

Table of Contents

| | |
|-----------------------------------|---|
| Exploded Views and Glossary | 2 |
| Ordering Methods | 3 |

C
M
E
T
R
I
C

| | |
|--------------------------------|-------|
| C Series Selector Guide | 4 |
| Enclosed Frame Worksheet | 5 |
| C1 Series | 6-7 |
| C2/C3 Series | 8-9 |
| C4 Series | 10-11 |
| C5/C6 Series | 12-13 |
| C7 Series | 14-15 |

C
M
E
T
R
I
C

D
M
E
T
R
I
C

| | |
|-------------------------------|-------|
| D Series Selector Guide | 16-17 |
| D1 Series | 18-19 |
| D2 Series | 20-21 |
| D3 Series | 22-23 |
| D4 Series | 24-25 |
| D5 Series | 26-27 |
| D6 Series | 28-29 |
| D7 Series | 30-31 |
| D8 Series | 32-33 |
| D9 Series | 34-35 |

D
M
E
T
R
I
C

E
M
E
T
R
I
C

| | |
|-------------------------------|-------|
| E Series Selector Guide | 36 |
| E1 Series | 37 |
| E2 Series | 38 |
| E3 Series | 39 |
| E4 Series | 40-41 |
| E5 Series | 42-43 |

E
M
E
T
R
I
C

M
M
E
T
R
I
C

| | |
|-------------------------------|-------|
| M Series Selector Guide | 44 |
| Open Frame Worksheet | 45 |
| M4 Series | 46-47 |
| M5 Series | 48-49 |
| M6 Series | 50-51 |
| M7 Series | 52-53 |

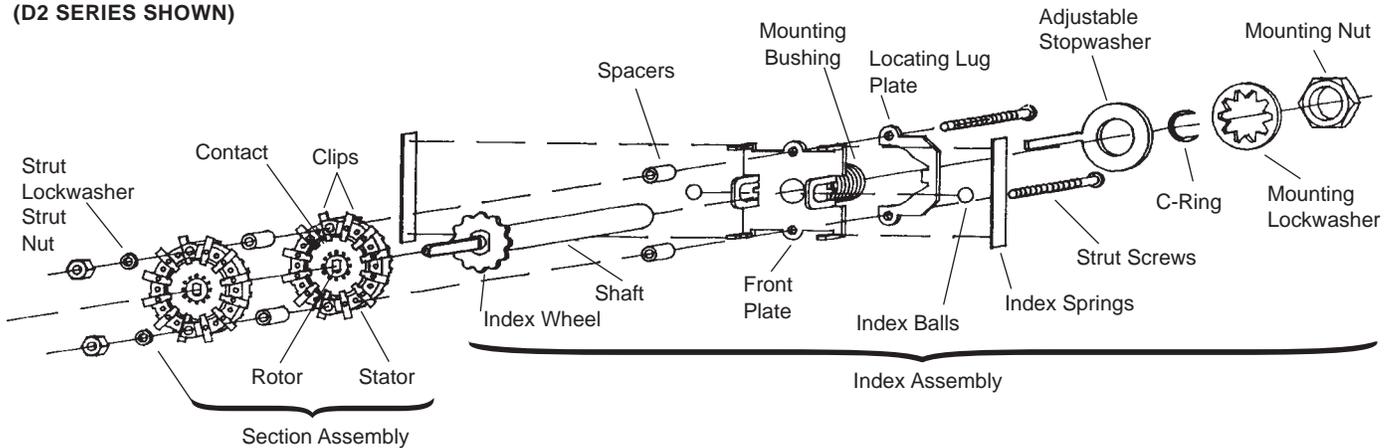
M
M
E
T
R
I
C

| | |
|------------------------------------|-------|
| Assemblies, Index Assemblies | 54 |
| Knobs and Dial Plates | 54A |
| Figures/Circuit Diagrams | 55-58 |
| ELECTROSWITCH History | 59 |

EXPLODED VIEWS AND GLOSSARY

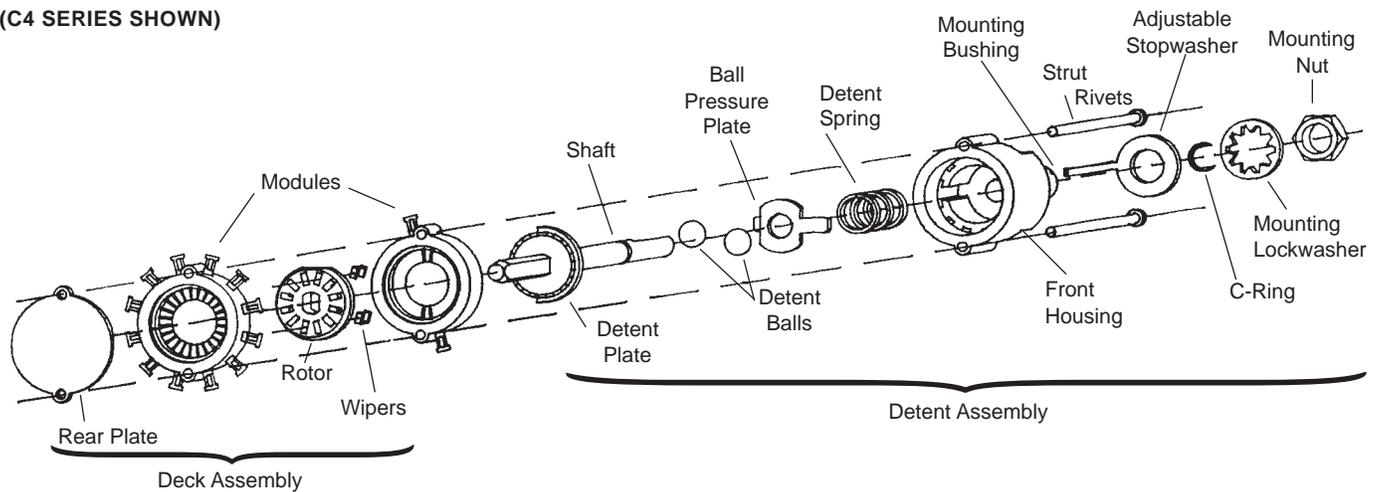
EXAMPLE OF OPEN FRAME CONSTRUCTION

(D2 SERIES SHOWN)



EXAMPLE OF ENCLOSED FRAME CONSTRUCTION

(C4 SERIES SHOWN)



GLOSSARY

Ceramic - Used for stators, an inorganic, non-metallic material processed at high temperatures.

Contact Resistance - The interface resistance between a clip and contact or a wiper and a contact.

Diallyl Phthalate - Used for stators and modules, a thermosetting plastic.

Dielectric Strength - The maximum voltage a section or deck assembly can handle.

Glass Epoxy - Used for stators, a fiberglass material.

Index and Detent Assembly - Performs the mechanical functions of the switch.

Index Angle - The number of degrees between positions.

Insulation Resistance - The resistance of the stator or module between switching components on the stator or module.

Non-Shorting - Also known as break before make.

Pole - An electrically isolated switching circuit. (Common).

Polyester - Used for modules and switch bodies - a thermosetting or thermoplastic resin.

Positions - The mechanical indexing of the electrical circuits. (Throw).

Section and Module Assembly - Performs the electrical functions of the switch.

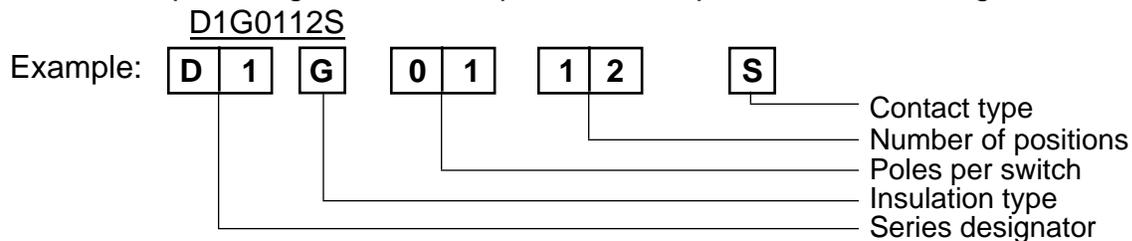
Shorting - Also known as make before break.

Stop Strength - The maximum rotation force the mechanical stop can facilitate.

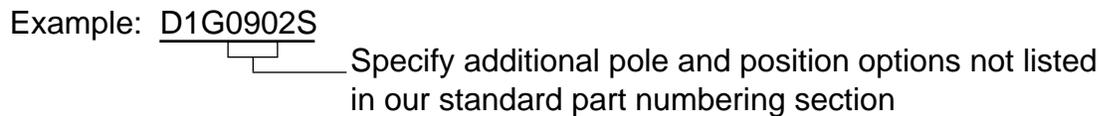
ORDERING METHODS

Determine the most applicable switch construction (C) enclosed, (D) open frame, (E) special purpose or (M) military, and then use the appropriate selector guide to determine the desired series. There are four ways to select a switch from the catalog.

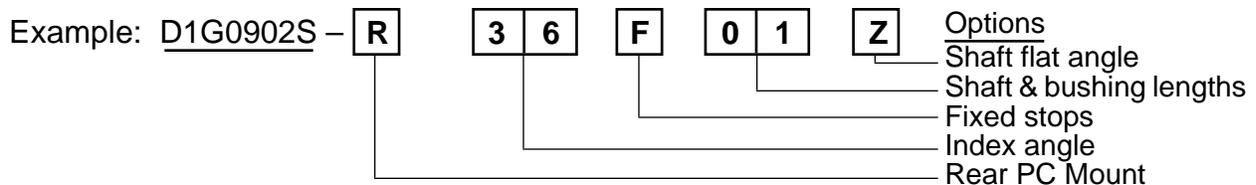
- 1. Use the pre-designed standard part numbers printed in the catalog.



- 2. Use the “How to Order Additional Options” section located with each series to specify the switch requirements with standard options.



- 3. Use the “How to Order Additional Options” to add additional options to either a standard part number or a standard option part number.



- 4. Contact the factory or your local representative of Electroswitch. Electroswitch designs and manufactures thousands of custom rotary switches, including “high volume one of a kind” designs. Open and enclosed frame worksheets are provided on pages 5 and 45 to help communicate your requirements.

Example: D1G0902S- Factory Assigned

SELECTOR GUIDE

ENCLOSED ROTARY ELECTRONIC SWITCHES



CHARACTERISTICS

SERIES C1

SERIES C2

SERIES C3

SERIES C4

SERIES C5 / C6

SERIES C7

| | | | | | | |
|---------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Page Number | 6,7 | 8,9 | 8,9 | 10,11 | 12,13 | 14,15 |
| Construction | ENCLOSED | ENCLOSED | ENCLOSED | ENCLOSED | ENCLOSED | ENCLOSED |
| Diameter | 21.97 mm wide | 20.83 mm wide | 30.48 mm wide | 38.1 mm | 23.37 mm | 51.6 mm |
| Positions | 2 - 12 | 2 - 8 | 2 - 12 | 2 - 12 | 2 - 12 | 2 - 24 |
| Current and Voltage | 0.1A @ 125 VAC 0.25A @ 28 VDC | 0.1A @ 125 VAC 0.25A @ 28 VDC | 0.1A @ 125 VAC 0.25A @ 28 VDC | 0.3A @ 125 VAC 0.5A @ 28 VDC | 1.0A @ 125 VAC 1.0A @ 28 VDC | 0.5A @ 125 VAC 1.0A @ 28 VDC |
| Current Carrying Capacity | 6A | 6A | 6A | 15A | 5A | 25A |
| Dielectric Strength | 600 VAC | 1,000 VAC | 1,000 VAC | 1,000 VAC | 1,000 VAC | 1,000 VAC |
| Insulation Resistance (megohms) | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Contact Resistance (milliohms) | 5 | 30 | 30 | 3 | 20 | 3 |
| Insulation - Glass Epoxy | NO | NO | NO | YES ★ | NO | NO |
| Diallyl Phthalate | STANDARD | NO | NO | STANDARD | NO | STANDARD |
| Ceramic | NO | NO | NO | NO | NO | NO |
| Polyester | NO | STANDARD | STANDARD | NO | STANDARD | NO |
| Contacts - Silver Alloy ★ | YES | NO | NO | YES | NO | YES |
| Brass/Silver Plate | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD |
| Stop Strength (Min.) | 0.9 Nm | 0.9 Nm | 0.9 Nm | 2.82 Nm | 0.51 Nm | 2.82 Nm |
| Mechanical Life | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles |
| Detenting Angles: 15° | — | — | — | — | — | 15 |
| 30° | 30 | 30 | 30 | 30 | 30 | 30 |
| 36° | — | — | — | 36 | — | — |
| 45° | — | — | — | 45 | — | — |
| 60° | 60 | 60 | 60 | 60 | — | 60 |
| 90° | 90 | 90 | 90 | 90 | — | 90 |
| Quick Connect | NO | NO | NO | YES | NO | YES |
| Rear PC Mount | YES | NO | NO | YES | YES | NO |
| Vertical PC Mount ★ | YES | YES | YES | YES | NO | NO |
| Front PC Mount ★ | NO | NO | NO | YES | NO | NO |
| Dual Concentric Designs ★ | YES | YES | YES | YES | NO | YES |
| Keylock ★ | YES | YES | YES | YES | NO | YES |
| Spring Return ★ | NO | NO | NO | YES | NO | NO |
| Water Resistant Seals ★ | YES | YES | YES | YES | YES | YES |

★ Contact factory



ELECTROSWITCH • ELECTRONIC PRODUCTS
UNIT OF ELECTRO SWITCH CORP.

2010 Yonkers Road, Raleigh, NC 27604

ENCLOSED FRAME WORKSHEET

SERIES PREFERRED _____

ELECTRICAL REQUIREMENTS:

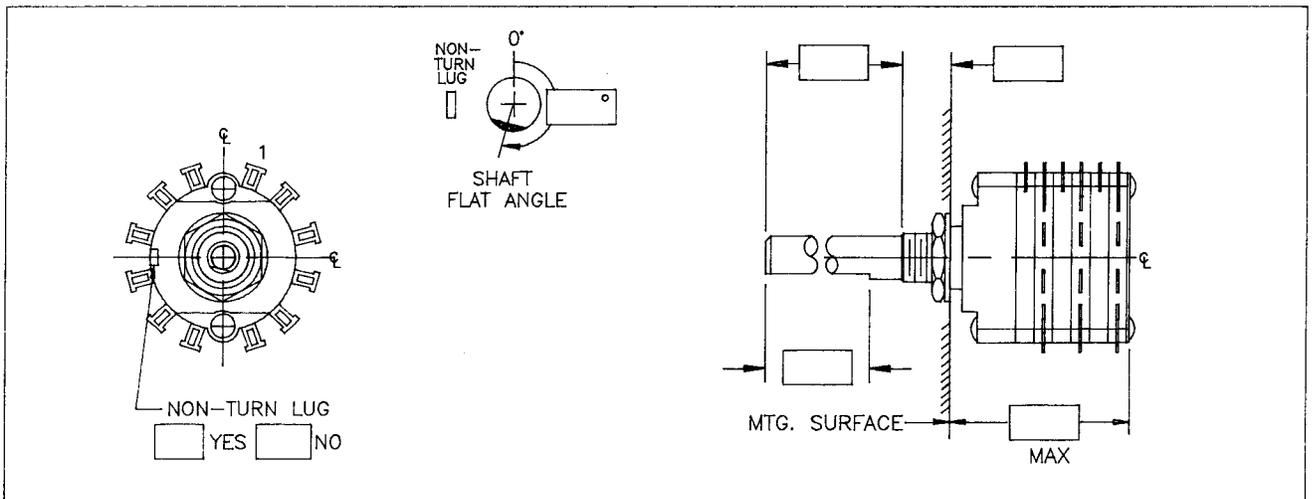
SHORTING OR NON-SHORTING

CURRENT CARRYING CAPACITY _____

INTERRUPTING CURRENT _____

MAXIMUM WORKING VOLTAGE _____

ADDITIONAL REQUIREMENTS: _____



NOTES: SEE APPROPRIATE CATALOG PAGES FOR STANDARD DIMENSIONS AND OPTIONS.

MECHANICAL REQUIREMENTS:

NO. OF POSITIONS _____

NO. OF POLES _____

TERMINAL TYPE _____

INDEX ANGLE _____

Estimated usage _____

ADDITIONAL REQUIREMENTS:



ELECTROSWITCH
 • ELECTRONIC PRODUCTS
 UNIT OF ELECTRO SWITCH CORP.

2010 YONKERS ROAD, RALEIGH, NC 27604
 USA

FAX TRANSMISSION

Sender Information

Date: _____ Time: _____

Name: _____

Company: _____

Address: _____

Ph #: _____

Fax #: _____

C1 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

21.97 mm WIDE 0.25 AMP @ 28 VDC

The C1 Series is our smallest enclosed rotary switch, offering index angles of 30°, 60°, and 90°. Standard designs utilize solder lug or vertical PC terminals and diallyl phthalate insulation.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 0.25 amp @ 28 VDC; 0.1 amp @ 125 VAC.
Current Carrying Capacity: 6 amps.
Dielectric Strength: 600 VAC between current carrying parts and ground.
Contact Resistance: Average initial 5 milliohms.
Insulation Resistance: In excess of 10,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Terminals and Contacts: Brass with silver plate as standard.
Insulation: Diallyl phthalate.
Index: Dual-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: 30° standard, 60°, and 90° available.
Index Stops: Fixed standard, adjustable, or continuous available.
Stop Strength: 0.9 Nm minimum.

STANDARD PART NUMBER

SOLDER LUG - ADJUSTABLE STOPS

SWITCHES - 30° INDEXING - STOPS SET @ 2 POS.

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|--------------|--------------|--------|
| 01 | 02-12 | 1 | 1 | C1D0112S - A | C1D0112N - A | CA |
| 02 | 02-12 | 1 | 2 | C1D0212S - A | C1D0212N - A | CA |
| 02 | 02-06 | 2 | 1 | C1D0206S - A | C1D0206N - A | CH |
| 03 | 02-12 | 1 | 3 | C1D0312S - A | C1D0312N - A | CA |
| 03 | 02-04 | 3 | 1 | C1D0304S - A | C1D0304N - A | CK |
| 04 | 02-06 | 2 | 2 | C1D0406S - A | C1D0406N - A | CH |
| 06 | 02-04 | 3 | 2 | C1D0604S - A | C1D0604N - A | CK |
| 06 | 02-06 | 2 | 3 | C1D0606S - A | C1D0606N - A | CH |

VERTICAL P.C. TERMINALS - ADJUSTABLE STOPS

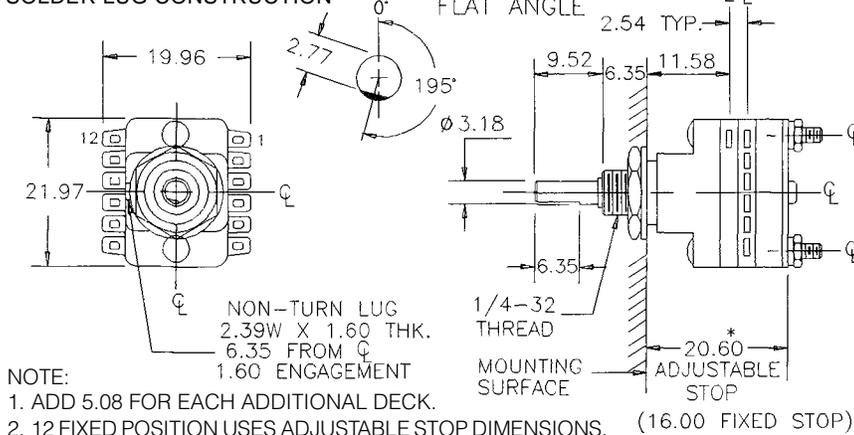
SWITCHES - 30° INDEXING - STOPS SET @ 2 POS.

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|---------------|---------------|--------|
| 01 | 02-06 | 1 | 1 | C1D0106S - VA | C1D0106N - VA | CB |
| 01 | 02-12 | 1 | 1 | C1D0112S - VA | C1D0112N - VA | CC |
| 02 | 02-06 | 1 | 2 | C1D0206S - VA | C1D0206N - VA | CB |
| 02 | 02-12 | 1 | 2 | C1D0212S - VA | C1D0212N - VA | CC |
| 03 | 02-06 | 1 | 3 | C1D0306S - VA | C1D0306N - VA | CB |
| 03 | 02-12 | 1 | 3 | C1D0312S - VA | C1D0312N - VA | CC |
| 04 | 02-06 | 1 | 4 | C1D0406S - VA | C1D0406N - VA | CB |
| 04 | 02-12 | 1 | 4 | C1D0412S - VA | C1D0412N - VA | CC |

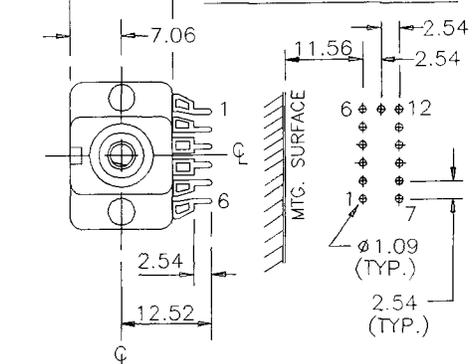
* FIGURES ARE SHOWN ON PAGE 55.

DIMENSIONS

C1D SOLDER LUG CONSTRUCTION



C1D VERTICAL P.C. CONSTRUCTION P.C. BRD. PATTERN

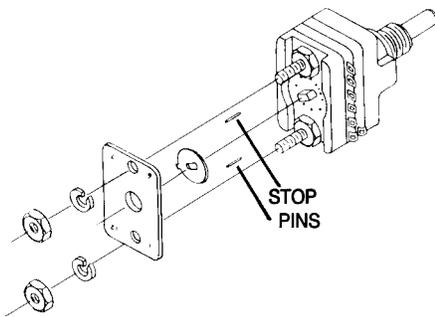


How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|--|----------------------------------|----------------------------------|-------------------|------------------------------------|----------------|---------------|
| C1 | D - DIALLYL | 01 - MIN. | 12 - MAX @ 30° 06 - MAX @ 60° 04 - MAX @ 90° | N - NON-SHORTING S - SHORTING | L - SOLDER LUG V - VERT. P.C. | 30° 60° 90° | F - FIXED C - CONT. A - ADJ. | SEE CHART "A" | SEE CHART "B" |
| | | | | | R - REAR P.C. | 30° 60° 90° | F - FIXED C - CONT. | | |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | | |
|---|----------|-----------|-----------|--------------------|-----------|-----------|-----------|
| C | 1 | D | | | | | |
| | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

ADJUSTABLE STOP MECHANISM



SHAFT, BUSHING, AND FLAT OPTIONS

CHART "A"

| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
|----------|-----------------|-----------------|
| 01 | 3/8 | 1/4 |
| 02 | 3/8 | 3/8 |
| 03 | 1/2 | 1/4 |
| 04 | 1/2 | 3/8 |
| 05 | 9/16 | 1/4 |
| 06 | 9/16 | 3/8 |
| 07 | 5/8 | 1/4 |
| 08 | 5/8 | 3/8 |
| 09 | 3/4 | 1/4 |
| 10 | 3/4 | 3/8 |
| 11 | 7/8 | 1/4 |
| 12 | 7/8 | 3/8 |
| 13 | 1 | 1/4 |
| 14 | 1 | 3/8 |

CHART "B"

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

PRINTED CIRCUIT BOARD TERMINAL OPTIONS

R REAR P.C. FIXED STOP CONSTRUCTION

P.C. BRD. PATTERN

NON-TURN LUG
2.39W X 1.60 THK.
6.35 FROM ϕ
1.60 ENGAGEMENT

SHAFT FLAT ANGLE

COMMON TERMINALS - A, B, C, D

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

C2/C3 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

20.83 mm WIDE 0.25 AMP @ 28 VDC

The C2/C3 Series offers an 8 position and a 12 position vertical P.C. board mountable design. Standard designs utilize a 30° index angle and polyester insulation.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 0.25 amp @ 28 VDC; 0.1 amp @ 125 VAC.
Current Carrying Capacity: 6 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 30 milliohms.
Insulation Resistance: In excess of 10,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Terminals and Contacts: Brass with silver plate as standard.
Insulation: Polyester.
Index: Dual-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard, 60°, and 90° available.
Index Stops: Fixed standard, adjustable, or continuous available.
Stop Strength: 0.9 Nm minimum.

