2 pole	6	fixed	1825536-2
MRJB3404		3 pole	4		1825536-3
MRJB4304		4 pole	3		1825536-4
MRJE11204	screwdriver slot	1 pole	12	continous rotation	1825537-1
MRJE2604	splashproof	2 pole	6	fixed	1825537-2
MRJE3404		3 pole	4		1825537-3
MRJE4304		4 pole	3		1825537-4

Catalogue No. 8-1773450-9
Issued 09/2008

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Specifications subject to change.

6000 Series

Features

- **Compact design**
- **Positive detent action**
- **Variety of outputs**
- **Large readable characters**

Typical performance characteristics

Contact timing . . . . . non-shorting
Contact rating . . . . . 0.4 VA max. @ 20 VDC or peak VAC
Electrical life . . . . . 10,000 cycles @ full contact rating
. . . . . 30,000 cycles @ 0.1 mA,12 VDC
Contact resistance, initial . . . . . 30 mOhms max.
Insulation resistance . . . . . 10,000 MOhms min.
Dielectric strength . . . . . 1,000 Vrms @ sea level
Rotation torque . . . . . 100 Nmm (14 inch oz) max.
Plunger/actuator travel . . . . . 30°
Product specification 108-7514
Instruction sheet 408-7523
Application specification 114-7005

Environmental specification

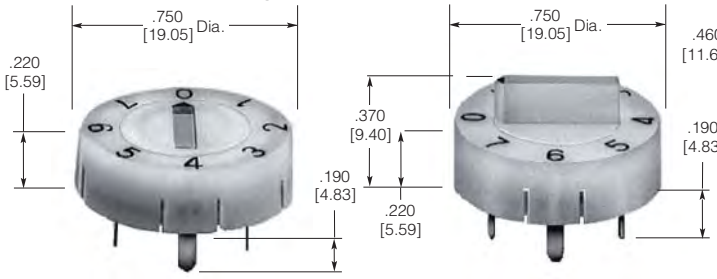
Operating temperature . . . . . -18°C to 88°C
Storage temperature . . . . . -45°C to 88°C
Humidity . . . . . +40°C and 95% RH for 96 hours

Material specifications

Contacts . . . . . phosphor bronze, gold over nickel plated
Solder tabs and pins . . . . . beryllium copper, tin plated
Coded switches . . . . . beryllium copper, tin plated
Single pole switches . . . . . brass, tin plated
Structural parts . . . . . thermoplastic

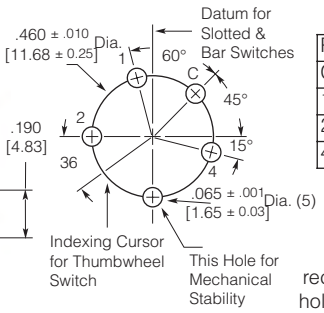
6000 Series, rotary switches, pc mount

8 position, binary coded octal (BCO) Part Numbers 435174-1, 1-435174-1



screwdriver/coin actuated
Part Number 435174-1

bar type knob
Part Number 1-435174-1



Pos	0	1	2	3	4	5	6	7
C	■	■	■	■	■	■	■	■
1		■		■		■		■
2			■	■			■	■
4					■	■	■	■

recommended pc board
hole pattern (switch side)

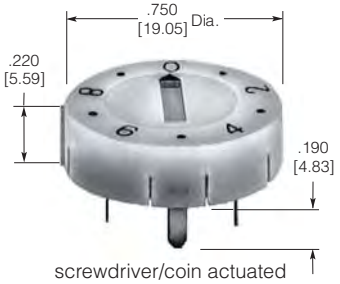
Catalogue No. 8-1773450-9
Issued 09/2008

Dimensions are in mm and inches and are shown for reference purposes only.

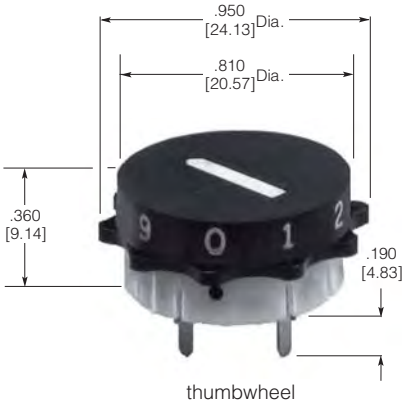
Specifications subject to change.