STANDARD PART NUMBER

C2 - 8 PIN CONSTRUCTION SWITCHES - 30° INDEXING
 ADJUSTABLE STOPS SET @ 2 POS. - P.C. TERMINALS

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|--------------|--------------|--------|
| 01 | 02-08 | 1 | 1 | C2P0108S - A | C2P0108N - A | CD |
| 02 | 02-08 | 1 | 2 | C2P0208S - A | C2P0208N - A | CD |
| 02 | 02-04 | 2 | 1 | C2P0204S - A | C2P0204N - A | CI |
| 03 | 02-08 | 1 | 3 | C2P0308S - A | C2P0308N - A | CD |
| 04 | 02-04 | 2 | 2 | C2P0404S - A | C2P0404N - A | CI |
| 04 | 02-08 | 1 | 4 | C2P0408S - A | C2P0408N - A | CD |
| 05 | 02-08 | 1 | 5 | C2P0508S - A | C2P0508N - A | CD |
| 06 | 02-04 | 2 | 3 | C2P0604S - A | C2P0604N - A | CI |

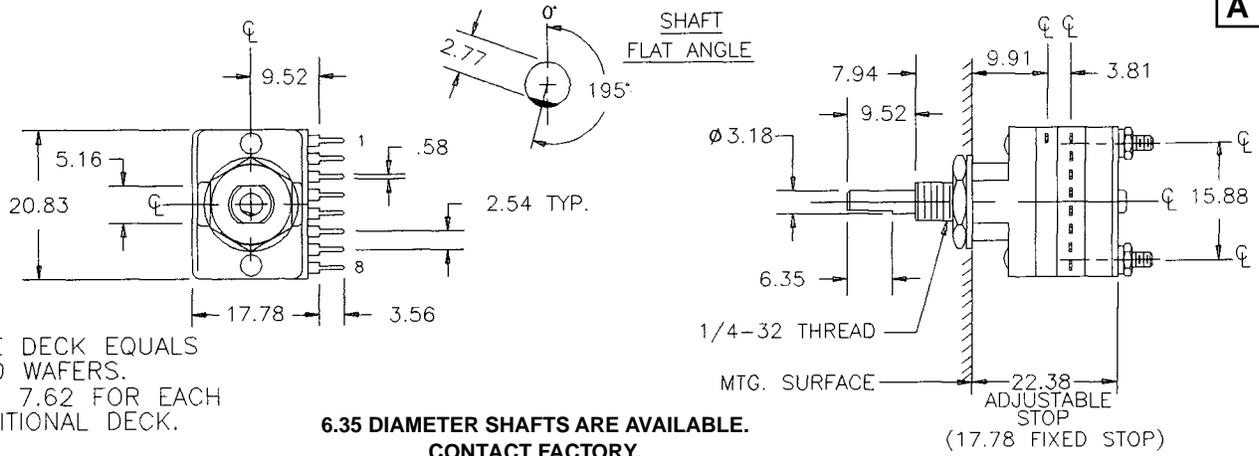
C3 - 12 PIN CONSTRUCTION SWITCHES - 30° INDEXING
 ADJUSTABLE STOPS SET @ 2 POS. - P.C. TERMINALS

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|--------------|--------------|--------|
| 01 | 02-12 | 1 | 1 | C3P0112S - A | C3P0112N - A | CA |
| 02 | 02-12 | 1 | 2 | C3P0212S - A | C3P0212N - A | CA |
| 02 | 02-06 | 2 | 1 | C3P0206S - A | C3P0206N - A | CH |
| 03 | 02-04 | 3 | 1 | C3P0304S - A | C3P0304N - A | CK |
| 03 | 02-12 | 1 | 3 | C3P0312S - A | C3P0312N - A | CA |
| 04 | 02-06 | 2 | 2 | C3P0406S - A | C3P0406N - A | CH |
| 04 | 02-12 | 1 | 4 | C3P0412S - A | C3P0412N - A | CA |
| 06 | 02-04 | 3 | 2 | C3P0604S - A | C3P0604N - A | CK |

* FIGURES ARE SHOWN ON PAGE 55.

C2 - DIMENSIONS - 8 PIN DESIGN

C2P - STANDARD 8-PIN PER DECK ARRANGEMENT



ADDITIONAL OPTIONS AND ORDERING INFORMATION

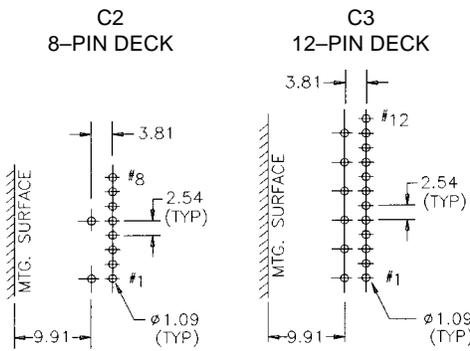
C2/C3 - SERIES

How to Order Additional Options:

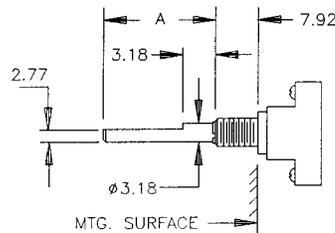
| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|--|----------------------------------|---------------|-------------------|------------------------------------|----------------|---------------|
| C2 | P-POLYESTER | 01 - MIN. | 08 - MAX @ 30° 04 - MAX @ 60° 03 - MAX @ 90° | N - NON SHORTING S - SHORTING | | 30° 60° 90° | F - FIXED C - CONT. A - ADJ. | SEE CHART "A" | SEE CHART "B" |
| C3 | P-POLYESTER | 01 - MIN. | 12 - MAX @ 30° 06 - MAX @ 60° 04 - MAX @ 90° | N - NON SHORTING S - SHORTING | | | | | |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | | |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | P | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

PRINTED CIRCUIT BOARD PATTERN

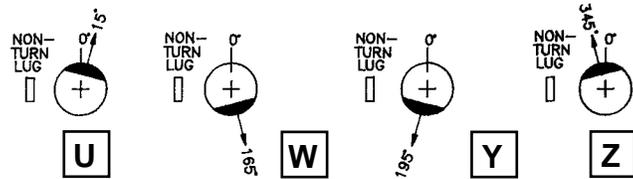


SHAFT AND FLAT OPTIONS



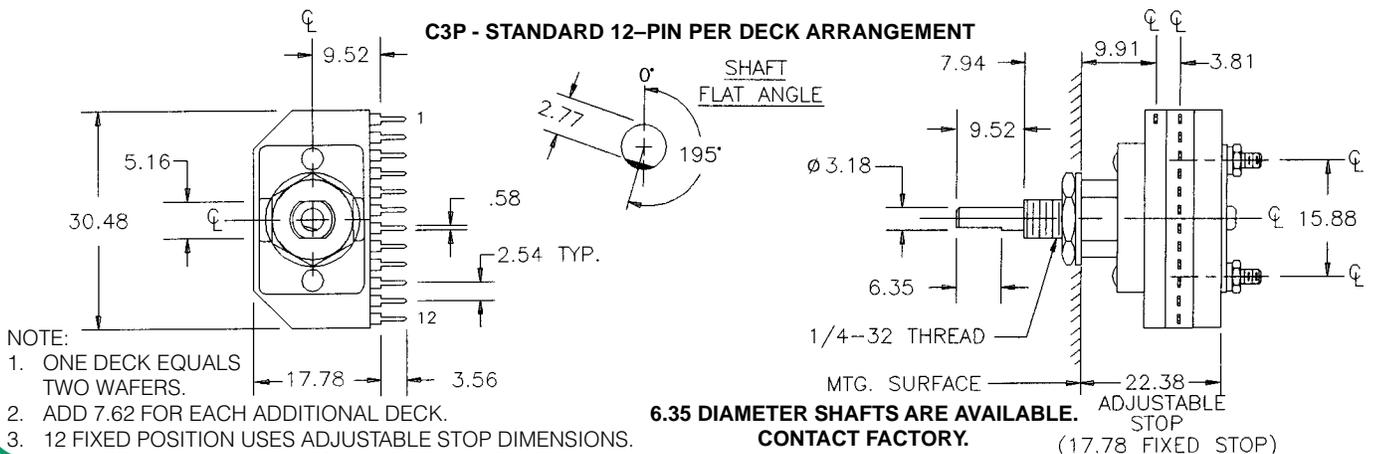
| P/N OPT. | SHAFT LGTH. "A" |
|----------|-----------------|
| 01 | 8.35 |
| 02 | 9.53 |
| 03 | 12.7 |
| 04 | 14.29 |
| 05 | 19.05 |
| 06 | 22.23 |
| 07 | 25.4 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |



SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

C3 - DIMENSIONS - 12 PIN DESIGN



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

C4 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

38.1 mm DIAMETER 0.5 AMP @ 28 VDC

The C4 Series provides a versatile, fully enclosed design, that helps keep dirt and moisture out of the contact area while locking in life time lubricants.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 0.5 amp @ 28 VDC; 0.3 amp @ 125 VAC.
Current Carrying Capacity: 15 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3 milliohms.
Insulation Resistance: In excess of 10,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Terminals and Contacts: Brass with silver plate as standard.
Insulation: Diallyl phthalate.
Index: Dual-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: 30° standard, 36°, 45°, 60°, and 90° available.
Index Stops: Fixed standard, adjustable or continuous available.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

SOLDER LUG - ADJUSTABLE STOPS

SWITCHES - 30° INDEXING - STOPS SET @ 2 POS.

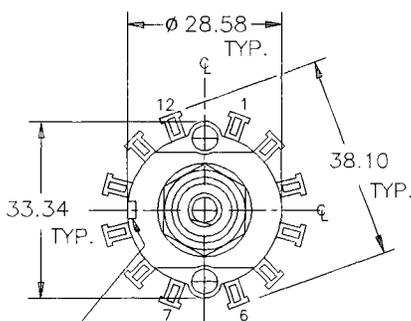
| FIG. * | NON-SHORTING | SHORTING | NO. OF DECKS | POLES/ DECK | ACTIVE POSITIONS |
|--------|--------------|--------------|--------------|-------------|------------------|
| 01 | C4D0112S - A | C4D0112N - A | 1 | 1 | 02-12 |
| 02 | C4D0206S - A | C4D0206N - A | 1 | 2 | 02-06 |
| 02 | C4D0212S - A | C4D0212N - A | 2 | 1 | 02-12 |
| 03 | C4D0312S - A | C4D0312N - A | 3 | 1 | 02-12 |
| 03 | C4D0304S - A | C4D0304N - A | 1 | 3 | 02-04 |
| 04 | C4D0412S - A | C4D0412N - A | 4 | 1 | 02-12 |
| 04 | C4D0406S - A | C4D0406N - A | 2 | 2 | 02-06 |
| 05 | C4D0512S - A | C4D0512N - A | 5 | 1 | 02-12 |

| FIG. * | NON-SHORTING | SHORTING | NO. OF DECKS | POLES/ DECK | ACTIVE POSITIONS |
|--------|--------------|--------------|--------------|-------------|------------------|
| 06 | C4D0606S - A | C4D0606N - A | 2 | 3 | 02-06 |
| 06 | C4D0604S - A | C4D0604N - A | 3 | 2 | 02-04 |
| 06 | C4D0612S - A | C4D0612N - A | 1 | 6 | 02-12 |
| 08 | C4D0806S - A | C4D0806N - A | 2 | 4 | 02-06 |
| 09 | C4D0904S - A | C4D0904N - A | 3 | 3 | 02-04 |
| 10 | C4D1006S - A | C4D1006N - A | 2 | 5 | 02-06 |
| 12 | C4D1204S - A | C4D1204N - A | 3 | 4 | 02-04 |
| 15 | C4D1504S - A | C4D1504N - A | 3 | 5 | 02-04 |

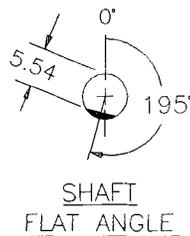
* FIGURES ARE SHOWN ON PAGE 55.

DIMENSIONS

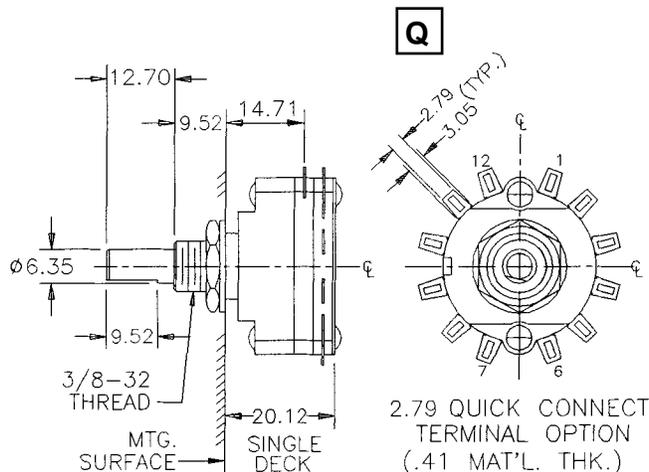
C4D STANDARD CONSTRUCTION



NON-TURN LUG
 3.18W X 1.58 THK.
 13.49 FROM ϕ
 1.60 ENGAGEMENT



- NOTE:
- ONE DECK EQUALS TWO WAFERS.
 - ADD 7.21 FOR EACH ADDITIONAL DECK.

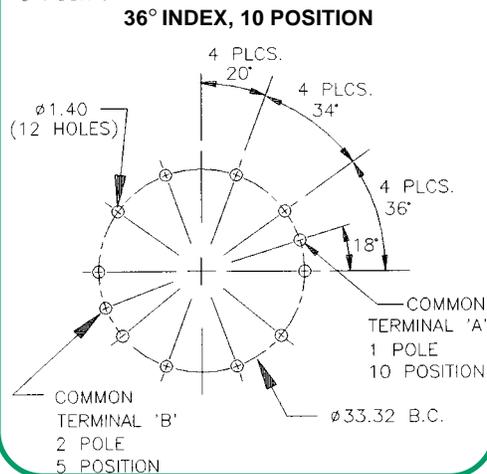
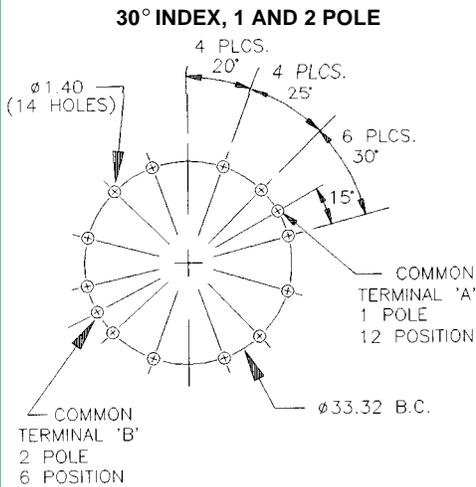


How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|--|----------------------------------|--|---------------------------------|--|----------------|---------------|
| C4 | D - DIALLYL | 01 - MIN. | 12 - MAX @ 30° 10 - MAX @ 36° 08 - MAX @ 45° 06 - MAX @ 60° 04 - MAX @ 90° | S - SHORTING N - NON SHORTING | L - SOLDER LUG P - FRONT P.C. R - REAR P.C. (30° & 36° ONLY) Q - QUICK CONNECT | 30° 36° 45° 60° 90° | F - FIXED A - ADJ. (30°, 60°, 90° ONLY) C - CONT. | SEE CHART "A" | SEE CHART "B" |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | | |
|---|-----------|-----------|-----------|--------------------|-----------|-----------|-----------|
| C | 4 | D | | | | | |
| | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

PRINTED CIRCUIT BOARD HOLE PATTERNS



SHAFT, BUSHING, AND FLAT OPTIONS

CHART "A"

| P/N OPT. | SHAFT LGTH. "A" | BUSH LGTH. "B" |
|----------|-----------------|----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 15.88 | 6.35 |
| 08 | 15.88 | 9.53 |
| 09 | 19.05 | 6.35 |
| 10 | 19.05 | 9.53 |
| 11 | 22.22 | 6.35 |
| 12 | 22.22 | 9.53 |
| 13 | 25.4 | 6.35 |
| 14 | 25.4 | 9.53 |

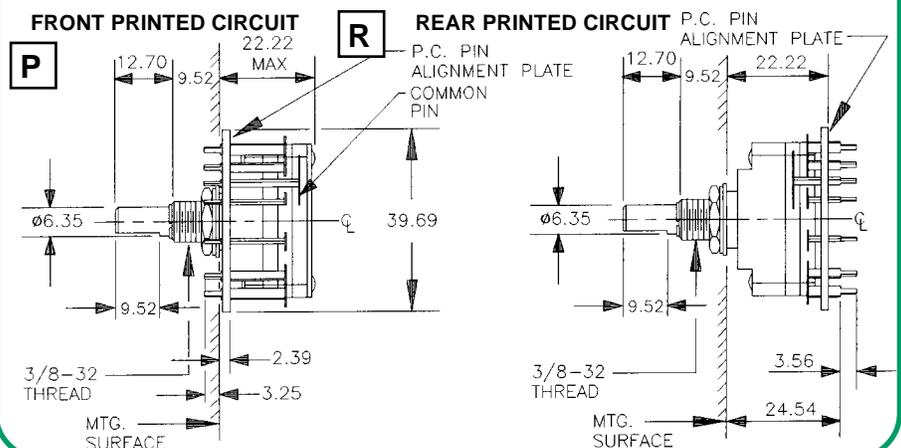
CHART "B"

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

- STD.

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

PRINTED CIRCUIT BOARD TERMINAL OPTIONS



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

C5/C6 - SERIES SPECIFICATIONS AND ORDERING INFORMATION

23.37 mm DIAMETER 1.0 AMP @ 28 VDC

The C5 Series offers a very economical and lightweight design. Standard features include 30° indexing up to 12 positions, solder lug terminals, fixed stops, and both internal and external seals for washability. The C6 Series offers the same features in an unsealed design.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
1 amp @ 28 VDC; 1 amp @ 125 VAC.
Current Carrying Capacity: 5 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 20 milliohms.
Insulation Resistance: In excess of 10,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Terminals and Contacts: Brass with silver plate as standard.
Insulation: Polyester.
Index: Molded live spring detent.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard.
Index Stops: Fixed standard, adjustable, or continuous available.
Stop Strength: 0.51 Nm minimum.

STANDARD PART NUMBER

C5 - SOLDER LUG TERMINALS

SWITCHES - 30° INDEX - ADJUSTABLE STOPS - SET @ 2 POS. - SEALED

| POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | NON-SHORTING | FIG. * |
|-------|------------------|---------------|-----------------|--------------|--------|
| 01 | 02-12 | 1 | 1 | C5P0112N - A | CE |
| 02 | 02-06 | 2 | 1 | C5P0206N - A | CJ |
| 03 | 02-04 | 3 | 1 | C5P0304N - A | CL |
| 04 | 02-03 | 4 | 1 | C5P0403N - A | CM |

C5 - P.C. TERMINALS

SWITCHES - 30° INDEX - ADJUSTABLE STOPS - SET @ 2 POS. - SEALED

| POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | NON-SHORTING | FIG. * |
|-------|------------------|---------------|-----------------|---------------|--------|
| 01 | 02-12 | 1 | 1 | C5P0112N - RA | CE |
| 02 | 02-06 | 2 | 1 | C5P0206N - RA | CJ |
| 03 | 02-04 | 3 | 1 | C5P0304N - RA | CL |
| 04 | 02-03 | 4 | 1 | C5P0403N - RA | CM |

C6 - UNSEALED

| POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | NON-SHORTING | FIG. * |
|-------|------------------|---------------|-----------------|--------------|--------|
| 01 | 02-12 | 1 | 1 | C6P0112N - A | CE |
| 02 | 02-06 | 2 | 1 | C6P0206N - A | CJ |
| 03 | 02-04 | 3 | 1 | C6P0304N - A | CL |
| 04 | 02-03 | 4 | 1 | C6P0403N - A | CM |

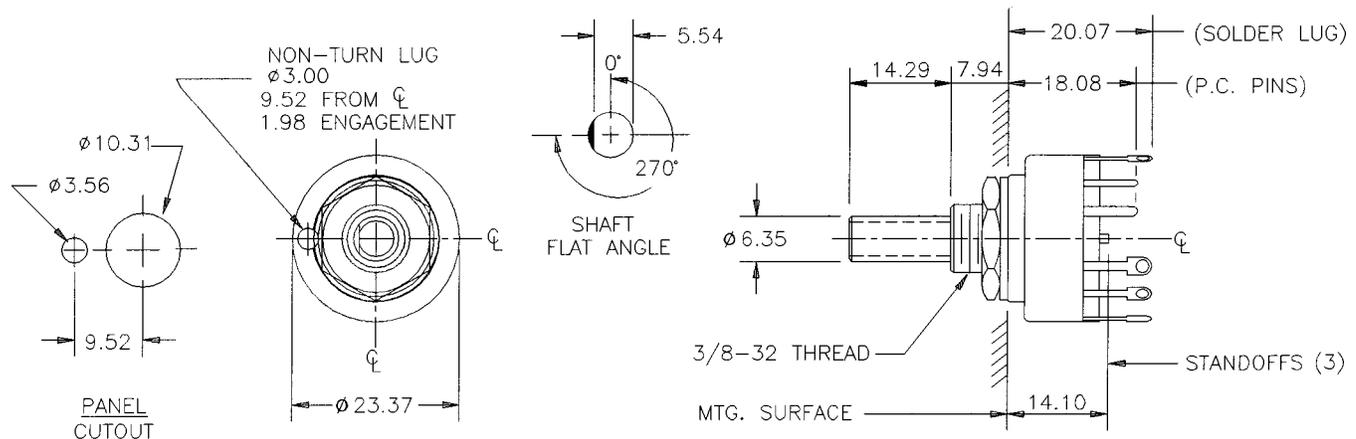
C6 - UNSEALED

| POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | NON-SHORTING | FIG. * |
|-------|------------------|---------------|-----------------|---------------|--------|
| 01 | 02-12 | 1 | 1 | C6P0112N - RA | CE |
| 02 | 02-06 | 2 | 1 | C6P0206N - RA | CJ |
| 03 | 02-04 | 3 | 1 | C6P0304N - RA | CL |
| 04 | 02-03 | 4 | 1 | C6P0403N - RA | CM |

* FIGURES ARE SHOWN ON PAGE 55.

DIMENSIONS

STANDARD CONSTRUCTION

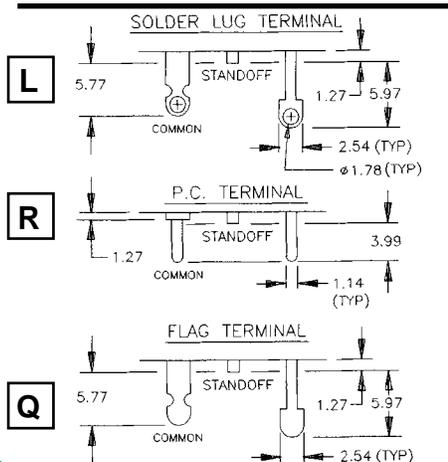


How to Order Additional Options:

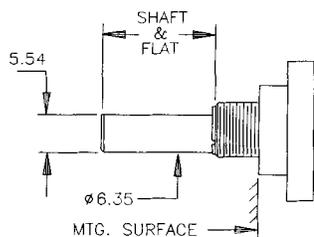
| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|------------------------|-------------|------------------|--------------------|---|------------------------------------|----------------|---------------|
| C5 | P - POLYESTER SEALED | 01 | 12 - MAX | N - NON - SHORTING | L - SOLDER LUG R - REAR P.C. Q - FLAG | F - FIXED A - ADJ. C - CONT. | SEE CHART "A" | SEE CHART "B" |
| | | 02 | 06 - MAX | | | | | |
| | | 03 | 04 - MAX | | | | | |
| | | 04 | 03 - MAX | | | | | |
| C6 | P - POLYESTER UNSEALED | 01 | 12 - MAX | N - NON - SHORTING | | | | |
| | | 02 | 06 - MAX | | | | | |
| | | 03 | 04 - MAX | | | | | |
| | | 04 | 03 - MAX | | | | | |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | P | (SPECIFY) | (SPECIFY) | N | (SPECIFY) | (SPECIFY) |

TERMINAL TYPES



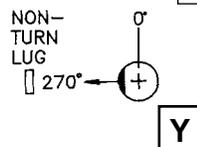
SHAFT AND FLAT OPTIONS



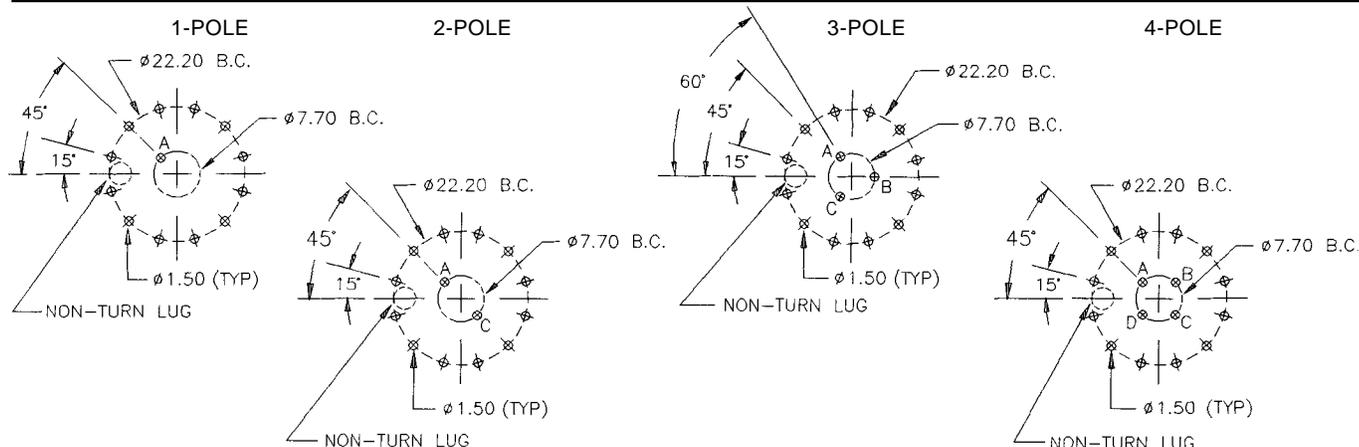
| P/N OPT. | SHAFT & FLAT LGTH. |
|----------|--------------------|
| 01 | 6.35 |
| 02 | 7.94 |
| 03 | 9.53 |
| 04 | 11.11 |
| 05 | 12.7 |
| 06 | 14.29 |
| 07 | 15.88 |
| 08 | 17.46 |
| 09 | 19.05 |
| 10 | 20.64 |
| 11 | 22.23 |
| 12 | 23.81 |
| 13 | 25.4 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| Y | 270° - STD |

- STD SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION.



PRINTED CIRCUIT BOARD TERMINAL PATTERNS



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

C7 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

51.6 mm DIAMETER 1.0 AMP @ 28 VDC

The C7 Series provides a fully enclosed, modular design that enables switching up to 24 positions. Our standard design offers 15° indexing, and solder lug terminals.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 1.0 amp @ 28 VDC; 0.5 amp @ 125 VAC.
Current Carrying Capacity: 25 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3 milliohms.
Insulation Resistance: In excess of 10,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Terminals and Contacts: Brass with silver plate as standard.
Insulation: Diallyl phthalate.
Index: Single-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: 15° standard, 30°, 60°, and 90° available.
Index Stops: Fixed standard, or continuous available.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

15° INDEXING - FIXED STOPS SOLDER LUG TERMINALS

| POLES | ACTIVE POSITIONS | POLES/DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|------------|--------------|----------|--------------|--------|
| 01 | 23 | 1 | 1 | C7D0123S | C7D0123N | CF |
| 02 | 23 | 1 | 2 | C7D0223S | C7D0223N | CF |
| 03 | 23 | 1 | 3 | C7D0323S | C7D0323N | CF |
| 04 | 23 | 1 | 4 | C7D0423S | C7D0423N | CF |

30° INDEXING

| POLES | ACTIVE POSITIONS | POLES/DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|------------|--------------|--------------|--------------|--------|
| 01 | 12 | 1 | 1 | C7D0112S -30 | C7D0112N -30 | CA |
| 02 | 12 | 1 | 2 | C7D0212S -30 | C7D0212N -30 | CA |
| 03 | 12 | 1 | 3 | C7D0312S -30 | C7D0312N -30 | CA |

15° INDEXING - CONTINUOUS ROTATION SOLDER LUG TERMINALS

| POLES | ACTIVE POSITIONS | POLES/DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|------------|--------------|-------------|--------------|--------|
| 01 | 24 | 1 | 1 | C7D0124S -C | C7D0124N -C | CG |
| 02 | 24 | 1 | 2 | C7D0224S -C | C7D0224N -C | CG |
| 03 | 24 | 1 | 3 | C7D0324S -C | C7D0324N -C | CG |
| 04 | 24 | 1 | 4 | C7D0424S -C | C7D0424N -C | CG |

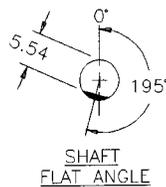
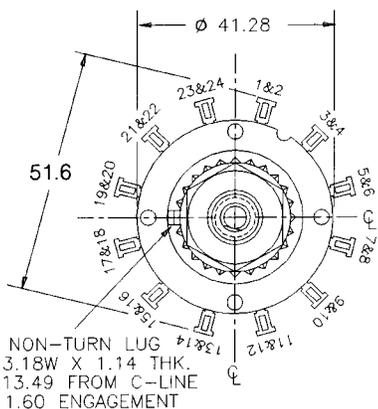
30° INDEXING

| POLES | ACTIVE POSITIONS | POLES/DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|------------|--------------|---------------|---------------|--------|
| 01 | 12 | 1 | 1 | C7D0112S -30C | C7D0112N -30C | CA |
| 02 | 12 | 1 | 2 | C7D0212S -30C | C7D0212N -30C | CA |
| 03 | 12 | 1 | 3 | C7D0312S -30C | C7D0312N -30C | CA |

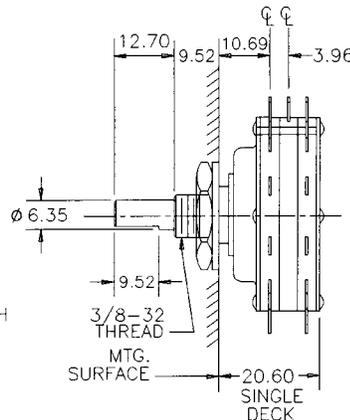
* FIGURES ARE SHOWN ON PAGE 55.

DIMENSIONS

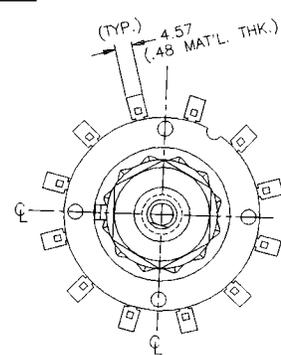
STANDARD CONSTRUCTION - 15° INDEX ANGLE (3 WAFER DECK)



- NOTE:
 1. ONE DECK EQUALS THREE WAFERS.
 2. ADD 11.89 FOR EACH ADDITIONAL DECK.



Q .187 QUICK CONNECT



4.75 QUICK CONNECT
TERMINAL OPTION

How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|--|----------------------------------|-------------------------------------|-------------------|--|----------------|---------------|
| C7 | D - DIALLYL | 01 - MIN. | 24 - MAX @ 15° | S - SHORTING N - NON SHORTING | L - SOLDER LUG Q - QUICK CONNECT | 15° | F - FIXED 23 - POS. MAX. C - CONT. 24 - POS. MAX. | SEE CHART "A" | SEE CHART "B" |
| C7 | D - DIALLYL | 01 - MIN. | 12 - MAX @ 30° 06 - MAX @ 60° 04 - MAX @ 90° | S - SHORTING N - NON SHORTING | L - SOLDER LUG Q - QUICK CONNECT | 30° 60° 90° | F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | | |
|---|----------|----------|----------------------|----------------------|----------------------|----------------------|----------------------|
| C | 7 | D | <input type="text"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

SHORTING AND NON-SHORTING SWITCHING IS NOT GUARANTEED ON THE 15° INDEXING C7 SERIES.

SHAFT AND FLAT OPTIONS

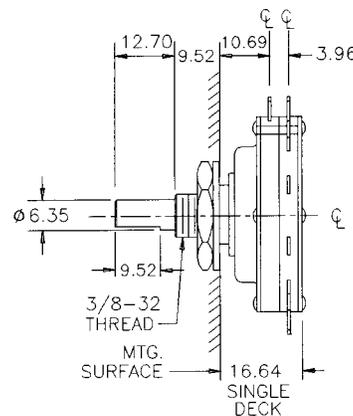
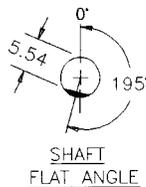
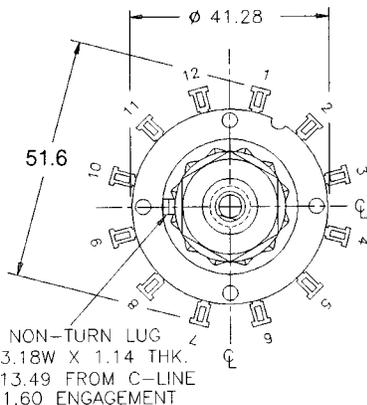
| P/N OPT. | SHAFT LGTH. "A" |
|----------|-----------------|
| 01 | 6.35 |
| 02 | 12.7 |
| 03 | 14.29 |
| 04 | 19.05 |
| 05 | 22.23 |
| 06 | 25.4 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION.

DIMENSIONS

STANDARD CONSTRUCTION - 30° INDEX ANGLE (2 WAFER DECK)



- NOTE:
- ONE DECK EQUALS TWO WAFERS.
 - ADD 7.92 FOR EACH ADDITIONAL DECK.

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

SELECTOR GUIDE OPEN FRAME ROTARY ELECTRONIC SWITCHES



CHARACTERISTICS

SERIES D1

SERIES D2

SERIES D3

SERIES D4

SERIES D5

SERIES D6

| | | | | | | |
|------------------------------------|-----------------|-----------------|----------------|----------------|----------------|----------------|
| Page Number | 18,19 | 20,21 | 22,23 | 24,25 | 26,27 | 28,29 |
| Construction | OPEN | OPEN | OPEN | OPEN | OPEN | OPEN |
| Diameter | 25.4 mm | 25.4 mm | 33.34 mm | 36.51 mm | 36.51 mm | 42.85 mm |
| Positions | 2 - 12 | 2 - 12 | 2 - 12 | 2 - 12 | 2 - 12 | 2 - 12 |
| E Current and Voltage | 0.25A @ 115 VAC | 0.25A @ 115 VAC | 0.5A @ 115 VAC |
| L | 0.55A @ 28 VDC | 0.55A @ 28 VDC | 1.5A @ 28 VDC |
| E Current Carrying Capacity | 7A | 7A | 12A | 9A | 9A | 9A |
| C Dielectric Strength | 750 VAC | 750 VAC | 1,000 VAC | 1,500 VAC | 1,500 VAC | 1,500 VAC |
| T Insulation Resistance | 750,000 | 900,000 | 1,000,000 | 1,000,000 | 750,000 | 900,000 |
| R (megohms) | | | | | | |
| I Contact Resistance | 5 | 5 | 3.5 | 3.5 | 3.5 | 3.5 |
| C (milliohms) | | | | | | |
| A | | | | | | |
| L | | | | | | |
| M Insulation - Glass Epoxy | STANDARD | YES | STANDARD | STANDARD | STANDARD | YES |
| A Diallyl Phthalate | YES | STANDARD | YES | YES | NO | STANDARD |
| T Ceramic | YES | YES | YES | YES | NO | YES |
| E | | | | | | |
| R | | | | | | |
| I Contacts - Silver Alloy ★ | YES | YES | STD-CERAMIC | YES | YES | YES |
| A Brass/Silver Plate | STANDARD | STANDARD | STD-GLASS | STANDARD | STANDARD | STANDARD |
| L | | | | | | |
| M Stop Strength (Min.) | 1.13 Nm | 1.13 Nm | 2.82 Nm | 1.13 Nm | 2.82 Nm | 2.82 Nm |
| E Mechanical Life | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles |
| C Detenting Angles: | | | | | | |
| H | | | | | | |
| A 30° | 30 | 30 | 30 | 30 | 30 | 30 |
| N 36° | 36 | 36 | — | — | — | 36 |
| I 45° | 45 | 45 | — | — | — | 45 |
| C 60° | — | 60 | 60 | 60 | — | 60 |
| A | | | | | | |
| L | | | | | | |
| O Quick Connect | NO | NO | NO | NO | NO | NO |
| P Rear PC Mount | YES | YES | YES | YES | YES | YES |
| T Vertical PC Mount ★ | YES | YES | NO | NO | NO | NO |
| I Front PC Mount ★ | YES | YES | YES | YES | YES | YES |
| O Dual Concentric Designs ★ | YES | YES | YES | YES | NO | NO |
| N Keylock ★ | YES | YES | YES | YES | YES | YES |
| S Spring Return ★ | NO | NO | NO | NO | NO | NO |
| Water Resistant Seals ★ | YES | YES | YES | YES | YES | YES |

★ Contact factory



ELECTROSWITCH • ELECTRONIC PRODUCTS
UNIT OF ELECTRO SWITCH CORP.

2010 Yonkers Road, Raleigh, NC 27604

SELECTOR GUIDE OPEN FRAME ROTARY ELECTRONIC SWITCHES



CHARACTERISTICS

SERIES D7

SERIES D8

SERIES D9

| | | | |
|---------------------------------------|----------------|----------------|-----------------|
| Page Number | 30,31 | 32,33 | 34,35 |
| Construction | OPEN | OPEN | OPEN |
| Diameter | 47.62 mm | 58.74 mm | 58.74 mm |
| Positions | 2 - 12 | 2 - 18 | 2 - 24 |
| E Current and Voltage | 1.0A @ 115 VAC | 1.0A @ 115 VAC | 0.25A @ 115 VAC |
| L | 2.25A @ 28 VDC | 2.25A @ 28 VDC | 1.5A @ 28 VDC |
| E Current Carrying Capacity | 9A | 9A | 9A |
| C Dielectric Strength | 1,500 VAC | 1,000 VAC | 1,000 VAC |
| T Insulation Resistance | 750 ,000 | 750,000 | 750 ,000 |
| R (megohms) | | | |
| I Contact Resistance | 3.5 | 5 | 5 |
| C (milliohms) | | | |
| A | | | |
| L | | | |
| M Insulation - Glass Epoxy | STANDARD | STANDARD | STANDARD |
| A Diallyl Phthalate | NO | NO | NO |
| T Ceramic | YES | NO | NO |
| E | | | |
| R | | | |
| I Contacts - Silver Alloy ★ | YES | YES | YES |
| A Brass/Silver Plate | STANDARD | STANDARD | STANDARD |
| L | | | |
| M Stop Strength (Min.) | 2.82 Nm | 2.82 Nm | 2.82 Nm |
| E Mechanical Life | 25,000 cycles | 25,000 cycles | 25,000 cycles |
| C Detenting Angles: 15° | — | — | 15 |
| H 20° | — | 20 | — |
| A 22.5° | — | — | — |
| N 30° | 30 | — | — |
| I 36° | — | — | — |
| C 45° | — | — | — |
| A 60° | 60 | — | — |
| L | | | |
| O Quick Connect | NO | NO | NO |
| P Rear PC Mount | NO | NO | YES |
| T Vertical PC Mount ★ | NO | NO | NO |
| I Front PC Mount ★ | NO | NO | NO |
| O Dual Concentric Designs ★ | YES | YES | YES |
| N Keylock ★ | YES | YES | YES |
| S Spring Return ★ | NO | NO | NO |
| Water Resistant Seals ★ | YES | YES | YES |
| Originally Designed To Meet Mil 3786/ | N/A | N/A | N/A |

Also see our “E” Series section for specialty open frame switches on pages 37 thru 43.

Use the open frame worksheet on page 45 for custom designs.

D
M
E
T
R
I
C

★ Contact factory

D1 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

25.4 mm DIAMETER 0.55 AMP @ 28 VDC

This 25.4 mm diameter switch offers a unique lateral thrust index with exceptionally crisp torque. The D1 Series was originally designed to meet the size requirements of MIL-S-3786 style SR05. The 30° index and glass epoxy insulation are standard and several options are available including rear printed circuit terminals.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 0.55 amp @ 28 VDC; 0.25 amp @ 115 VAC.
Current Carrying Capacity: 7 amps.
Dielectric Strength: 750 VAC between current carrying parts and ground.
Contact Resistance: Average initial 5 milliohms.
Insulation Resistance: Diallyl in excess of 900,000 megohms.
 Glass in excess of 750,000 megohms.
 Ceramic in excess of 1,000,000 megohms.
Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass, diallyl phthalate, or ceramic.
Index: Dual-ball, side thrust design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angle: Positive 30° standard, 36°, and 45° available.
Index Stops: Adjustable standard, fixed or continuous available.
Stop Strength: 1.13 Nm minimum.

STANDARD PART NO.

EPOXY GLASS INSULATION

SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - ADJUSTABLE STOPS SET @ 2 POS.

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-12 | 1 | 1 | D1G0112S | D1G0112N | DE |
| 02 | 02-12 | 1 | 2 | D1G0212S | D1G0212N | DE |
| 02 | 02-06 | 2 | 1 | D1G0206S | D1G0206N | DL |
| 03 | 02-12 | 1 | 3 | D1G0312S | D1G0312N | DE |
| 03 | 02-05 | 3 | 1 | D1G0305S | D1G0305N | DO |
| 04 | 02-06 | 2 | 2 | D1G0406S | D1G0406N | DL |
| 06 | 02-06 | 2 | 3 | D1G0606S | D1G0606N | DL |
| 06 | 02-05 | 3 | 2 | D1G0605S | D1G0605N | DO |

CERAMIC INSULATION

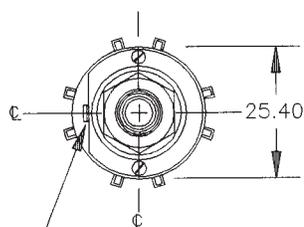
SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - ADJUSTABLE STOPS SET @ 2 POS.

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-11 | 1 | 1 | D1C0111S | D1C0111N | DB |
| 02 | 02-11 | 1 | 2 | D1C0211S | D1C0211N | DB |
| 02 | 02-05 | 2 | 1 | D1C0205S | D1C0205N | DG |
| 03 | 02-11 | 1 | 3 | D1C0311S | D1C0311N | DB |
| 03 | 02-03 | 3 | 1 | D1C0303S | D1C0303N | DN |
| 04 | 02-05 | 2 | 2 | D1C0405S | D1C0405N | DG |
| 06 | 02-05 | 2 | 3 | D1C0605S | D1C0605N | DG |
| 06 | 02-03 | 3 | 2 | D1C0603S | D1C0603N | DN |

* FIGURES ARE SHOWN ON PAGES 55 AND 56.

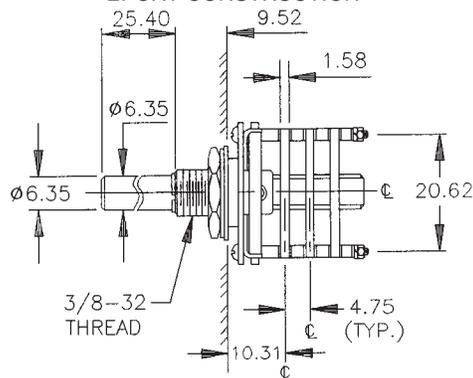
DIMENSIONS

STANDARD CONSTRUCTION

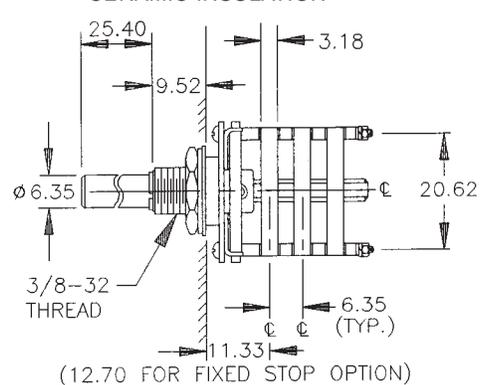


NON-TURN LUG
 3.18W X .89 THK.
 9.52 FROM C
 1.60 ENGAGEMENT

D1G - STANDARD GLASS EPOXY CONSTRUCTION



D1C CERAMIC INSULATION



How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|--|-------------|--|----------------------------------|--|-------------------|--|----------------|---------------|
| D1 | G - GLASS (30°,36°,45°) D - DIALLYL (30°,45°) | 01 - MIN. | 12 - MAX @ 30° 10 - MAX @ 36° 08 - MAX @ 45° | S - SHORTING N - NON-SHORTING | L - SOLDER LUG R - (REAR P.C. DIALLYL ONLY) | 30° 36° 45° | A - ADJ. F - FIXED (7-POS MAX @45°) C - CONT. | SEE CHART "A" | SEE CHART "B" |
| D1 | C - CERAMIC | 01 - MIN. | 11 - MAX @ 30° | S - SHORTING N - NON-SHORTING | L - SOLDER LUG | 30° | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | | |
|---|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| D | 1 | <input type="checkbox"/> |
| | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

SHAFT, BUSHING, AND FLAT OPTIONS

| P/N OPT. | SHAFT LGTH. "A" | BUSH LGTH. "B" |
|----------|-----------------|----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 15.88 | 6.35 |
| 08 | 15.88 | 9.53 |
| 09 | 19.05 | 6.35 |
| 10 | 19.05 | 9.53 |
| 11 | 22.22 | 6.35 |
| 12 | 22.22 | 9.53 |
| 13 | 25.4 | 6.35 |
| 14 | 25.4 | 9.53 |

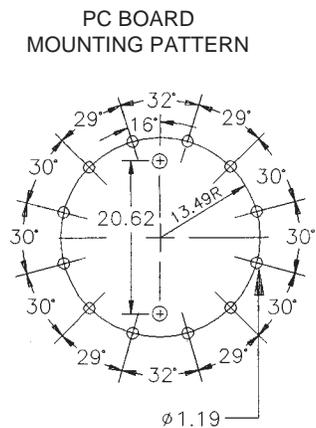
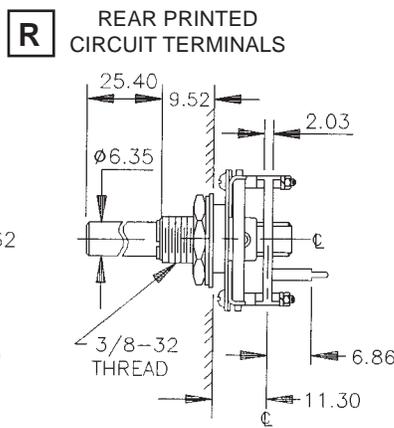
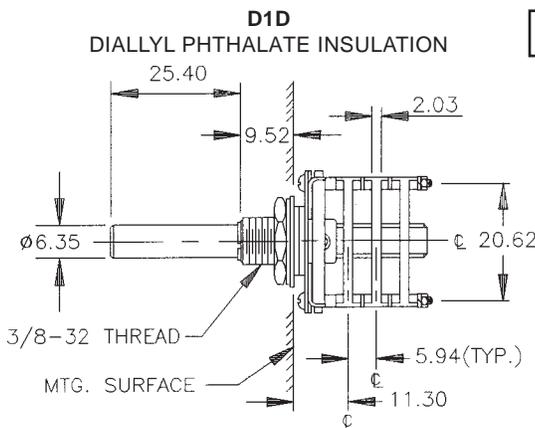
| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

D1C - STD.
D1G - STD.