6000 Series (Continued)

10 position, binary coded decimal (BCD) Part Numbers 435005-1, 435123-1, 435128-1

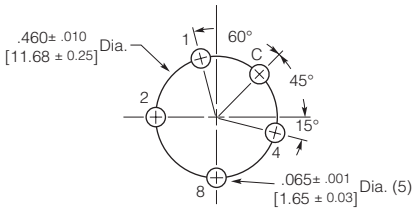


screwdriver/coin actuated
Part Number 435005-1

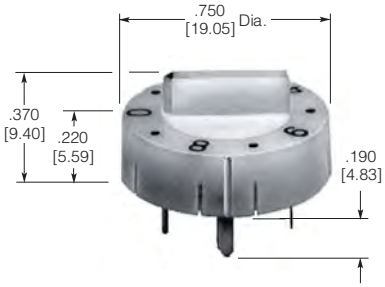


thumbwheel
Part Number 435128-1

recommended pc board
hole pattern (switch side)

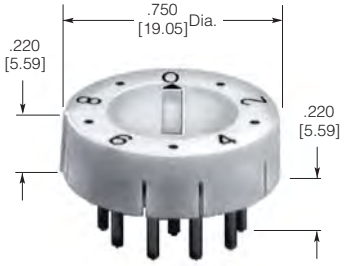


Pos.	0	1	2	3	4	5	6	7	8	9
C	■	■	■	■	■	■	■	■	■	■
1		■		■		■		■		■
2			■	■			■	■		
4					■	■	■	■		
8									■	■

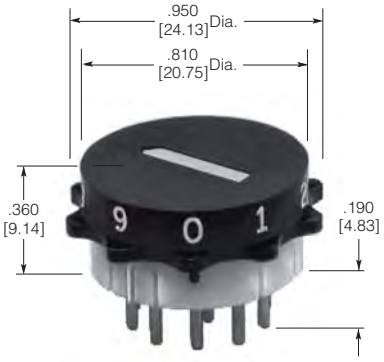


bar type knob
Part Number 1-435123-1

10 position, single pole Part Numbers 1-435097-1, 2-435097-1, 435097-1, 435097-2

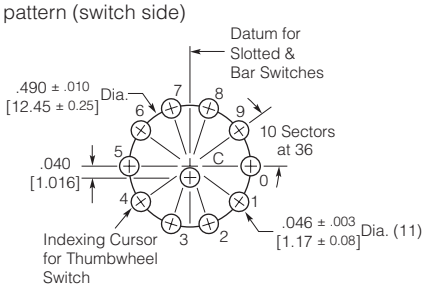


screwdriver/coin actuated
Part Number 1-435097-1

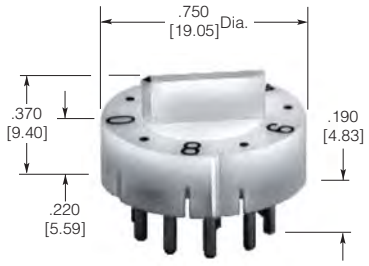


thumbwheel
Part Number 435097-1 (shown)
Part Number 435097-2 (with numbers 1-10)

recommended pc board
hole pattern (switch side)



P.	0	1	2	3	4	5	6	7	8	9
C	■	■	■	■	■	■	■	■	■	■
0	■									
1		■								
2			■							
3				■						
4					■					
5						■				
6							■			
7								■		
8									■	
9										■



bar type knob
Part Number 2-435097-1

Catalogue No. 8-1773450-9
Issued 09/2008

Dimensions are in mm and inches and are shown for reference purposes only.
Specifications subject to change.
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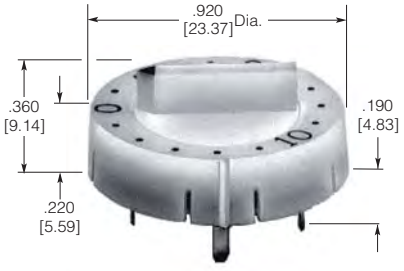
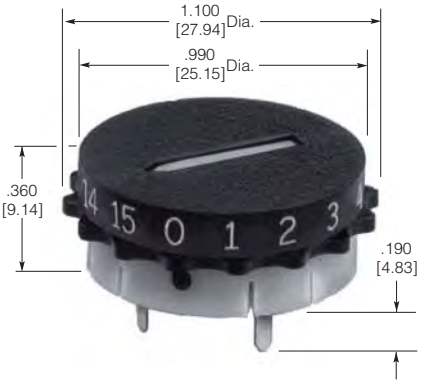
6000 Series (Continued)

16 position, hexadecimal Part Numbers 1-435167-1, 2-435167-1

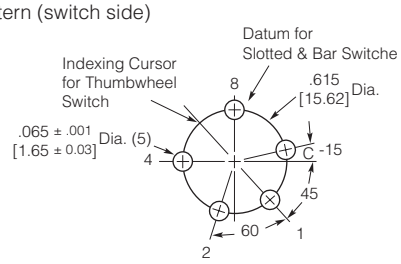


bar type knob
Part Number 1-435167-1



thumbwheel
Part Number 2-435167-1

recommended pc board
hole pattern (switch side)



P.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1		■		■		■		■		■		■		■		■
2			■	■			■	■			■	■			■	■
4					■	■	■	■					■	■	■	■
8									■	■	■	■	■	■	■	■

Positions	Actuator type	Coding	Part Number
10	screwdriver/coin	single pole	1-435097-1
16	bar	hexadecimal	1-435167-1
8		binary coded octal	1-435174-1
10		single pole	2-435097-1
16	thumbwheel	hexadecimal	2-435167-1
10	screwdriver/coin	BCD	435005-1
10	thumbwheel	single pole	435097-1
10	bar	BCD	435123-1
8	screwdriver/coin	binary coded octal	435174-1