D
M
E
T
R
I
C

INSULATION AND PRINTED CIRCUIT BOARD TERMINAL OPTIONS



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D2 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

25.4 mm DIAMETER 0.55 AMP @ 28 VDC

The D2 Series switch is used where space is at a premium. This dual-ball side thrust index offers exceptional torque control and is available in 30°, 36°, 45°, and 60° angles. Standard designs utilize diallyl phthalate or ceramic insulation, solder lug terminals, and 30° adjustable stop indexing.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 0.55 amp @ 28 VDC; 0.25 amp @ 115 VAC.
Current Carrying Capacity: 7 amps.
Dielectric Strength: 750 VAC between current carrying parts and ground.
Contact Resistance: Average initial 5 milliohms.
Insulation Resistance: Diallyl in excess of 900,000 megohms.
 Glass in excess of 750,000 megohms.
 Ceramic in excess of 1,000,000 megohms.
Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Diallyl phthalate, glass, or ceramic.
Index: Dual-ball, side thrust design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard, 36°, 45°, and 60° available.
Index Stops: Adjustable standard, fixed or continuous.
Stop Strength: 1.13 Nm minimum.

STANDARD PART NUMBER

DIALLYL PHTHALATE INSULATION - ADJUSTABLE STOPS

SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - SET @ 2 POS.

| POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|---------------|-----------------|----------|--------------|--------|
| 01 | 02-12 | 1 | 1 | D2D0112S | D2D0112N | DE |
| 02 | 02-06 | 2 | 1 | D2D0206S | D2D0206N | DL |
| 02 | 02-12 | 1 | 2 | D2D0212S | D2D0212N | DE |
| 03 | 02-05 | 3 | 1 | D2D0305S | D2D0305N | DO |
| 03 | 02-12 | 1 | 3 | D2D0312S | D2D0312N | DE |
| 04 | 02-06 | 2 | 2 | D2D0406S | D2D0406N | DL |
| 06 | 02-05 | 3 | 2 | D2D0605S | D2D0605N | DO |
| 06 | 02-06 | 2 | 3 | D2D0606S | D2D0606N | DL |

CERAMIC INSULATION - ADJUSTABLE STOPS

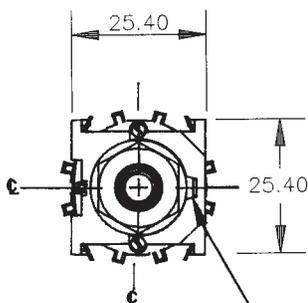
SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - SET @ 2 POS. - 1/8 DIA. SHAFT

| POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|---------------|-----------------|----------|--------------|--------|
| 01 | 02-11 | 1 | 1 | D2C0111S | D2C0111N | DB |
| 02 | 02-05 | 2 | 1 | D2C0205S | D2C0205N | DG |
| 02 | 02-11 | 1 | 2 | D2C0211S | D2C0211N | DB |
| 03 | 02-03 | 3 | 1 | D2C0303S | D2C0303N | DN |
| 03 | 02-11 | 1 | 3 | D2C0311S | D2C0311N | DB |
| 04 | 02-05 | 2 | 2 | D2C0405S | D2C0405N | DG |
| 06 | 02-05 | 2 | 3 | D2C0605S | D2C0605N | DG |
| 06 | 02-03 | 3 | 2 | D2C0603S | D2C0603N | DN |

* FIGURES ARE SHOWN ON PAGES 55 AND 56.

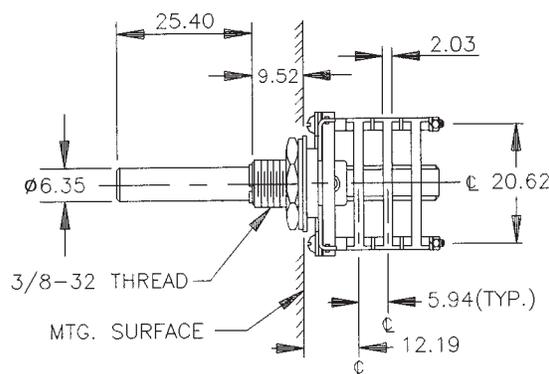
DIMENSIONS

STANDARD CONSTRUCTION

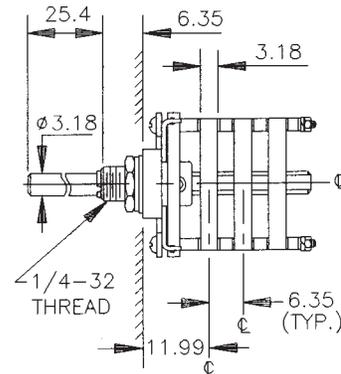


NON-TURN LUG
 3.18W X .89 THK.
 9.52 FROM ϕ
 1.60 ENGAGEMENT

D2D DIALLYL PHTHALATE INSULATION



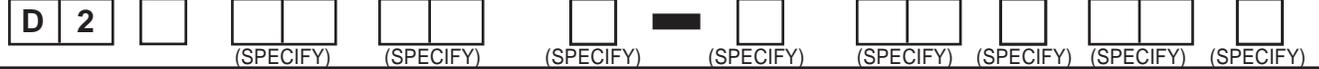
D2C CERAMIC INSULATION



How to Order Additional Options:

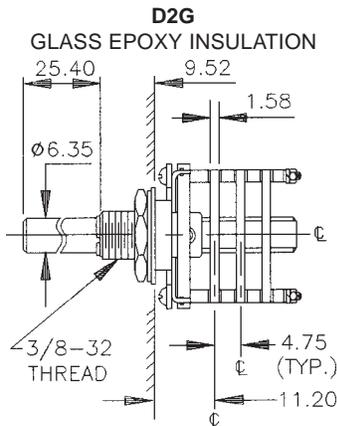
| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|--|-------------|--|----------------------------------|---|--------------------------|------------------------------------|----------------|---------------|
| D2 | D - DIALYL (30°, 45°, 60°) G - GLASS (30°, 36°, 45°, 60°) | 01 - MIN. | 12 - MAX @ 30° 10 - MAX @ 36° 08 - MAX @ 45° 06 - MAX @ 60° | S - SHORTING N - NON SHORTING | L - SOLDER LUG V - VERT. P.C. 30° R - (REAR P.C. DIALYL ONLY) | 30° 36° 45° 60° | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |
| D2 | C - CERAMIC (30°, 60°) 1/8 SHAFT | 01 - MIN. | 11 - MAX @ 30° | S - SHORTING N - NON SHORTING | L - SOLDER LUG | 30° 60° | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS



ADDITIONAL OPTIONS

INSULATION OPTION



SHAFT, BUSHING, AND FLAT OPTIONS

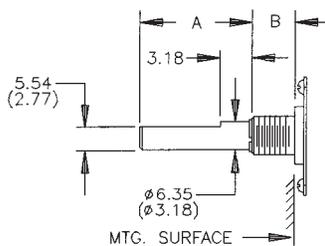


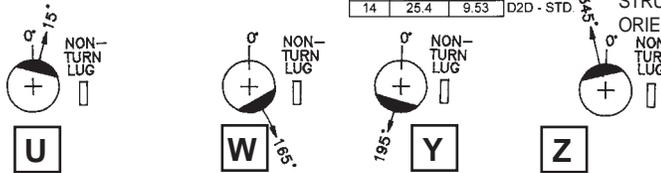
CHART "A"

| P/N OPT. | SHAFT LGTH. "A" | BUSH LGTH. "B" |
|----------|-----------------|----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 15.88 | 6.35 |
| 08 | 15.88 | 9.53 |
| 09 | 19.05 | 6.35 |
| 10 | 19.05 | 9.53 |
| 11 | 22.22 | 6.35 |
| 12 | 22.22 | 9.53 |
| 13 | 25.4 | 6.35 |
| 14 | 25.4 | 9.53 |

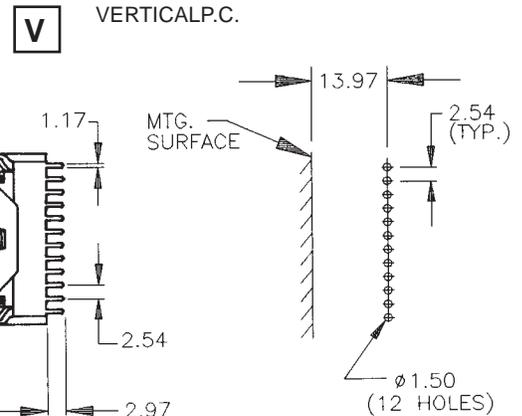
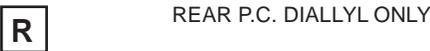
CHART "B"

| P/N OPT. | FLAT ANGLE |
|----------|--------------|
| B | ROUND - STD. |
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

SHAFT AS VIEWED WITH NON-TURN LUG AT 3 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.



PRINTED CIRCUIT BOARD TERMINAL OPTIONS



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D3 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

33.34 mm DIAMETER 1.5 AMPS @ 28 VDC

The D3 Series was originally designed as a high quality military switch, but is ideal for use in both military and commercial equipment applications. The standard features of this hill and valley design are glass epoxy insulation and a 30° index, with options of ceramic and diallyl insulation and a 60° index.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
1.5 amps @ 28 VDC; 0.5 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3.5 milliohms.
Insulation Resistance: Glass in excess of 750,000 megohms.
Ceramic in excess of 1,000,000 megohms.
Diallyl in excess of 900,000 megohms.
Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials.
Clips and Rotors: Silver alloy standard on ceramic.
Brass with silver plate standard on glass.
Insulation: Glass epoxy, ceramic, or diallyl phthalate.
Index: Single-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard, 60° available.
Index Stops: Adjustable standard, fixed or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

EPOXY GLASS INSULATION - BRASS SILVER PLATE

SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - ADJUSTABLE STOPS SET @ 2 POS.

| ACTIVE POLES | POLES/ POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|--------------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-11 | 1 | 1 | D3G0111S | D3G0111N | DA |
| 02 | 02-11 | 1 | 2 | D3G0211S | D3G0211N | DA |
| 02 | 02-05 | 2 | 1 | D3G0205S | D3G0205N | DH |
| 03 | 02-11 | 1 | 3 | D3G0311S | D3G0311N | DA |
| 03 | 02-03 | 3 | 1 | D3G0303S | D3G0303N | DM |
| 04 | 02-05 | 2 | 2 | D3G0405S | D3G0405N | DH |
| 06 | 02-03 | 3 | 2 | D3G0603S | D3G0603N | DM |
| 06 | 02-05 | 2 | 3 | D3G0605S | D3G0605N | DH |

CERAMIC INSULATION - SILVER ALLOY - 2.6 AMPS @ 28 VDC

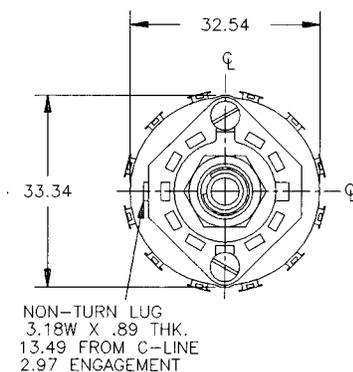
SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - ADJUSTABLE STOPS SET @ 2 POS.

| ACTIVE POLES | POLES/ POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|--------------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-11 | 1 | 1 | D3C0111S | D3C0111N | DA |
| 02 | 02-11 | 1 | 2 | D3C0211S | D3C0211N | DA |
| 02 | 02-05 | 2 | 1 | D3C0205S | D3C0205N | DH |
| 03 | 02-11 | 1 | 3 | D3C0311S | D3C0311N | DA |
| 03 | 02-03 | 3 | 1 | D3C0303S | D3C0303N | DM |
| 04 | 02-05 | 2 | 2 | D3C0405S | D3C0405N | DH |
| 06 | 02-03 | 3 | 2 | D3C0603S | D3C0603N | DM |
| 06 | 02-05 | 2 | 3 | D3C0605S | D3C0605N | DH |

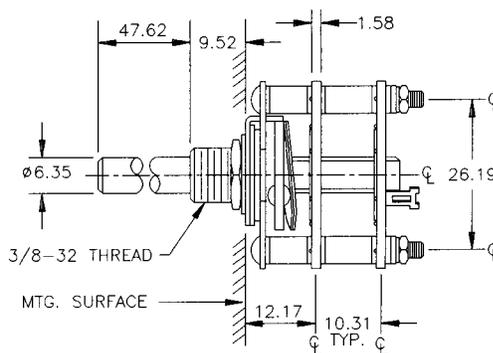
* FIGURES ARE SHOWN ON PAGES 55 AND 56.

DIMENSIONS

STANDARD CONSTRUCTION



D3G - GLASS EPOXY CONSTRUCTION



How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|--|-------------|----------------------------------|----------------------------------|---------------------------------|-------------|------------------------------------|----------------|---------------|
| D3 | G - GLASS C - CERAMIC (SILVER ALLOY) D - DIALYL | 01 - MIN. | 12 - MAX @ 30° 06 - MAX @ 60° | N - NON SHORTING S - SHORTING | L - SOLDER LUG R - REAR P.C. | 30° 60° | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS

| | | | | | | | | | |
|----------|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| D | 3 | <input type="checkbox"/> |
| | | (SPECIFY) |

ADDITIONAL OPTIONS

SHAFT, BUSHING, AND FLAT OPTIONS

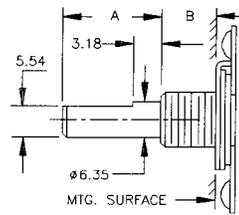


CHART "A"

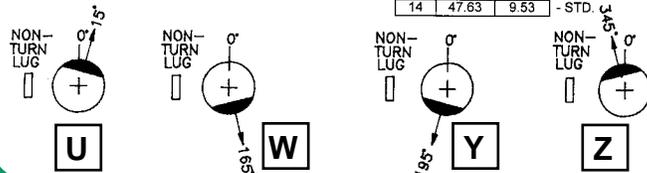
| P/N OPT. | SHAFT LGTH. "A" | BUSH LGTH. "B" |
|----------|-----------------|----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 19.05 | 6.35 |
| 08 | 19.05 | 9.53 |
| 09 | 25.4 | 6.35 |
| 10 | 25.4 | 9.53 |
| 11 | 38.1 | 6.35 |
| 12 | 38.1 | 9.53 |
| 13 | 47.63 | 6.35 |
| 14 | 47.63 | 9.53 |

CHART "B"

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

- STD.

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

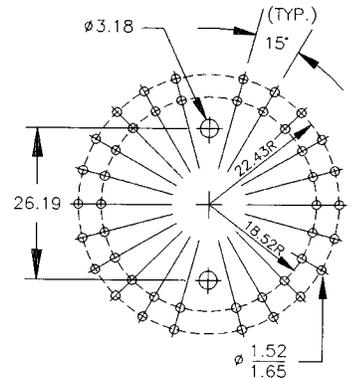
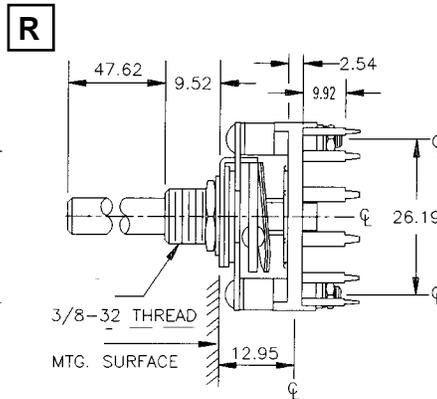
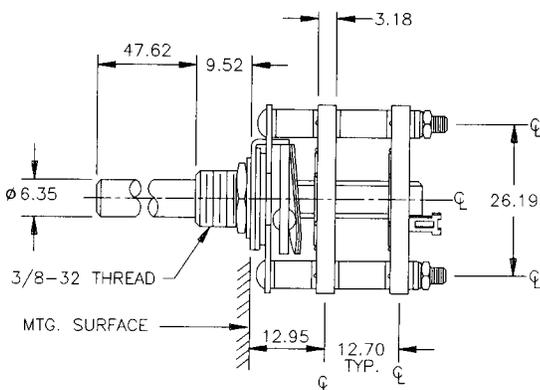


INSULATION AND PRINTED CIRCUIT BOARD TERMINAL OPTIONS

D3C - CERAMIC CONSTRUCTION

D3D - DIALYL PHTHALATE CONSTRUCTION

P.C. BOARD MOUNTING PATTERN



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D4 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

36.51 mm DIAMETER 1.5 AMPS @ 28 VDC

The D4 Series switch is the most economical and versatile switch in our open frame rotary line. This series offers the quality feel of a ball and spring index mechanism and is available with up to 12 positions and 30° or 60° indexing.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 1.5 amps @ 28 VDC; 0.5 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,500 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3.5 milliohms.
Insulation Resistance: Glass epoxy in excess of 750,000 megohms. Ceramic in excess of 1,000,000 megohms. Diallyl in excess of 900,000 megohms.
Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy, ceramic, or diallyl phthalate.
Index: Single-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard, 60° available.
Index Stops: Adjustable standard, fixed or continuous.
Stop Strength: 1.13 Nm minimum.

STANDARD PART NUMBER

GLASS EPOXY INSULATION

SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - ADJUSTABLE STOPS

| ACTIVE POLES | POLES/ POSITIONS | SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|--------------|------------------|---------|-----------------|----------|--------------|--------|
| 01 | 02-11 | 1 | 1 | D4G0111S | D4G0111N | DA |
| 02 | 02-11 | 1 | 2 | D4G0211S | D4G0211N | DA |
| 02 | 02-05 | 2 | 1 | D4G0205S | D4G0205N | DG |
| 03 | 02-11 | 1 | 3 | D4G0311S | D4G0311N | DA |
| 03 | 02-03 | 3 | 1 | D4G0303S | D4G0303N | DM |
| 04 | 02-11 | 1 | 4 | D4G0411S | D4G0411N | DA |
| 04 | 02-05 | 2 | 2 | D4G0405S | D4G0405N | DG |
| 05 | 02-11 | 1 | 5 | D4G0511S | D4G0511N | DA |
| 06 | 02-11 | 1 | 6 | D4G0611S | D4G0611N | DA |
| 06 | 02-05 | 2 | 3 | D4G0605S | D4G0605N | DG |
| 06 | 02-03 | 3 | 2 | D4G0603S | D4G0603N | DM |
| 09 | 02-03 | 3 | 3 | D4G0903S | D4G0903N | DM |

CERAMIC INSULATION

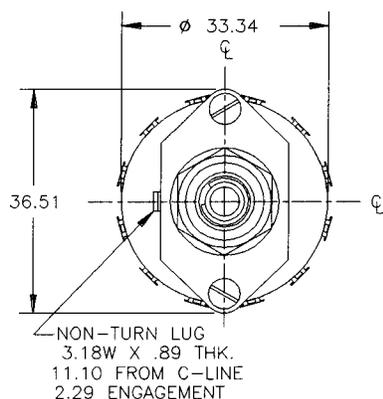
SWITCHES - SOLDER LUG TERMINALS - 30° INDEX - ADJUSTABLE STOPS

| ACTIVE POLES | POLES/ POSITIONS | SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|--------------|------------------|---------|-----------------|----------|--------------|--------|
| 01 | 02-12 | 1 | 1 | D4C0112S | D4C0112N | DD |
| 02 | 02-12 | 1 | 2 | D4C0212S | D4C0212N | DD |
| 02 | 02-06 | 2 | 1 | D4C0206S | D4C0206N | DL |
| 03 | 02-12 | 1 | 3 | D4C0312S | D4C0312N | DD |
| 03 | 02-05 | 3 | 1 | D4C0305S | D4C0305N | DO |
| 04 | 02-12 | 1 | 4 | D4C0412S | D4C0412N | DD |
| 04 | 02-06 | 2 | 2 | D4C0406S | D4C0406N | DL |
| 05 | 02-12 | 1 | 5 | D4C0512S | D4C0512N | DD |
| 05 | 02-03 | 5 | 1 | D4C0503S | D4C0503N | DR |
| 06 | 02-12 | 1 | 6 | D4C0612S | D4C0612N | DD |
| 06 | 02-06 | 2 | 3 | D4C0606S | D4C0606N | DL |
| 06 | 02-05 | 3 | 2 | D4C0605S | D4C0605N | DO |

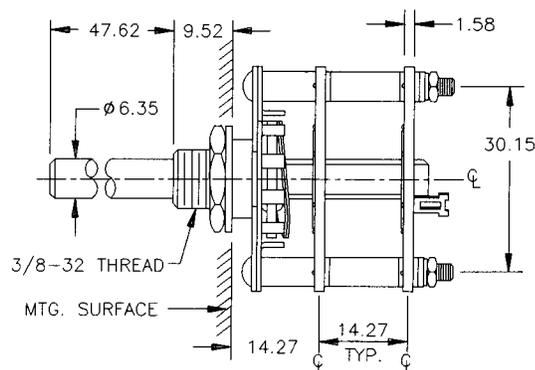
* FIGURES ARE SHOWN ON PAGES 55 AND 56.

DIMENSIONS

STANDARD CONSTRUCTION



D4G - STANDARD GLASS EPOXY CONSTRUCTION

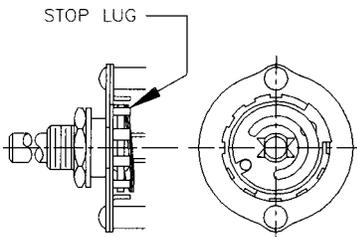


How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|---|-------------|----------------------------------|----------------------------------|---------------------------------|-------------|------------------------------------|----------------|---------------|
| D4 | G - GLASS C - CERAMIC D - DIALLYL | 01 - MIN. | 12 - MAX @ 30° 06 - MAX @ 60° | N - NON SHORTING S - SHORTING | L - SOLDER LUG R - REAR P.C. | 30° 60° | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | | ADDITIONAL OPTIONS | | | | |
|---|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| D | 4 | <input type="checkbox"/> |
| | | (SPECIFY) |

ADJUSTABLE STOP MECHANISM



REMOVE STOP LUGS TO ACHIEVE MORE POSITIONS.

SHAFT, BUSHING, AND FLAT OPTIONS

| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
|----------|-----------------|-----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 19.05 | 6.35 |
| 08 | 19.05 | 9.53 |
| 09 | 25.4 | 6.35 |
| 10 | 25.4 | 9.53 |
| 11 | 38.1 | 6.35 |
| 12 | 38.1 | 9.53 |
| 13 | 47.63 | 6.35 |
| 14 | 47.63 | 9.53 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

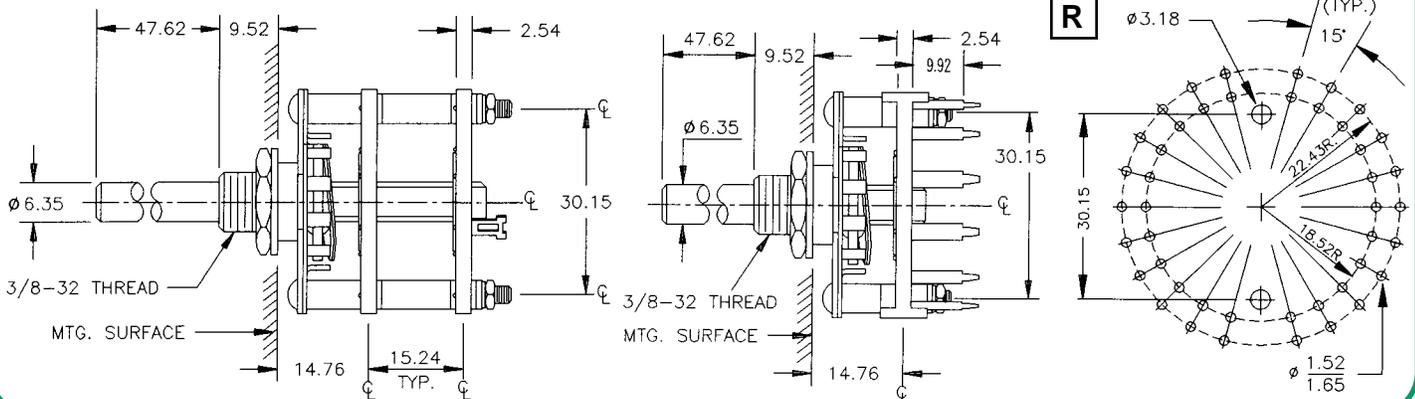
SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

INSULATION AND PRINTED CIRCUIT BOARD TERMINAL OPTIONS

D4C - CERAMIC CONSTRUCTION

D4D - DIALLYL PHTHALATE CONSTRUCTION

DIALLYL PHTHALATE P.C. BOARD MOUNTING PATTERN



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D5 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

36.51 mm DIAMETER 1.5 AMPS @ 28 VDC

The D5 Series switch is an economical single section switch utilizing glass epoxy insulation, staked construction, and printed circuit board or solder lug terminals. The formed spring index uses a small face plate area with detenting available up to 12 positions.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
1.5 amps @ 28 VDC; 0.5 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,500 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3.5 milliohms.
Insulation Resistance: In excess of 750,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy.
Index: Formed spring, hill and valley design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard.
Index Stops: Fixed or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

SOLDER LUG TERMINALS

SWITCHES - 30° INDEXING - FIXED STOPS

| ACTIVE POLES | POLES/ POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|--------------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 06 | 1 | 1 | D5G0106S | D5G0106N | DB |
| 01 | 08 | 1 | 1 | D5G0108S | D5G0108N | DB |
| 01 | 10 | 1 | 1 | D5G0110S | D5G0110N | DB |
| 01 | 11 | 1 | 1 | D5G0111S | D5G0111N | DB |
| 02 | 04 | 2 | 1 | D5G0204S | D5G0204N | DG |
| 02 | 05 | 2 | 1 | D5G0205S | D5G0205N | DG |
| 03 | 03 | 3 | 1 | D5G0303S | D5G0303N | DN |

PRINTED CIRCUIT BOARD TERMINALS

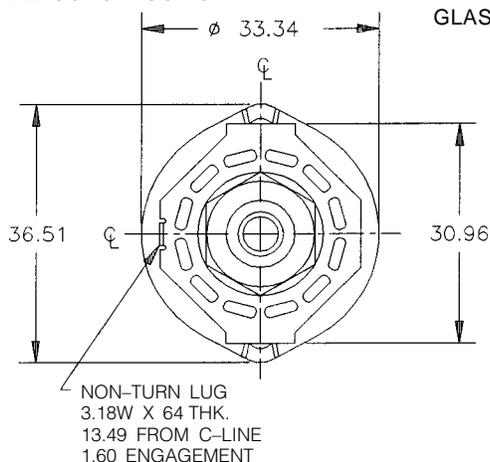
SWITCHES - 30° INDEXING - FIXED STOPS

| ACTIVE POLES | POLES/ POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|--------------|------------------|----------------|-----------------|--------------|--------------|--------|
| 01 | 06 | 1 | 1 | D5G0106S - R | D5G0106N - R | DB |
| 01 | 08 | 1 | 1 | D5G0108S - R | D5G0108N - R | DB |
| 01 | 10 | 1 | 1 | D5G0110S - R | D5G0110N - R | DB |
| 01 | 11 | 1 | 1 | D5G0111S - R | D5G0111N - R | DB |
| 02 | 04 | 2 | 1 | D5G0204S - R | D5G0204N - R | DG |
| 02 | 05 | 2 | 1 | D5G0205S - R | D5G0205N - R | DG |
| 03 | 03 | 3 | 1 | D5G0303S - R | D5G0303N - R | DN |

* FIGURES ARE SHOWN ON PAGES 55 AND 56.

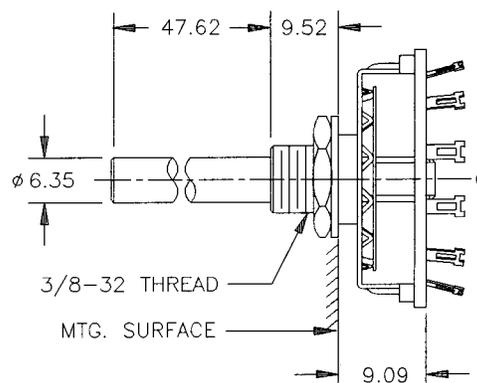
DIMENSIONS

STANDARD CONSTRUCTION



D5G

GLASS EPOXY CONSTRUCTION



How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|------------------|----------------------------------|---------------------------------|-------------|------------------------|----------------|---------------|
| D5 | G - GLASS | 01 - MIN. | 12 - MAX @ 30° | S - SHORTING N - NON SHORTING | L - SOLDER LUG R - REAR P.C. | | F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | | ADDITIONAL OPTIONS | | | | |
|---|----------|----------|----------------------|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| D | 5 | G | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

SHAFT, BUSHING, AND FLAT OPTIONS

| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
|----------|-----------------|-----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 19.05 | 6.35 |
| 08 | 19.05 | 9.53 |
| 09 | 25.4 | 6.35 |
| 10 | 25.4 | 9.53 |
| 11 | 38.1 | 6.35 |
| 12 | 38.1 | 9.53 |
| 13 | 47.63 | 6.35 |
| 14 | 47.63 | 9.53 |

| P/N OPT. | FLAT ANGLE |
|----------|-------------|
| B | ROUND - STD |
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

D
M
E
T
R
I
C

PRINTED CIRCUIT BOARD OPTIONS

R

3/8-32 THREAD
MTG. SURFACE

P.C. BOARD MOUNTING PATTERN

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D6 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

42.85 mm DIAMETER 1.5 AMPS @ 28 VDC

The D6 Series is one of our more versatile rotary switches. A 30° index angle, solder lug terminals, and diallyl phthalate insulation are standard. However, additional indexes of 36°, 45°, and 60° and insulation sections of glass epoxy and ceramic are available. Adjustable stops are available on indexes of 30° and 60°.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
1.5 amps @ 28 VDC; 0.5 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,500 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3.5 milliohms.
Insulation Resistance: Diallyl in excess of 900,000 megohms
Glass in excess of 750,000 megohms.
Ceramic in excess of 1,000,000 megohms.
Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Diallyl phthalate, glass, or ceramic.
Index: Dual-ball, side thrust design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard, 36°, 45°, and 60° available.
Index Stops: Adjustable standard, fixed or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

DIALLYL PHTHALATE INSULATION

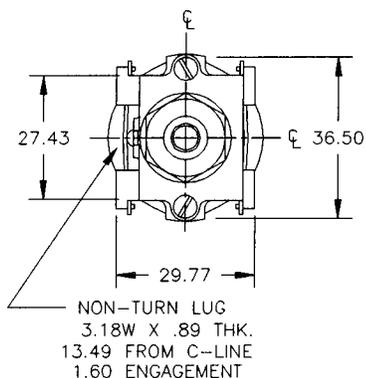
SWITCHES - 30° INDEX - ADJUSTABLE STOPS - SOLDER LUG TERMINALS

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * | POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|----------|--------------|--------|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-12 | 1 | 1 | D6D0112S | D6D0112N | DD | 05 | 02-03 | 5 | 1 | D6D0503S | D6D0503N | DR |
| 02 | 02-12 | 1 | 2 | D6D0212S | D6D0212N | DD | 06 | 02-12 | 1 | 6 | D6D0612S | D6D0612N | DD |
| 02 | 02-06 | 2 | 1 | D6D0206S | D6D0206N | DL | 06 | 02-06 | 2 | 3 | D6D0606S | D6D0606N | DL |
| 03 | 02-12 | 1 | 3 | D6D0312S | D6D0312N | DD | 06 | 02-05 | 3 | 2 | D6D0605S | D6D0605N | DO |
| 03 | 02-05 | 3 | 1 | D6D0305S | D6D0305N | DO | 08 | 02-06 | 2 | 4 | D6D0806S | D6D0806N | DL |
| 04 | 02-12 | 1 | 4 | D6D0412S | D6D0412N | DD | 09 | 02-05 | 3 | 3 | D6D0905S | D6D0905N | DO |
| 04 | 02-06 | 2 | 2 | D6D0406S | D6D0406N | DL | 10 | 02-03 | 5 | 2 | D6D1003S | D6D1003N | DR |
| 05 | 02-12 | 1 | 5 | D6D0512S | D6D0512N | DD | 10 | 02-06 | 2 | 5 | D6D1006S | D6D1006N | DL |

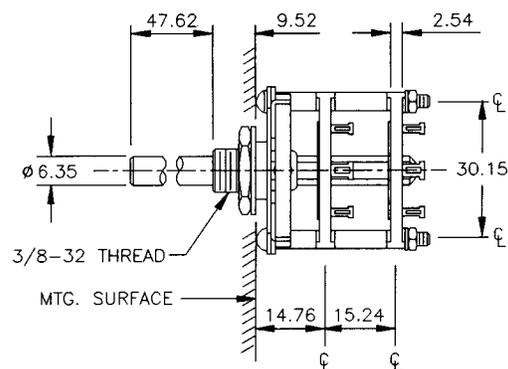
* FIGURES ARE SHOWN ON PAGES 55 AND 56.

DIMENSIONS

STANDARD CONSTRUCTION



D6D - DIALLYL PHTHALATE CONSTRUCTION



How to Order Additional Options:

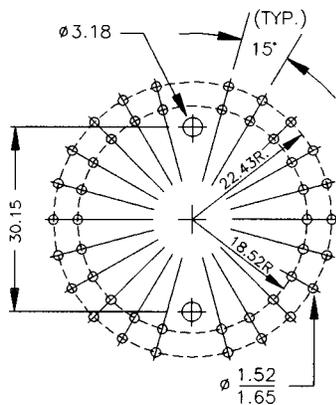
| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|--|-------------|--|----------------------------------|---------------------------------|--------------------------|--|----------------|---------------|
| D6 | D - DIALLYL (30°,45°,60°) G - GLASS (30°,36°,45°,60°) | 01 - MIN. | 12 - MAX @ 30° 10 - MAX @ 36° 08 - MAX @ 45° 06 - MAX @ 60° | S - SHORTING N - NON SHORTING | L - SOLDER LUG R - REAR P.C. | 30° 36° 45° 60° | A - ADJ. (30°,60° ONLY) F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |
| D6 | C - CERAMIC (30°,60°) | 01 - MIN. | 12 - MAX @ 30° 06 - MAX @ 60° | S - SHORTING N - NON SHORTING | L - SOLDER LUG | 30° 60° | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS

| | | | | | | | | | |
|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| D | 6 | | | | | | | | |
| | | (SPECIFY) |

ADDITIONAL OPTIONS

PRINTED BOARD MOUNTING PATTERN



SHAFT, BUSHING, AND FLAT OPTIONS

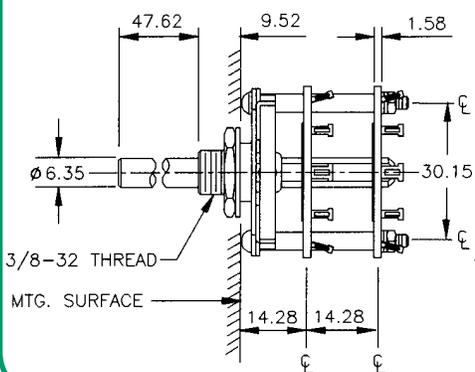
| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
|----------|-----------------|-----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 19.05 | 6.35 |
| 08 | 19.05 | 9.53 |
| 09 | 25.4 | 6.35 |
| 10 | 25.4 | 9.53 |
| 11 | 38.1 | 6.35 |
| 12 | 38.1 | 9.53 |
| 13 | 47.63 | 6.35 |
| 14 | 47.63 | 9.53 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

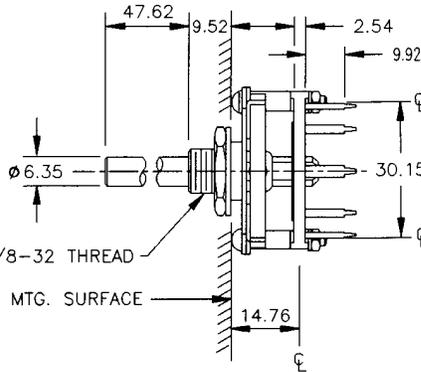
SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

INSULATION OPTIONS

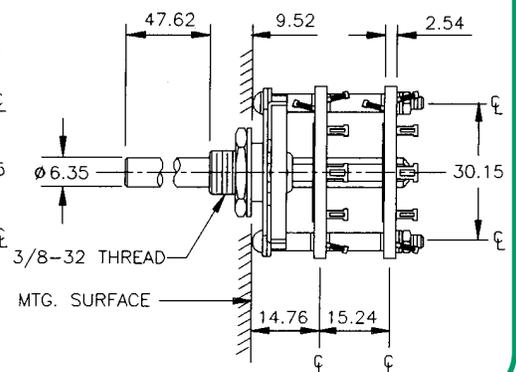
D6G - GLASS EPOXY INSULATION



R REAR P.C.



D6C - CERAMIC CONSTRUCTION



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D7 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

47.62 mm DIAMETER 2.25 AMPS @ 28 VDC

The D7 Series, constructed with a dual-ball, hill and valley index, has increased the physical size of the switch conductors allowing for additional current carrying capabilities. Standard designs utilize glass epoxy or ceramic insulations, solder lug terminals, and 30° adjustable stop indexing.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 2.25 amps @ 28 VDC; 1.0 amp @ 115 VAC.

Current Carrying Capacity: 9 amps.

Dielectric Strength: 1,500 VAC between current carrying parts and ground.

Contact Resistance: Average initial 3 milliohms.

Insulation Resistance: Glass in excess of 750,000 megohms.
Ceramic in excess of 1,000,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.

Clips and Rotors: Brass with silver plate as standard.

Insulation: Glass epoxy, or ceramic.

Index: Dual-ball, hill and valley design.

Index Life: 25,000 cycles minimum.

Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.

Index Angles: Positive 30° standard, 60° available.

Index Stops: Adjustable standard, fixed or continuous.

Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

GLASS EPOXY INSULATION

SWITCHES - 30° INDEXING

ADJUSTABLE STOPS - SOLDER LUG TERMINALS - STOPS SET @ 2 POS.

CERAMIC INSULATION

SWITCHES - 30° INDEXING

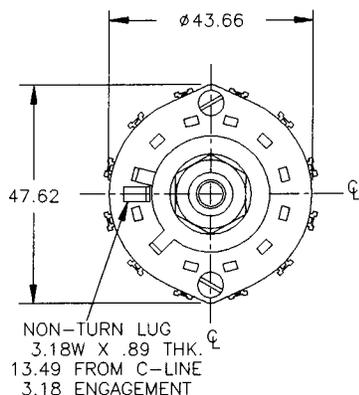
ADJUSTABLE STOPS - SOLDER LUG TERMINALS - STOPS SET @ 2 POS.

| POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * | POLES | ACTIVE POSITIONS | POLES/SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|---------------|-----------------|----------|--------------|--------|---------------------|------------------|---------------|-----------------|----------|--------------|--------|
| 01 | 02-11 | 1 | 1 | D7G0111S | D7G0111N | DA | 01 | 02-11 | 1 | 1 | D7C0111S | D7C0111N | DA |
| 02 | 02-11 | 1 | 2 | D7G0211S | D7G0211N | DA | 02 | 02-11 | 1 | 2 | D7C0211S | D7C0211N | DA |
| 02 | 02-05 | 2 | 1 | D7G0205S | D7G0205N | DH | 02 | 02-05 | 2 | 1 | D7C0205S | D7C0205N | DH |
| 03 | 02-11 | 1 | 3 | D7G0311S | D7G0311N | DA | 03 | 02-11 | 1 | 3 | D7C0311S | D7C0311N | DA |
| 03 | 02-03 | 3 | 1 | D7G0303S | D7G0303N | DM | 03 | 02-03 | 3 | 1 | D7C0303S | D7C0303N | DM |
| 04 | 02-11 | 1 | 4 | D7G0411S | D7G0411N | DA | 04 | 02-05 | 2 | 2 | D7C0405S | D7C0405N | DH |
| 04 | 02-05 | 2 | 2 | D7G0405S | D7G0405N | DH | 06 | 02-05 | 2 | 3 | D7C0605S | D7C0605N | DH |
| 05 | 02-11 | 1 | 5 | D7G0511S | D7G0511N | DA | 06 | 02-03 | 3 | 2 | D7C0603S | D7C0603N | DM |
| 06 | 02-05 | 2 | 3 | D7G0605S | D7G0605N | DH | 60° INDEXING | | | | | | |
| 06 | 02-03 | 3 | 2 | D7G0603S | D7G0603N | DM | 01 | 02-06 | 1 | 1 | _____ | D7C0106N-60 | DK |
| 06 | 02-11 | 1 | 6 | D7G0611S | D7G0611N | DA | 02 | 02-06 | 1 | 2 | _____ | D7C0206N-60 | DK |
| 08 | 02-05 | 2 | 4 | D7G0805S | D7G0805N | DH | 03 | 02-06 | 1 | 3 | _____ | D7C0306N-60 | DK |
| 09 | 02-03 | 3 | 3 | D7G0903S | D7G0903N | DM | 04 | 02-06 | 1 | 4 | _____ | D7C0406N-60 | DK |
| 10 | 02-05 | 2 | 5 | D7G1005S | D7G1005N | DH | 05 | 02-06 | 1 | 5 | _____ | D7C0506N-60 | DK |

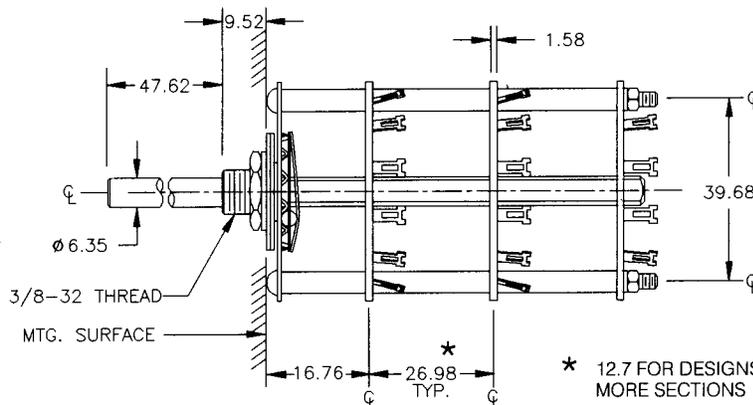
* FIGURES ARE SHOWN ON PAGES 55 AND 56.

DIMENSIONS

STANDARD CONSTRUCTION



D7G - GLASS EPOXY CONSTRUCTION



* 12.7 FOR DESIGNS OF FIVE OR MORE SECTIONS

How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|--------------------------|-------------|----------------------------------|----------------------------------|-------------|------------------------------------|----------------|---------------|
| D7 | G - GLASS C - CERAMIC | 01 - MIN. | 12 - MAX @ 30° 06 - MAX @ 60° | S - SHORTING N - NON-SHORTING | 30° 60° | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS

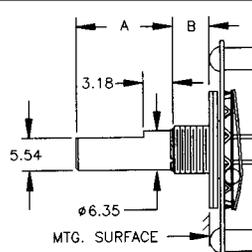
D 7

(SPECIFY) (SPECIFY) (SPECIFY) (SPECIFY)

ADDITIONAL OPTIONS

(SPECIFY) (SPECIFY) (SPECIFY) (SPECIFY)

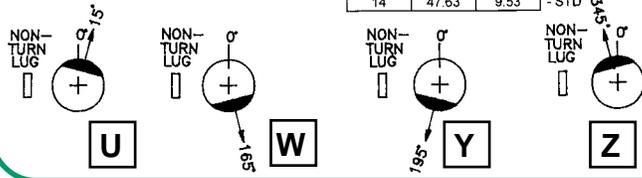
SHAFT, BUSHING, AND FLAT OPTIONS



| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
|----------|-----------------|-----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 19.05 | 6.35 |
| 08 | 19.05 | 9.53 |
| 09 | 25.4 | 6.35 |
| 10 | 25.4 | 9.53 |
| 11 | 38.1 | 6.35 |
| 12 | 38.1 | 9.53 |
| 13 | 47.63 | 6.35 |
| 14 | 47.63 | 9.53 |

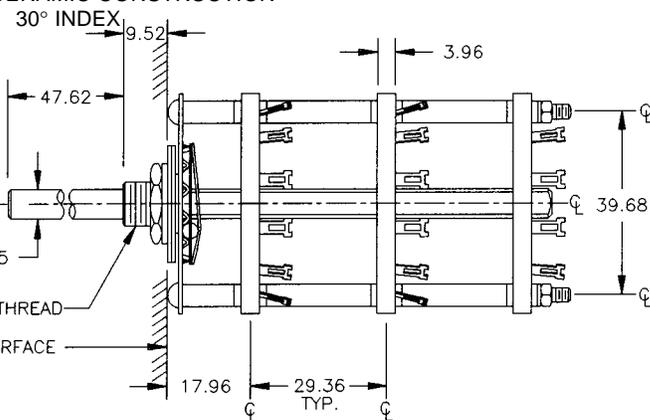
| P/N OPT. | FLAT ANGLE | - STD |
|----------|------------|-------|
| B | ROUND | |
| U | 15° | |
| W | 165° | |
| Y | 195° | |
| Z | 345° | |

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

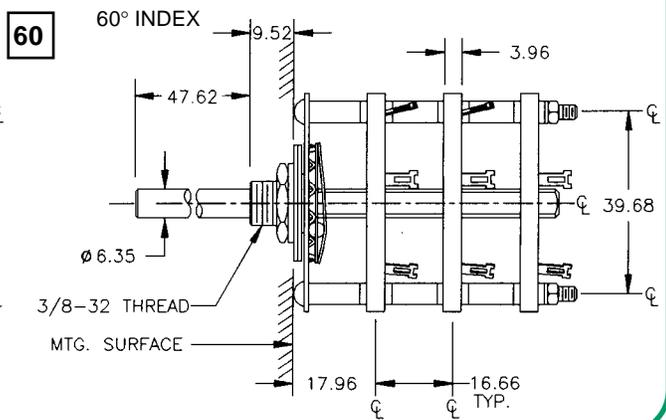


INSULATION AND INDEX OPTIONS

D7C - CERAMIC CONSTRUCTION



D7C - CERAMIC INSULATION



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D8 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

58.74 mm DIAMETER 2.25 AMPS @ 28 VDC

The D8 Series switches are heavy duty, 18 position, 20° index, and glass epoxy insulation. Double eyelet construction is standard to assist in supporting larger wiring harness applications. Positive indexing is provided by a dual-ball, hill and valley index assembly.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
2.25 amps @ 28 VDC; 1.0 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 5 milliohms.
Insulation Resistance: In excess of 750,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy.
Index: Dual-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 20° standard.
Index Stops: Adjustable standard, fixed or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

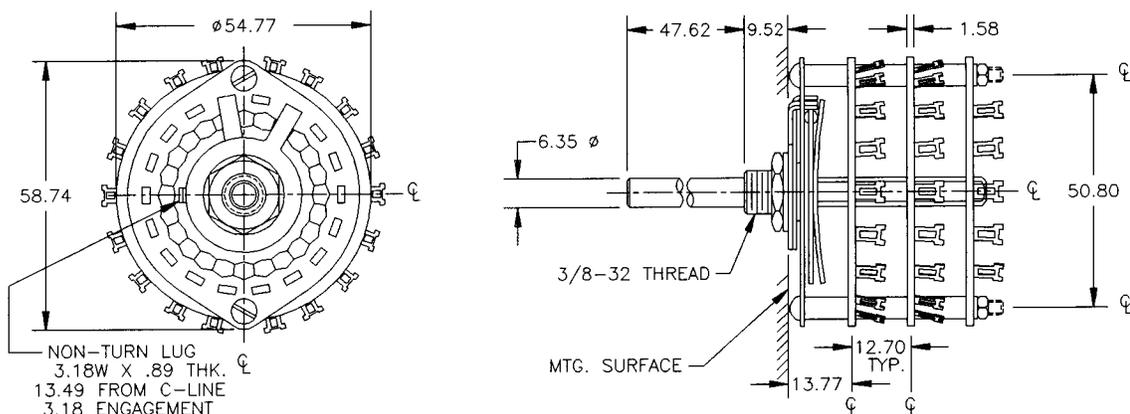
GLASS EPOXY INSULATION SWITCHES - 20° INDEXING
ADJUSTABLE STOPS SET @ 2 POS. - SOLDER LUG TERMINALS

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-17 | 1 | 1 | D8G0117S | D8G0117N | DT |
| 02 | 02-17 | 1 | 2 | D8G0217S | D8G0217N | DT |
| 03 | 02-17 | 1 | 3 | D8G0317S | D8G0317N | DT |
| 04 | 02-17 | 1 | 4 | D8G0417S | D8G0417N | DT |
| 05 | 02-17 | 1 | 5 | D8G0517S | D8G0517N | DT |
| 06 | 02-17 | 1 | 6 | D8G0617S | D8G0617N | DT |
| 07 | 02-17 | 1 | 7 | D8G0717S | D8G0717N | DT |
| 08 | 02-17 | 1 | 8 | D8G0817S | D8G0817N | DT |

* FIGURES ARE SHOWN ON PAGE 57.

DIMENSIONS

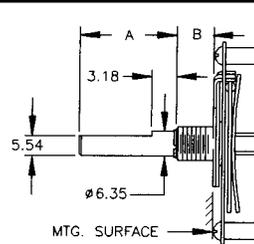
STANDARD CONSTRUCTION
D8G - GLASS EPOXY
CONSTRUCTION



How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | STOP TYPE | SHAFT/BUSHING | SHAFT FLAT |
|---|-----------------|-------------|----------------------|----------------------------------|------------------------------------|----------------------|----------------------|
| D8 | G - GLASS | 01 - MIN. | 18 - MAX @ 20° | N - NON SHORTING S - SHORTING | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |
| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | | ADDITIONAL OPTIONS | | |
| D | 8 | G | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

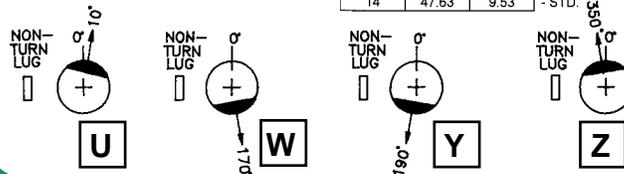
SHAFT, BUSHING, AND FLAT OPTIONS



| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
|----------|-----------------|-----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 19.05 | 6.35 |
| 08 | 19.05 | 9.53 |
| 09 | 25.4 | 6.35 |
| 10 | 25.4 | 9.53 |
| 11 | 38.1 | 6.35 |
| 12 | 38.1 | 9.53 |
| 13 | 47.63 | 6.35 |
| 14 | 47.63 | 9.53 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 10° |
| W | 170° |
| Y | 190° |
| Z | 350° |

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.



D
M
E
T
R
I
C

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

D9 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

58.74 mm DIAMETER 1.5 AMPS @ 28 VDC

The D9 Series has a 15° index with a maximum of 24 positions. Indexing is provided by a dual-ball hill and valley design. Standard features include solder lug terminals, adjustable stops and glass epoxy insulation.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 1.5 amps @ 28 VDC; 0.25 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 5 milliohms.
Insulation Resistance: In excess of 750,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy.
Index: Dual-ball, hill and valley design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 15° standard.
Index Stops: Adjustable standard, fixed or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

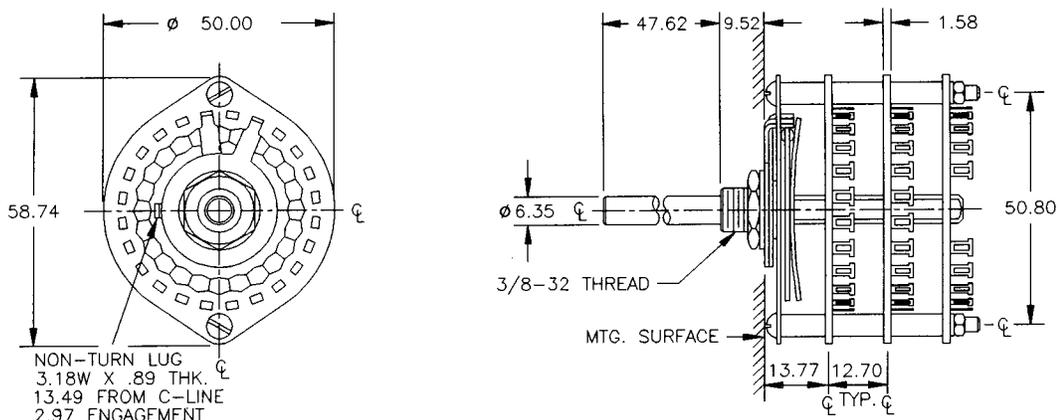
GLASS EPOXY INSULATION SWITCHES - 15° INDEXING
 ADJUSTABLE STOPS - SOLDER LUG TERMINALS - STOPS SET @ 2 POS.

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-23 | 1 | 1 | D9G0123S | D9G0123N | DU |
| 02 | 02-23 | 1 | 2 | D9G0223S | D9G0223N | DU |
| 03 | 02-23 | 1 | 3 | D9G0323S | D9G0323N | DU |
| 04 | 02-23 | 1 | 4 | D9G0423S | D9G0423N | DU |
| 05 | 02-23 | 1 | 5 | D9G0523S | D9G0523N | DU |
| 06 | 02-23 | 1 | 6 | D9G0623S | D9G0623N | DU |
| 07 | 02-23 | 1 | 7 | D9G0723S | D9G0723N | DU |
| 08 | 02-23 | 1 | 8 | D9G0823S | D9G0823N | DU |

* FIGURES ARE SHOWN ON PAGE 57.

DIMENSIONS

STANDARD CONSTRUCTION
 D9G - GLASS EPOXY
 CONSTRUCTION



How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|------------------|----------------------------------|---------------------------------|------------------------------------|----------------|---------------|
| D9 | G - GLASS | 01 - MIN. | 24 - MAX @ 15° | S - SHORTING N - NON SHORTING | L - SOLDER LUG R - REAR P.C. | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | | ADDITIONAL OPTIONS | | |
|---|----------|----------|----------------------|----------------------|--------------------------|--------------------------|--------------------------|
| D | 9 | G | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

SHAFT, BUSHING, AND FLAT OPTIONS

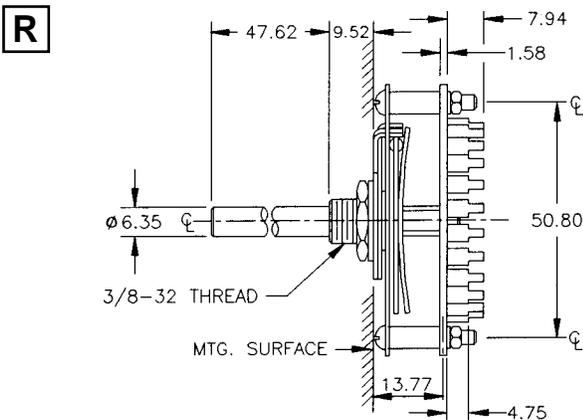
| P/N OPT. | SHAFT LGTH. "A" | BUSH LGTH. "B" |
|----------|-----------------|----------------|
| 01 | 9.53 | 6.35 |
| 02 | 9.53 | 9.53 |
| 03 | 12.7 | 6.35 |
| 04 | 12.7 | 9.53 |
| 05 | 14.29 | 6.35 |
| 06 | 14.29 | 9.53 |
| 07 | 19.05 | 6.35 |
| 08 | 19.05 | 9.53 |
| 09 | 25.4 | 6.35 |
| 10 | 25.4 | 9.53 |
| 11 | 38.1 | 6.35 |
| 12 | 38.1 | 9.53 |
| 13 | 47.63 | 6.35 |
| 14 | 47.63 | 9.53 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 7.5° |
| W | 172.5° |
| Y | 187.5° |
| Z | 352.5° |

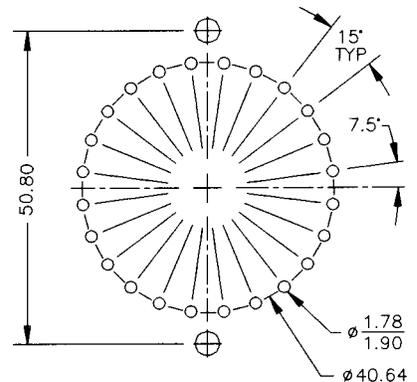
SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

D
M
E
T
R
I
C

PRINTED CIRCUIT BOARD OPTIONS



P.C. BOARD MOUNTING PATTERN



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

SELECTOR GUIDE OPEN FRAME ROTARY ELECTRONIC SWITCHES



CHARACTERISTICS

SERIES E1

SERIES E2

SERIES E3

SERIES E4

SERIES E5

| CHARACTERISTICS | SERIES E1 | SERIES E2 | SERIES E3 | SERIES E4 | SERIES E5 |
|------------------------------------|----------------|----------------|----------------|----------------|-----------------|
| Page Number | 37 | 38 | 39 | 40,41 | 42,43 |
| Construction | OPEN | OPEN | OPEN | OPEN | OPEN |
| Diameter | 37.39 mm | N/A | 38.1 mm | 71.44 mm | 63.5 x 41.28 mm |
| Positions | 2 - 3 | 2 - 5 | 2 - 3 | 2 - 17 | 2 - 24 |
| E Current and Voltage | .25A @ 115 VAC | 0.5A @ 115 VAC | 0.5A @ 115 VAC | 9.0A @ 115 VAC | 0.25A @ 115 VAC |
| L | 1.5A @ 28 VDC | 1.5A @ 28 VDC | 1.5A @ 28 VDC | 11.0A @ 28 VDC | 0.55A @ 28 VDC |
| E Current Carrying Capacity | 9A | 9A | 9A | 17A | 1A |
| C Dielectric Strength | 1,000 VAC | 1,000 VAC | 1,500 VAC | 3,000 VAC | 750 VAC |
| T Insulation Resistance | 750,000 | 750,000 | 750,000 | 1,000,000 | 750,000 |
| R (megohms) | | | | | |
| I Contact Resistance | 3.5 | 3.5 | 3.5 | 7 | N/A |
| C (milliohms) | | | | | |
| A | | | | | |
| L | | | | | |
| M Insulation - Glass Epoxy | STANDARD | STANDARD | STANDARD | NO | STANDARD |
| A Ceramic | NO | NO | YES | STANDARD | NO |
| T | | | | | |
| E | | | | | |
| R | | | | | |
| I Contacts - Silver Alloy ★ | YES | YES | YES | STANDARD | YES |
| A Brass/Silver Plate | STANDARD | STANDARD | STANDARD | NO | STANDARD |
| L | | | | | |
| M Stop Strength (Min.) | 1.13 Nm | 2.82 Nm | 2.82 Nm | 2.82 Nm | 2.82 Nm |
| E Mechanical Life | 10,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles |
| C Detenting Angles: 15° | — | 15 | — | — | 15 |
| H 20° | — | — | — | 20 | — |
| A 22.5° | — | — | — | — | — |
| N 30° | 30 | 30 | 30 | — | — |
| I 36° | — | — | — | — | — |
| C 45° | — | — | — | — | — |
| A 60° | — | — | — | — | — |
| L 90° | — | — | — | — | — |
| O Quick Connect | NO | NO | NO | NO | NO |
| P Rear PC Mount | YES | YES | YES | NO | NO |
| T Vertical PC Mount ★ | NO | NO | NO | NO | YES |
| I Front PC Mount ★ | YES | NO | NO | NO | NO |
| O Dual Concentric Designs ★ | NO | NO | NO | NO | NO |
| N Keylock ★ | NO | NO | NO | NO | NO |
| S Spring Return ★ | NO | YES | YES | NO | NO |
| Water Resistant Seals ★ | NO | NO | YES | NO | YES |

★ Contact factory



ELECTROSWITCH • ELECTRONIC PRODUCTS
UNIT OF ELECTRO SWITCH CORP.

2010 Yonkers Road, Raleigh, NC 27604

SPECIFICATIONS AND ORDERING INFORMATION

E1 - SERIES

37.39 mm MAXIMUM DIAMETER 1.5 AMPS @ 28 VDC

The E1 Series offers a strong positive 30° index in a hill and valley design, and a small front housing. This series is superior where depth-behind-panel is critical.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 1.5 amps @ 28 VDC; 0.25 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3.5 milliohms.
Insulation Resistance: In excess of 750,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy.
Index: Formed spring, hill and valley design.
Index Life: 10,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard.
Index Stops: Fixed stops standard.
Stop Strength: 1.13 Nm minimum.

STANDARD PART NUMBER

GLASS EPOXY INSULATION

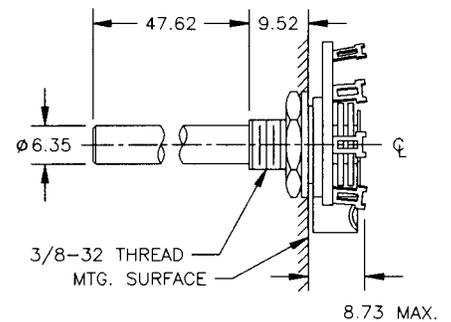
SWITCHES - 30° INDEXING - FIXED STOPS - SOLDER LUG TERMINALS

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | DETAIL |
|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02 | 1 | 1 | E1G0102S | E1G0102N | A |
| 01 | 03 | 1 | 1 | E1G0103S | E1G0103N | B |
| 02 | 02 | 2 | 1 | E1G0202S | E1G0202N | C |
| 02 | 03 | 2 | 1 | E1G0203S | E1G0203N | D |

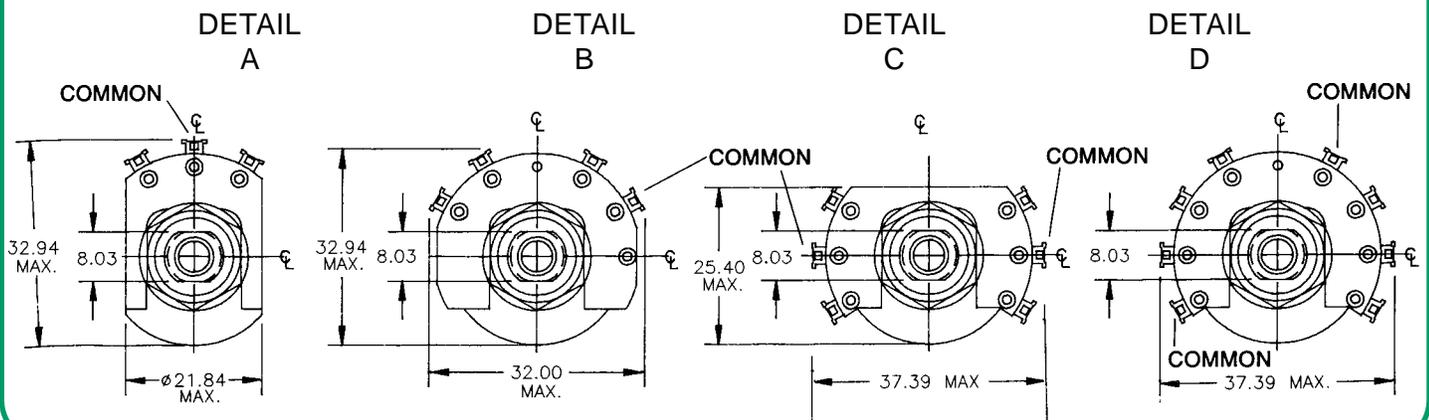
DIMENSIONS

STANDARD CONSTRUCTION

E1G - GLASS EPOXY CONSTRUCTION



DIMENSIONS



E2 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

Lever Action 1.5 AMPS @ 28 VDC

The E2 Series is our lever action switch, originally designed for the electric guitar market. It offers positive 2-5 position switching, a 30° or a 15° index, and solder lug terminals.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 1.5 amps @ 28 VDC; 0.5 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3.5 milliohms.
Insulation Resistance: In excess of 750,000 megohms.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy.
Index: Cam and roller with coil spring.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30°, 15° and spring return.
Index Stops: Fixed stops standard.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

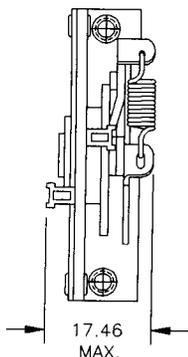
LEVER

SWITCHES - 30° INDEXING - FIXED STOPS - SOLDER LUG TERMINALS

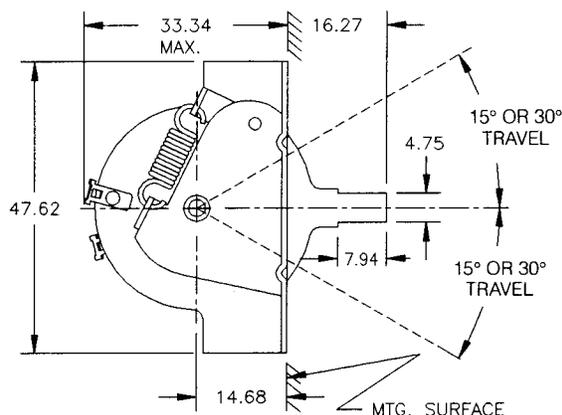
| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | DESCRIPTION | DETAIL |
|-------|------------------|----------------|-----------------|-------------|--------------|---|--------|
| 02 | 03 | 2 | 1 | E2G0203S-1 | E2G0203N-1 | POSITIVE INDEX ONE SIDE TO CENTER, SPRING RETURN OPPOSITE SIDE TO CENTER. | E |
| 02 | 05 | 2 | 1 | E2G0205S-15 | ----- | 2 POSITIVE INDEX POSITIONS BOTH SIDES OF CENTER. | E |
| 02 | 03 | 2 | 1 | E2G0203S | E2G0203N | POSITIVE INDEX BOTH SIDES OF CENTER. | E |
| 02 | 03 | 2 | 1 | E2G0203S-2 | E2G0203N-2 | SPRING RETURN BOTH SIDES TO CENTER. | E |
| 04 | 02 | 4 | 1 | E2G0402S-3 | E2G0402N-3 | SPRING RETURN TO CENTER. | E |
| 04 | 02 | 4 | 1 | E2G0402S | E2G0402N | POSITIVE INDEX. | E |

DIMENSIONS

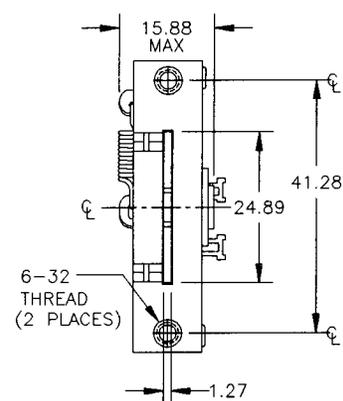
STANDARD CONSTRUCTION



DETAIL E



DETAIL F



SPECIFICATIONS AND ORDERING INFORMATION

E3 - SERIES

38.1 mm DIAMETER 1.5 AMPS @ 28 VDC

The E3 Series was designed to provide spring return action in an open frame construction. Standard construction is available with 2 or 3 positions, 30° index, and solder lug terminals.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
1.5 amps @ 28 VDC; 0.5 amp @ 115 VAC.
Current Carrying Capacity: 9 amps.
Dielectric Strength: 1,500 VAC between current carrying parts and ground.
Contact Resistance: Average initial 3.5 milliohms.
Insulation Resistance: In excess of 750,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy.
Index: Coil spring.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard.
Index Stops: Fixed stops standard.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

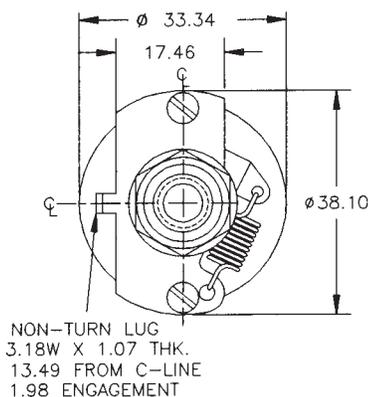
SPRING RETURN

SWITCHES - 30° INDEXING - FIXED STOPS - SOLDER LUG TERMINALS

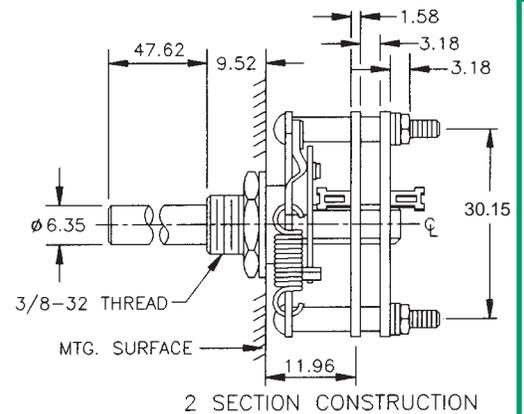
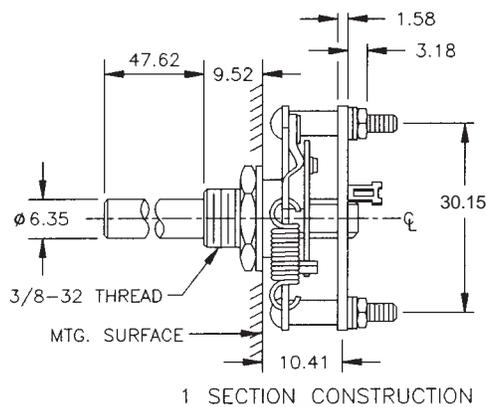
| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | DESCRIPTION |
|-------|------------------|----------------|-----------------|------------|--------------|--|
| 04 | 02 | 4 | 1 | E3G0402S-1 | E3G0402N-1 | SPRING RETURN FROM CLOCKWISE. |
| 06 | 03 | 3 | 2 | E3G0603S-2 | E3G0603N-2 | SPRING RETURN BOTH SIDES TO CENTER. |
| 06 | 03 | 3 | 2 | E3G0603S-3 | E3G0603N-3 | SPRING RETURN CLOCKWISE TO CENTER, POSITIVE INDEX COUNTER CLOCKWISE OF CENTER. |

DIMENSIONS

STANDARD CONSTRUCTION



E3G - GLASS EPOXY CONSTRUCTION



E4 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

71.44 mm DIAMETER 11.0 AMPS @ 28 VDC

The E4 Series was designed to offer maximum power ratings in an electronic open frame switch. Standard construction consists of a 20° index, 2-17 positions, and solder lug terminals.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 11.0 amps @ 28 VDC; 9.0 amps @ 115 VAC.
Current Carrying Capacity: 17 amps.
Dielectric Strength: 3000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 7.0 milliohms.
Insulation Resistance: In excess of 1,000,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Contacts and Collector Rings: Coin silver as standard.
Insulation: Ceramic.
Index: Dual-ball, hill and valley design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 20° standard.
Index Stops: Adjustable stops standard, fixed or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

20° INDEXING

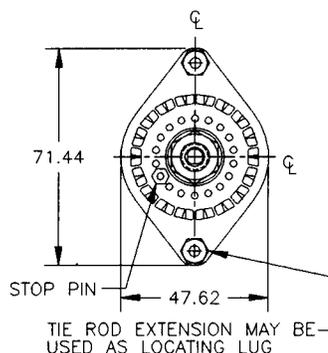
SWITCHES ADJUSTABLE STOPS - SOLDER LUG TERMINALS - STOPS SET @ 2 POS.

| ACTIVE POLES | POLES/ POSITIONS | NO. OF SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * | ACTIVE POLES | POLES/ POSITIONS | NO. OF SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|--------------|------------------|----------------|-----------------|----------|--------------|--------|--------------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-17 | 1 | 1 | E4C0117S | E4C0117N | EA | 06 | 02-17 | 1 | 6 | E4C0617S | E4C0617N | EA |
| 02 | 02-17 | 1 | 2 | E4C0217S | E4C0217N | EA | 06 | 02-08 | 2 | 3 | E4C0608S | E4C0608N | EB |
| 02 | 02-08 | 2 | 1 | E4C0208S | E4C0208N | EB | 06 | 02-05 | 3 | 2 | E4C0605S | E4C0605N | EC |
| 03 | 02-17 | 1 | 3 | E4C0317S | E4C0317N | EA | 08 | 02-08 | 2 | 4 | E4C0808S | E4C0808N | EB |
| 03 | 02-05 | 3 | 1 | E4C0305S | E4C0305N | EC | 09 | 02-05 | 3 | 3 | E4C0905S | E4C0905N | EC |
| 04 | 02-17 | 1 | 4 | E4C0417S | E4C0417N | EA | 10 | 02-08 | 2 | 5 | E4C1008S | E4C1008N | EB |
| 04 | 02-08 | 2 | 2 | E4C0408S | E4C0408N | EB | 12 | 02-05 | 3 | 4 | E4C1205S | E4C1205N | EC |
| 05 | 02-17 | 1 | 5 | E4C0517S | E4C0517N | EA | 15 | 02-05 | 3 | 5 | E4C1505S | E4C1505N | EC |

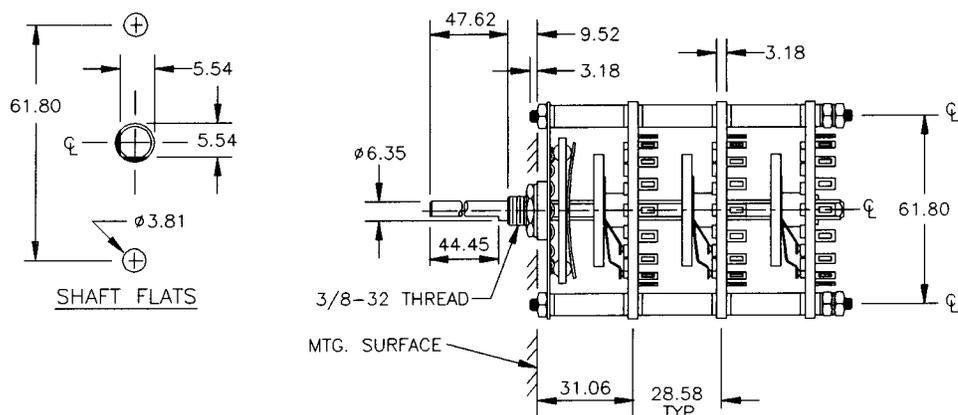
* FIGURES ARE SHOWN ON PAGE 57.

DIMENSIONS

STANDARD CONSTRUCTION



E4C - CERAMIC CONSTRUCTION

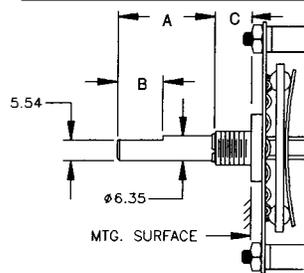


How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|------------------|----------------------------------|------------------------------------|----------------|---------------|
| E4 | C - CERAMIC | 01 - MIN. | 17 - MAX @ 20° | S - SHORTING N - NON SHORTING | A - ADJ. F - FIXED C - CONT. | SEE CHART "A" | SEE CHART "B" |

| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | |
|---|----------|----------|----------------------|----------------------|----------------------|----------------------|
| E | 4 | C | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

SHAFT, BUSHING, AND FLAT OPTIONS

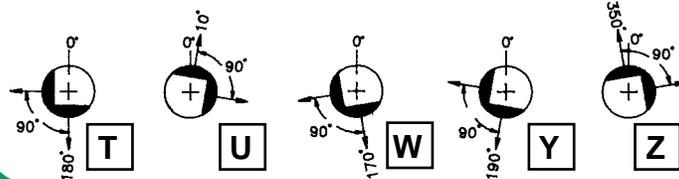


| P/N OPT. | SHAFT LGTH. "A" | FLAT LGTH. "B" | BUSH LGTH. "C" |
|----------|-----------------|----------------|----------------|
| 01 | 9.53 | 6.35 | 6.35 |
| 02 | 9.53 | 6.35 | 9.53 |
| 03 | 12.7 | 8.73 | 6.35 |
| 04 | 12.7 | 8.73 | 9.53 |
| 05 | 19.05 | 11.91 | 6.35 |
| 06 | 19.05 | 11.91 | 9.53 |
| 07 | 25.4 | 15.08 | 6.35 |
| 08 | 25.4 | 15.08 | 9.53 |
| 09 | 38.1 | 15.88 | 6.35 |
| 10 | 38.1 | 15.88 | 9.53 |
| 11 | 47.63 | 15.88 | 6.35 |
| 12 | 47.63 | 15.88 | 9.53 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 10° |
| W | 170° |
| T | 180° |
| Y | 190° |
| Z | 350° |

- STD.

SHAFT AS VIEWED IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.



E
M
E
T
R
I
C

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

E5 - SERIES

63.5 mm 0.55 AMP @ 28 VDC

SPECIFICATIONS AND ORDERING INFORMATION

The E5 Series offers a vertical printed circuit board mountable switch with up to 24 positions and a 15° index. This series is great where complex switching is required in a small package.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
0.55 amp @ 28 VDC; 0.55 amp @ 115 VAC.
Current Carrying Capacity: 1 amp.
Dielectric Strength: 750 VAC between current carrying parts and ground.
Insulation Resistance: In excess of 750,000 megohms.

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Brass with silver plate as standard.
Insulation: Glass epoxy.
Index: Single-ball, hill and valley.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 15° standard.
Index Stops: Fixed standard or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

VERTICAL PRINTED CIRCUIT BOARD

15° INDEXING - SOLDER LUG TERMINALS - FIXED STOPS

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|----------|--------------|--------|
| 01 | 23 | 1 | 1 | E5G0123S | E5G0123N | ED |
| 02 | 23 | 1 | 2 | E5G0223S | E5G0223N | ED |
| 03 | 23 | 1 | 3 | E5G0323S | E5G0323N | ED |
| 04 | 23 | 1 | 4 | E5G0423S | E5G0423N | ED |

VERTICAL PRINTED CIRCUIT BOARD

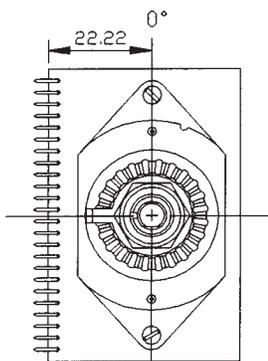
15° INDEXING - SOLDER LUG TERMINALS - CONTINUOUS ROTATION

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|------------|--------------|--------|
| 01 | 23 | 1 | 1 | E5G0123S-C | E5G0123N-C | ED |
| 02 | 23 | 1 | 2 | E5G0223S-C | E5G0223N-C | ED |
| 03 | 23 | 1 | 3 | E5G0323S-C | E5G0323N-C | ED |
| 04 | 23 | 1 | 4 | E5G0423S-C | E5G0423N-C | ED |

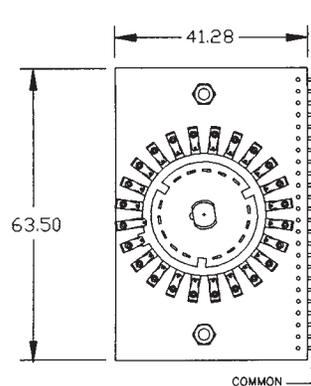
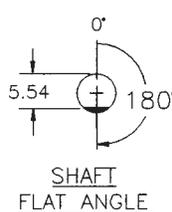
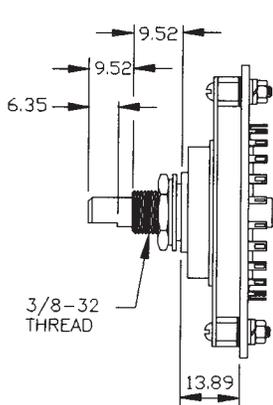
* FIGURES ARE SHOWN ON PAGE 57.

DIMENSIONS

STANDARD CONSTRUCTION



E5 - GLASS EPOXY CONSTRUCTION



How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | STOP TYPE | SHAFT/BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|------------------|----------------------------------|--|---------------|---------------|
| E5 | G - GLASS | 01 - MIN. | 23 - MAX @ 15° | S - SHORTING N - NON SHORTING | F - FIXED 23 - POS. MAX. C - CONT. 24 - POS. MAX. | SEE CHART "A" | SEE CHART "B" |

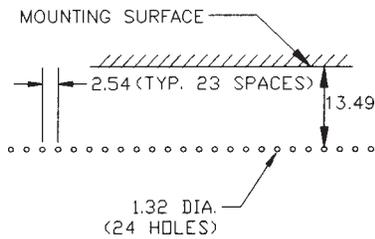
CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS

| | | | | | | |
|----------|----------|-----------|----------------------|----------------------|----------------------|--------------------------|
| E | 5 | G | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> |
| | | (SPECIFY) | (SPECIFY) | (SPECIFY) | | |

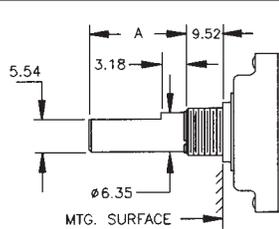
ADDITIONAL OPTIONS

| | | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (SPECIFY) | (SPECIFY) | (SPECIFY) |

PRINTED CIRCUIT BOARD DRILLING



SHAFT, BUSHING, AND FLAT OPTIONS

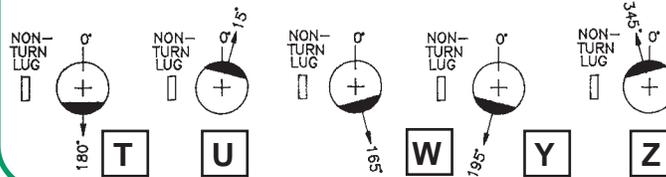


| P/N OPT. | SHAFT LGTH. "A" |
|----------|-----------------|
| 01 | 9.53 |
| 02 | 12.7 |
| 03 | 14.29 |
| 04 | 19.05 |
| 05 | 22.23 |
| 06 | 25.4 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| T | 180° |
| U | 15° |
| W | 165° |
| Y | 195° |
| Z | 345° |

- STD.

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

SELECTOR GUIDE

ORIGINALLY DESIGNED AS MIL. SPEC.
ROTARY ELECTRONIC SWITCHES



CHARACTERISTICS

SERIES M4

SERIES M5

SERIES M6

SERIES M7

| | | | | |
|------------------------------------|-----------------|----------------|------------------|------------------|
| Page Number | 46,47 | 48,49 | 50,51 | 52,53 |
| Construction | ENCLOSED | ENCLOSED | OPEN | OPEN |
| Diameter | 36.32 mm | 25.4 mm | 44.45 mm | 63.5 mm |
| Positions | 2 - 12 | 2 - 12 | 2 - 32 | 2 - 48 |
| E Current and Voltage | 0.35A @ 115 VAC | 2.5A @ 120 VAC | 0.125A @ 115 VAC | 0.125A @ 115 VAC |
| L | 1.0A @ 28 VDC | 2.0A @ 28 VDC | 0.5A @ 28 VDC | 0.5A @ 28 VDC |
| E Current Carrying Capacity | 10A | 12A | 10A | 10A |
| C Dielectric Strength | 1,000 VAC | 1,500 VAC | 1,500 VAC | 1,500 VAC |
| T Insulation Resistance | 10,000 | 100,000 | 1,000,000 | 1,000,000 |
| R (megohms) | | | | |
| I Contact Resistance | 5 | 5 | 10 | 10 |
| C (milliohms) | | | | |
| A | | | | |
| L | | | | |
| M Insulation - Glass Epoxy | NO | NO | STANDARD | STANDARD |
| A Diallyl Phthalate | STANDARD | STANDARD | NO | NO |
| T | | | | |
| E | | | | |
| R | | | | |
| I Contacts - Silver Alloy ★ | STANDARD | STANDARD | STANDARD | STANDARD |
| A Brass/Silver Plate | NO | NO | NO | NO |
| L Gold Plate | YES | YES | YES | YES |
| M Stop Strength (Min.) | 2.82 Nm | 1.69 Nm | 5.65 Nm | 5.65 Nm |
| E Mechanical Life | 25,000 cycles | 25,000 cycles | 25,000 cycles | 25,000 cycles |
| C Detenting Angles: 7.5° | — | — | — | 7.5 |
| H 11.25° | — | — | 11.25 | — |
| A 15° | — | — | 15 | 15 |
| N 22.5° | — | — | 22.5 | — |
| I 30° | 30 | 30 | 30 | — |
| C 36° | — | 36 | — | — |
| A 45° | — | 45 | — | — |
| L 60° | — | 60 | — | — |
| 90° | — | 90 | — | — |
| O Quick Connect | NO | NO | NO | NO |
| P Rear PC Mount | NO | NO | YES | NO |
| T Vertical PC Mount ★ | NO | NO | NO | NO |
| I Front PC Mount ★ | NO | NO | NO | NO |
| O Dual Concentric Designs ★ | NO | YES | NO | YES |
| N Keylock ★ | NO | NO | NO | NO |
| S Spring Return ★ | NO | NO | YES | NO |
| Water Resistant Seals ★ | YES | YES | YES | YES |

The M4 and M5 Series use the enclosed frame worksheet on page 5 for custom designs.

The M6 and M7 Series use the open frame worksheet on page 45 for custom designs.

★ Contact factory



ELECTROSWITCH • ELECTRONIC PRODUCTS
UNIT OF ELECTRO SWITCH CORP.

2010 Yonkers Road, Raleigh, NC 27604

OPEN FRAME WORKSHEET

SERIES PREFERRED _____

ELECTRICAL REQUIREMENTS:

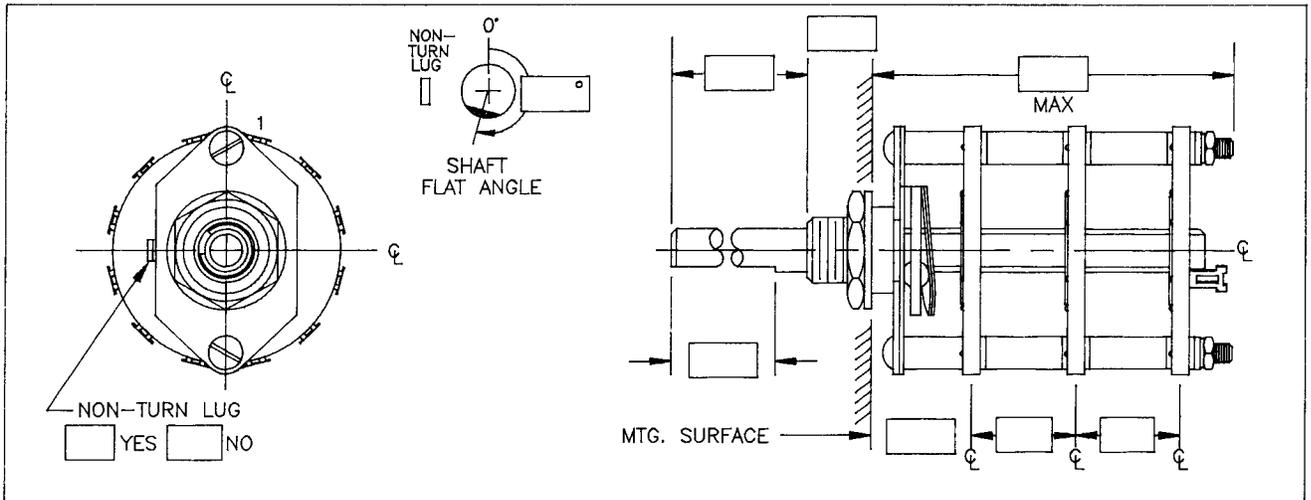
SHORTING OR NON-SHORTING

CURRENT CARRYING CAPACITY _____

INTERRUPTING CURRENT _____

MAXIMUM WORKING VOLTAGE _____

ADDITIONAL REQUIREMENTS: _____



NOTES: SEE APPROPRIATE CATALOG PAGES FOR STANDARD DIMENSIONS AND OPTIONS.

MECHANICAL REQUIREMENTS:

NO. OF POSITIONS _____

NO. OF POLES _____

TERMINAL TYPE _____

INDEX ANGLE _____

Estimated usage _____

ADDITIONAL REQUIREMENTS: _____



ELECTROSWITCH
• ELECTRONIC PRODUCTS
UNIT OF ELECTRO SWITCH CORP.

2010 YONKERS ROAD, RALEIGH, NC 27604
USA

Sender Information

Date: _____ Time: _____

Name: _____

Company: _____

Address: _____

Ph #: _____

Fax #: _____

FAX TRANSMISSION

M4 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

36.32 mm DIAMETER 1.0 AMP @ 28 VDC

The M4 Series was originally designed to meet the requirements of MIL-S-3786/28. Standard construction includes solder lug terminals, adjustable stops and up to 12 positions.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
1.0 amp @ 28 VDC; 0.35 amp @ 115 VAC; .
Current Carrying Capacity: 10 amps.
Dielectric Strength: 1,000 VAC between current carrying parts and ground.
Contact Resistance: Average initial 5 milliohms.
Insulation Resistance: In excess of 10,000 megohms

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Silver alloy as standard.
Insulation: Diallyl phthalate.
Index: Dual-ball, hill and valley design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard.
Index Stops: Adjustable standard, or continuous.
Stop Strength: 2.82 Nm minimum.

STANDARD PART NUMBER

2 WAFER/DECK CONSTRUCTION
ADJUSTABLE STOPS SET @ 12 POS. - SOLDER LUG TERMINALS

SWITCHES - 30° INDEXING

1 WAFER/DECK CONSTRUCTION
ADJUSTABLE STOPS SET @ 6 POS. - SOLDER LUG TERMINALS

SWITCHES - 30° INDEXING

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|----------|--------------|--------|
| 01 | 02-12 | 1 | 1 | M4D0112S | M4D0112N | MB |
| 02 | 02-12 | 1 | 2 | M4D0212S | M4D0212N | MB |
| 03 | 02-12 | 1 | 3 | M4D0312S | M4D0312N | MB |
| 04 | 02-12 | 1 | 4 | M4D0412S | M4D0412N | MB |

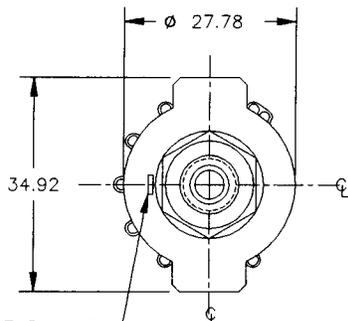
| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|-----------|--------------|--------|
| 01 | 02-06 | 1 | 1 | M4D01 06S | M4D01 06N | MA |
| 02 | 02-06 | 1 | 2 | M4D0206S | M4D0206N | MA |
| 03 | 02-06 | 1 | 3 | M4D0306S | M4D0306N | MA |
| 04 | 02-06 | 1 | 4 | M4D0406S | M4D0406N | MA |

* FIGURES ARE SHOWN ON PAGE 57.

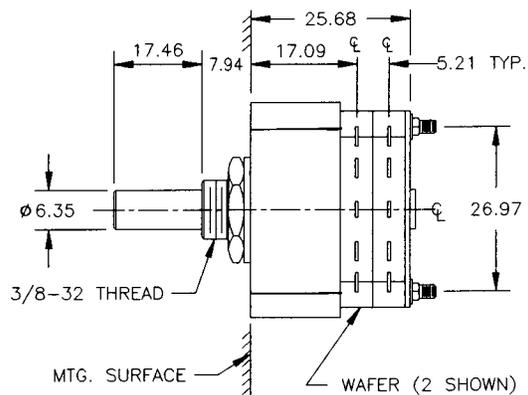
DIMENSIONS

STANDARD CONSTRUCTION

M4D - DIALYL PHTHALATE CONSTRUCTION



NON-TURN LUG
3.18W X .79 THK.
9.52 FROM C-LINE
1.27 ENGAGEMENT



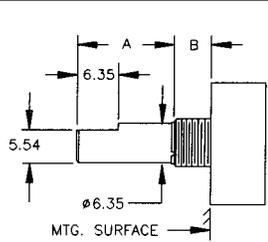
WAFER (2 SHOWN)

How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|------------------|----------------------------------|-----------------------|----------------|---------------|
| M5 | D - DIALLYL | 01 - MIN. | 12 - MAX @ 30° | S - SHORTING N - NON SHORTING | A - ADJ. C - CONT. | SEE CHART "A" | SEE CHART "B" |

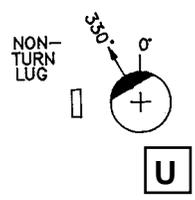
| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | |
|---|----------|----------|----------------------|----------------------|----------------------|----------------------|
| M | 4 | D | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

SHAFT, BUSHING, AND FLAT OPTIONS



| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
|----------|-----------------|-----------------|
| 01 | 11/16 | 5/16 |
| 02 | 7/16 | 7/16 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| U | 330° |
| B | ROUND |



SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

M5 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

25.4 mm DIAMETER 2.0 AMPS @ 28 VDC

The M5 Series was originally designed to meet the requirements of MIL-S-3786/4. Standard construction includes 30° indexing up to 12 positions, solder lug terminals and adjustable stops. A very reliable switch for long life.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 2.0 amps @ 28 VDC; 2.5 amp @ 120 VAC.
Current Carrying Capacity: 12 amps.
Dielectric Strength: 1,500 VAC between current carrying parts and ground.
Contact Resistance: Average initial 5 milliohms.
Insulation Resistance: In excess of 100,000 megohms

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Copper alloy with silver plate as standard.
Insulation: Diallyl phthalate.
Index: Dual-ball, hill and valley design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 30° standard, 36°, 45°, 60°, and 90° available.
Index Stops: Fixed standard, adjustable, or continuous.
Stop Strength: 1.69 Nm minimum.

STANDARD PART NUMBER

ADJUSTABLE STOPS

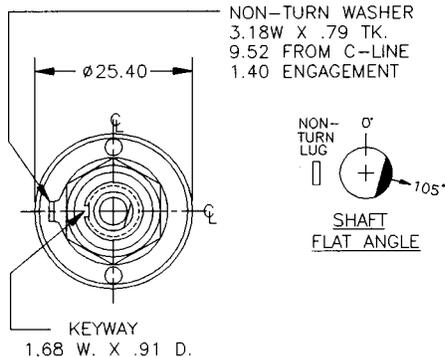
SWITCHES - 30° INDEXING - STOPS SET @ 2 POS. - SOLDER LUG TERMINALS

| POLES | ACTIVE POSITIONS | POLES/ DECK | NO. OF DECKS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|-------------|--------------|--------------|--------------|--------|
| 01 | 02-12 | 1 | 1 | M5D0112S - A | M5D0112N - A | CE |
| 02 | 02-12 | 1 | 2 | M5D0212S - A | M5D0212N - A | CE |
| 02 | 02-06 | 2 | 1 | M5D0206S - A | M5D0206N - A | CJ |
| 03 | 02-12 | 1 | 3 | M5D0312S - A | M5D0312N - A | CE |
| 04 | 02-12 | 1 | 4 | M5D0412S - A | M5D0412N - A | CE |
| 04 | 02-06 | 2 | 2 | M5D0406S - A | M5D0406N - A | CJ |
| 06 | 02-06 | 2 | 3 | M5D0606S - A | M5D0606N - A | CJ |
| 08 | 02-06 | 2 | 4 | M5D0806S - A | M5D0806N - A | CJ |

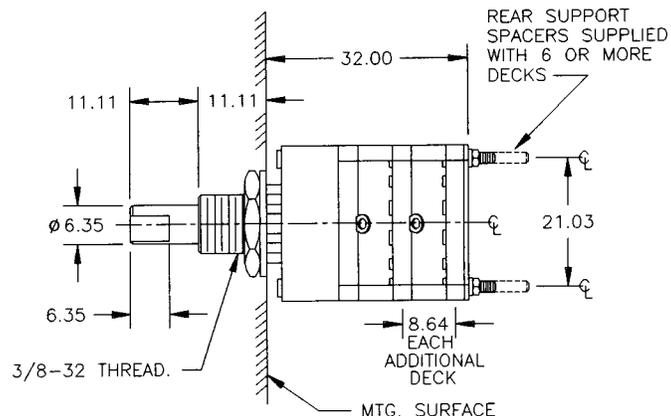
* FIGURES ARE SHOWN ON PAGE 55.

DIMENSIONS

STANDARD CONSTRUCTION



M5D - DIALLYL PHTHALATE CONSTRUCTION



How to Order Additional Options:

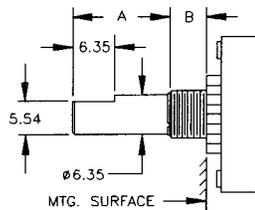
| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|--|----------------------------------|---------------------------------|--|----------------|---------------|
| M5 | D - DIALLYL | 01 - MIN. | 12 - MAX @ 30° 10 - MAX @ 36° 08 - MAX @ 45° 06 - MAX @ 60° 04 - MAX @ 90° | S - SHORTING N - NON SHORTING | 30° 36° 45° 60° 90° | F - FIXED A - ADJ. (30° AND 36° ONLY) C - CONT. | SEE CHART "A" | SEE CHART "B" |

CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS

| | | | | | | | | | | |
|----------|----------|----------|----------------------|----------------------|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| M | 5 | D | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

ADDITIONAL OPTIONS

SHAFT, BUSHING, AND FLAT OPTIONS



| CHART "A" | | |
|-----------|-----------------|-----------------|
| P/N OPT. | SHAFT LGTH. "A" | BUSH. LGTH. "B" |
| 01 | 11.11 | 11.11 |
| 02 | 9.53 | 7.94 |

- STD

| CHART "B" | |
|-----------|------------|
| P/N OPT. | FLAT ANGLE |
| U | 105° |
| B | ROUND |

- STD

SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.



U

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

M6 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

44.45 mm SQUARE 0.5 AMP @ 28 VDC

The M6 Series was originally designed to meet the requirements of MIL-S-3786/40. Standard construction includes 30° indexing up to 12 positions, solder lug terminals, and adjustable stops. Switching is available up to 32 positions.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load
0.5 amp @ 28 VDC; 0.125 amp @ 115 VAC.

Current Carrying Capacity: 10 amps.

Dielectric Strength: 1,500 VAC between current carrying parts and ground.

Contact Resistance: Average initial 10 milliohms.

Insulation Resistance: In excess of 1,000,000 megohms

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.

Clips and Rotors: Silver alloy composite as standard.

Insulation: Glass epoxy.

Index: Dual-ball, hill and valley design.

Index Life: 25,000 cycles minimum.

Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.

Index Angles: Positive 30° standard, 11.25°, 15°, and 22.5° available.

Index Stops: Adjustable standard, or continuous.

Stop Strength: 5.65 Nm minimum.

STANDARD PART NUMBER

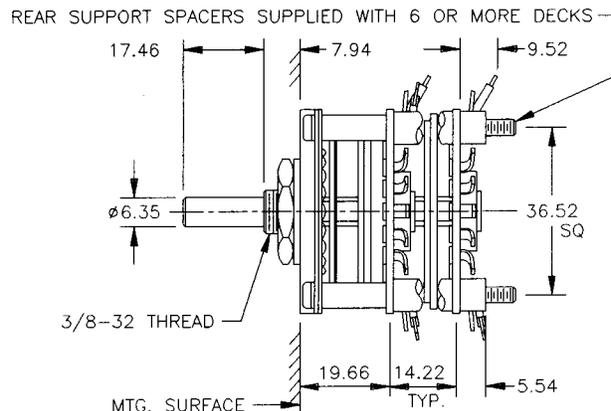
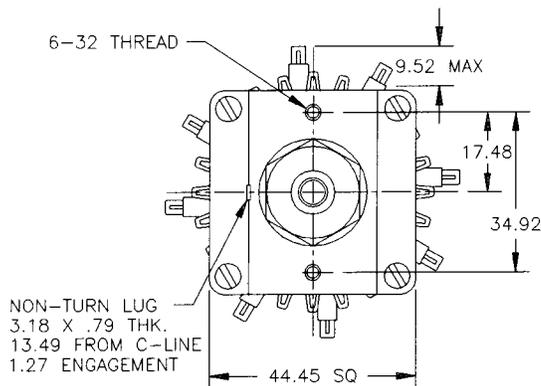
EPOXY GLASS INSULATION SWITCHES - 30° INDEXING
ADJUSTABLE STOPS SET @ 2 POS. - SOLDER LUG TERMINALS

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-12 | 1 | 1 | M6G0112S | M6G0112N | MC |
| 02 | 02-12 | 1 | 2 | M6G0212S | M6G0212N | MC |
| 02 | 02-06 | 2 | 1 | M6G0206S | M6G0206N | MD |
| 03 | 02-12 | 1 | 3 | M6G0312S | M6G0312N | MC |
| 04 | 02-12 | 1 | 4 | M6G0412S | M6G0412N | MC |
| 04 | 02-06 | 2 | 2 | M6G0406S | M6G0406N | MD |
| 06 | 02-06 | 2 | 3 | M6G0606S | M6G0606N | MD |
| 08 | 02-06 | 2 | 4 | M6G0806S | M6G0806N | MD |

* FIGURES ARE SHOWN ON PAGE 57.

DIMENSIONS

STANDARD CONSTRUCTION
M6G - GLASS EPOXY CONSTRUCTION



How to Order Additional Options:

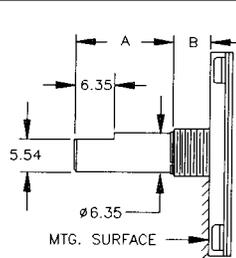
| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | TERMINAL TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|------------------------------------|----------------------------------|---------------------------------|------------------------------|-----------------------|----------------|---------------|
| M6 | G - GLASS | 01 - MIN. | 12 - MAX @ 30° 16 - MAX @ 22.5° | N - NON-SHORTING S - SHORTING | L - SOLDER LUG R - REAR P.C. | 11.5° 15° 22.5° 30° | A - ADJ. C - CONT. | SEE CHART "A" | SEE CHART "B" |
| M6 | G - GLASS | 01 - MIN. | 32 - MAX @ 11.5° 24 - MAX @ 15° | S - SHORTING | | | | | |

CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS

| | | | | | | | | | | | |
|----------|----------|----------|----------------------|----------------------|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| M | 6 | G | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

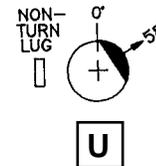
ADDITIONAL OPTIONS

SHAFT, BUSHING, AND FLAT OPTIONS



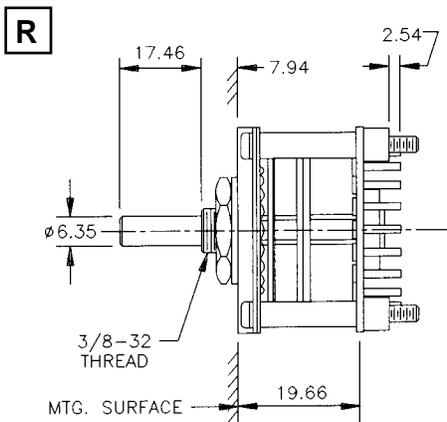
| P/N OPT. | SHAFT LGTH. "A" | BUSH LGTH. "B" |
|----------|-----------------|----------------|
| 01 | 17.46 | 7.94 |
| 02 | 15.88 | 9.53 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 58° |

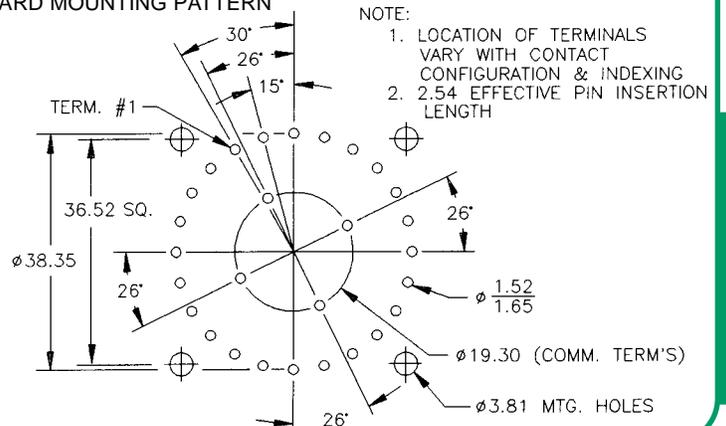


SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

PRINTED CIRCUIT BOARD OPTIONS



P.C. BOARD MOUNTING PATTERN



CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

M7 - SERIES

SPECIFICATIONS AND ORDERING INFORMATION

63.5 mm SQUARE 0.5 AMPS @ 28 VDC

The M7 Series was originally designed to meet the requirements of MIL-S-3786/15. Standard construction includes 15° indexing up to 24 positions, adjustable stops and solder lug terminals. Switching is available with up to 48 positions. A very reliable switch for critical applications.



SPECIFICATIONS

ELECTRICAL

Current and Voltage Rating: Make and break resistive load 0.5 amp @ 28 VDC; 0.125 amp @ 115 VAC.
Current Carrying Capacity: 10 amps.
Dielectric Strength: 1,500 VAC between current carrying parts and ground.
Contact Resistance: Average initial 10 milliohms.
Insulation Resistance: In excess of 1,000,000 megohms

Hardware: Mounting nut and lockwasher are shipped assembled.

MECHANICAL

Materials and Finishes: All parts utilize non-corrosive materials as standard.
Clips and Rotors: Silver alloy composite as standard.
Insulation: Glass epoxy.
Index: Dual-ball, hill and valley design.
Index Life: 25,000 cycles minimum.
Index Torque: Switches have lowest practical torque consistent with crisp detenting and smooth, reliable operation.
Index Angles: Positive 15° standard, 7.5° available.
Index Stops: Adjustable standard, or continuous.
Stop Strength: 5.65 Nm minimum.

STANDARD PART NUMBER

EPOXY GLASS INSULATION
ADJUSTABLE STOPS SET @ 2 POS. - SOLDER LUG TERMINALS

SWITCHES - 15° INDEXING

EPOXY GLASS INSULATION
ADJUSTABLE STOPS SET @ 2 POS. - SOLDER LUG TERMINALS

SWITCHES - 7.5° INDEXING

| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | NON-SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|----------|--------------|--------|
| 01 | 02-24 | 1 | 1 | | M7G0124N | ME |
| 02 | 02-24 | 1 | 2 | | M7G0224N | ME |
| 02 | 02-12 | 2 | 1 | | M7G0212N | MF |
| 03 | 02-24 | 1 | 3 | | M7G0324N | ME |
| 04 | 02-12 | 2 | 2 | | M7G0412N | MF |
| 03 | 02-06 | 3 | 1 | | M7G0306N | MG |
| 06 | 02-12 | 2 | 3 | | M7G0612N | MF |
| 09 | 02-06 | 3 | 3 | | M7G0906N | MG |
| 12 | 02-06 | 4 | 3 | | M7G1206N | MH |

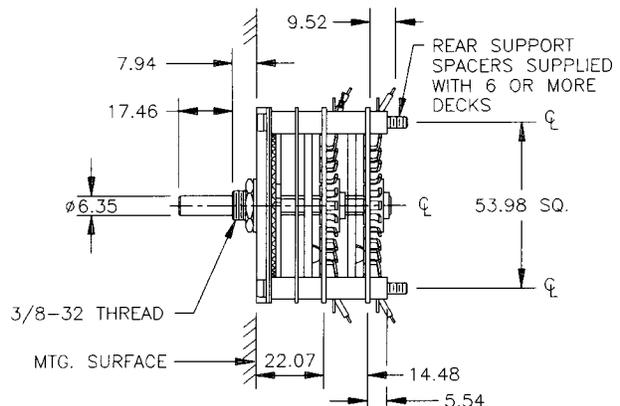
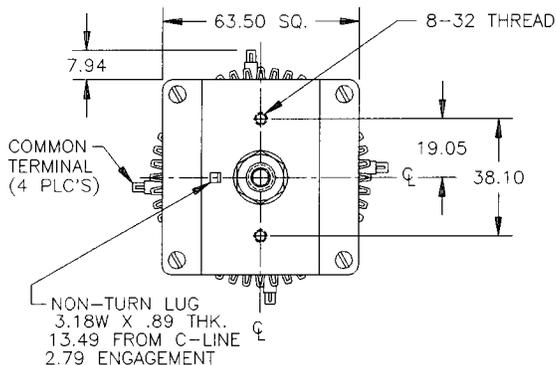
| POLES | ACTIVE POSITIONS | POLES/ SECTION | NO. OF SECTIONS | SHORTING | FIG. * |
|-------|------------------|----------------|-----------------|-------------|--------|
| 01 | 02 - 48 | 1 | 1 | M7G0148S-75 | MI |

* FIGURES ARE SHOWN ON PAGE 57.

DIMENSIONS

STANDARD CONSTRUCTION

M7G - GLASS EPOXY CONSTRUCTION

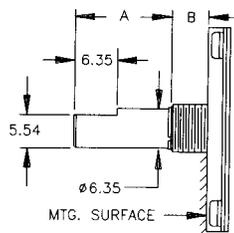


How to Order Additional Options:

| 2 DIGIT SERIES | INSULATION TYPE | TOTAL POLES | ACTIVE POSITIONS | CONTACT TYPE | INDEX ANGLE | STOP TYPE | SHAFT/ BUSHING | SHAFT FLAT |
|----------------|-----------------|-------------|------------------|------------------|-------------|-----------------------|----------------|---------------|
| M7 | G - GLASS | 01 - MIN. | 48 - MAX @ 7.5° | S - SHORTING | 7.5° 15° | A - ADJ. C - CONT. | SEE CHART "A" | SEE CHART "B" |
| M7 | G - GLASS | 01 - MIN. | 24 - MAX @ 15° | N - NON-SHORTING | | | | |

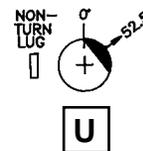
| CUSTOMERS SPECIFIED ORDER NUMBER FOR STANDARD OPTIONS | | | | ADDITIONAL OPTIONS | | | |
|---|----------|----------|----------------------|----------------------|----------------------|----------------------|----------------------|
| M | 7 | G | <input type="text"/> |
| | | | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) | (SPECIFY) |

SHAFT, BUSHING, AND FLAT OPTIONS



| P/N OPT. | SHAFT LGTH. "A" | BUSH LGTH. "B" |
|----------|-----------------|----------------|
| 01 | 17.46 | 7.94 |
| 02 | 25.4 | 0 |

| P/N OPT. | FLAT ANGLE |
|----------|------------|
| B | ROUND |
| U | 52.5° |



SHAFT AS VIEWED WITH NON-TURN LUG AT 9 O'CLOCK AND SHAFT IN EXTREME CCW POSITION AND STRUT BOLTS ORIENTED VERTICALLY.

CUSTOM SWITCHES ARE AVAILABLE. CONTACT THE FACTORY WITH YOUR COMPLETE SPECIFICATIONS.

SECTION ASSEMBLIES

AVAILABLE SEPARATE

INDEX ASSEMBLIES

AVAILABLE SEPARATE

| NO. OF POLES | POLES/ POSITIONS | SECTION | INDEX ANGLE | SHORTING | NON- SHORTING | FIG. * |
|--|---------------------|---------|----------------|--------------|------------------|-----------|
| | | | | PART NUMBERS | PART NUMBERS | |
| D2D - SERIES DIALLYL PHTHALATE INSULATION | | | | | | |
| 01 | 02-12 | 1 | 30° | D2D-50 | D2D-51 | DE |
| 02 | 02-06 | 2 | 30° | D2D-52 | D2D-53 | DL |
| 03 | 02-05 | 3 | 30° | D2D-54 | D2D-55 | DO |
| 05 | 02-03 | 5 | 30° | D2D-56 | D2D-57 | DR |
| D2C - SERIES CERAMIC INSULATION | | | | | | |
| 01 | 02-11 | 1 | 30° | D2C-20 | D2C-21 | DB |
| 02 | 02-05 | 2 | 30° | D2C-22 | D2C-23 | DG |
| 03 | 02-03 | 3 | 30° | D2C-24 | D2C-25 | DN |
| 04 | 02 | 4 | 30° | D2C-26 | D2C-27 | DQ |
| D3C - SERIES CERAMIC INSULATION | | | | | | |
| 01 | 02-11 | 1 | 30° | D3C-80 | D3C-81 | DA |
| 02 | 02-05 | 2 | 30° | D3C-82 | D3C-83 | DH |
| D4C - SERIES CERAMIC INSULATION | | | | | | |
| 01 | 02-12 | 1 | 30° | D4C-0 | D4C-1 | DD |
| 02 | 02-06 | 2 | 30° | D4C-2 | D4C-3 | DL |
| 03 | 02-05 | 3 | 30° | D4C-4 | D4C-5 | DO |
| 05 | 02-03 | 5 | 30° | D4C-6 | D4C-7 | DR |
| 06 | 02 | 6 | 30° | D4C-8 | D4C-9 | DS |
| 01 | 02-06 | 1 | 60° | D4C-20 | D4C-17 | DJ |
| D4G - SERIES GLASS EPOXY INSULATION | | | | | | |
| 01 | 02-11 | 1 | 30° | D4G-30 | D4G-31 | DA |
| 02 | 02-05 | 2 | 30° | D4G-32 | D4G-33 | DG |
| 03 | 02-03 | 3 | 30° | D4G-34 | D4G-35 | DM |
| 04 | 02 | 4 | 30° | D4G-36 | D4G-37 | DP |
| D7C - SERIES CERAMIC INSULATION | | | | | | |
| 01 | 02-06 | 1 | 30° | D7C-SXD | D7C-XD | DI |
| 01 | 02-11 | 1 | 30° | D7C-SYD | D7C-YD | DB |
| 02 | 02-05 | 2 | 30° | D7C-SRRD | D7C-RRD | DF |
| 01 | 02-06 | 1 | 60° | D7C-SZZD | D7C-ZZD | DK |
| D7G - SERIES GLASS EPOXY INSULATION | | | | | | |
| 01 | 02-11 | 1 | 30° | D7G-BD | D7G-JD | DB |
| 02 | 02-05 | 2 | 30° | D7G-SKD | D7G-KD | DH |
| E4C - SERIES CERAMIC INSULATION | | | | | | |
| 01 | 02-17 | 1 | 20° | E4C-8 | E4C-N8 | EA |
| 02 | 02-08 | 2 | 20° | E4C-10 | E4C-N10 | EB |
| 03 | 02-05 | 3 | 20° | E4C-9 | E4C-N9 | EC |

| INDEX ANGLE | NO. OF POSITIONS | NO. OF SECTIONS | PART NUMBERS | PAGE NUMBER |
|--------------------|---------------------|--------------------|--------------|----------------|
| | | | | |
| 30° | 02-12 | 1-2 | D2-512 | 20, 21 |
| 30° | 02-12 | 3-5 | D2-513 | 20, 21 |
| D3 - SERIES | | | | |
| 30° | 02-11 | 1-4 | D3-600 | 22,23 |
| D4 - SERIES | | | | |
| 30° | 02-12 | 1-3 | D4-300 | 24, 25 |
| 30° | 02-12 | 4-6 | D4-301 | 24, 25 |
| 30° | 02-12 | 7-9 | D4-302 | 24, 25 |
| 60° | 02-06 | 1-3 | D4-304 | 24, 25 |
| 60° | 02-06 | 4-6 | D4-305 | 24, 25 |
| D7 - SERIES | | | | |
| 30° | 02-11 | 1-3 | D7-270 | 30, 31 |
| 30° | 02-11 | 4-5 | D7-271 | 30, 31 |
| 30° | 02-11 | 6-10 | D7-272 | 30, 31 |
| 60° | 02-06 | 1-2 | D7-273 | 30, 31 |
| 60° | 02-06 | 3-8 | D7-275 | 30, 31 |
| E4 - SERIES | | | | |
| 20° | 02-17 | 1-6 | E4-7 | 40, 41 |

KNOBS AND DIAL PLATES

KNOBS



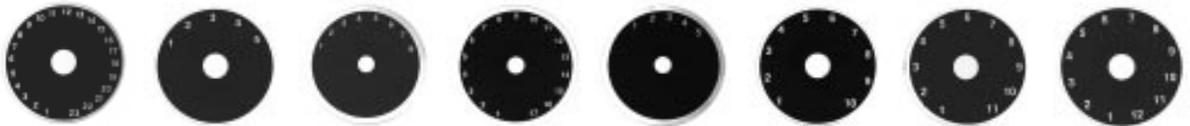
| | | | | | | |
|----------------|---|---------------------------------|---|---|--|--|
| Part Number | 1910DG | 1400R | 1202BJ | 1930BP | 1922 | 1914N |
| Switch Type | Rotary | Rotary | Rotary | Rotary | Rotary | Rotary |
| Shaft Diameter | 3.18 mm | 3.18 mm | 6.35 mm | 6.35 mm | 6.35 mm | 6.35 mm |
| Description | Inner knob with skirt and spun silver color cap | Pointer knob with one set screw | Round knob with spun silver color cap and one set screw | Large round knob with skirt and one set screw | Outer knob for dual concentric designs | Round knob with brass insert and one set screw |
| Overall Length | 19.05 mm | 20.83 mm | 19.05 mm | 38.1 mm | 26.92 mm | 19.05 mm |

KNOBS



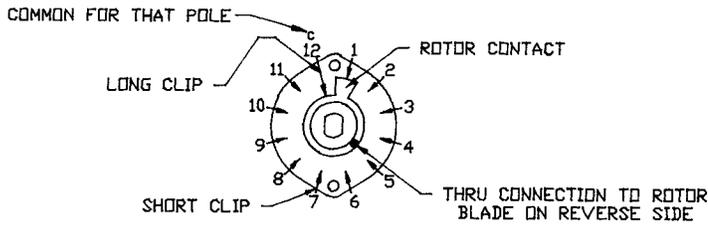
| | | | | | | |
|----------------|---------------------------------|---|--------------------------|---------------------------------|---------------------------------|--|
| Part Number | 2300 | 2350AP | 5149A | SSKW | SSKB | |
| Switch Type | Rotary | Rotary | Lever | Lever | Lever | |
| Shaft Diameter | 6.35 mm | 6.35 mm | 4.75 x 1.27 mm | 4.75 x 1.52 mm | 4.75 x 1.52 mm | |
| Description | Pointer knob with one set screw | Round knob with brass insert and two set screws | Oval knob push on design | Switch tip push on design-white | Switch tip push on design-black | |
| Overall Length | 31.75 mm | 50.8 mm | 20.06 mm | 8.89 mm | 8.89 mm | |

DIAL PLATES



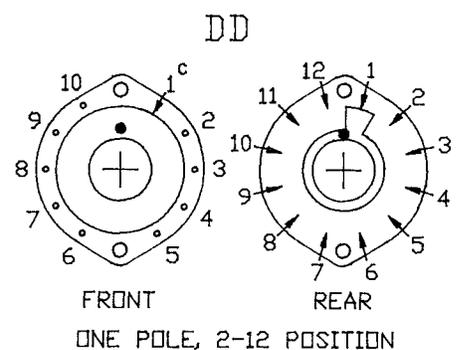
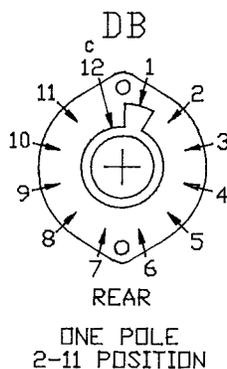
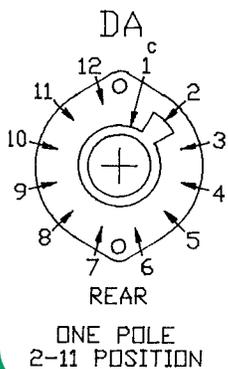
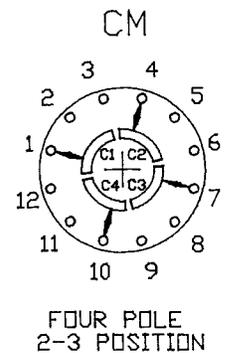
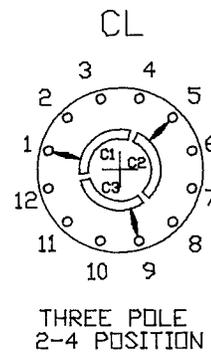
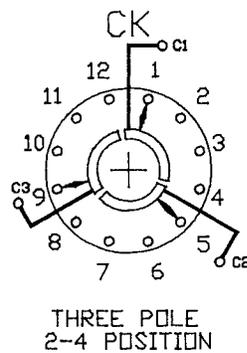
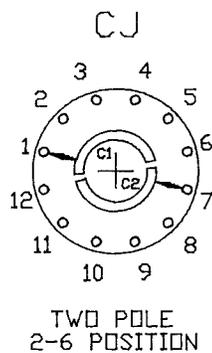
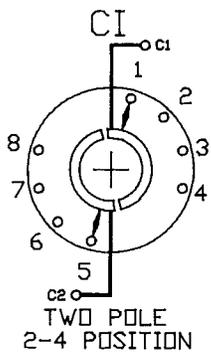
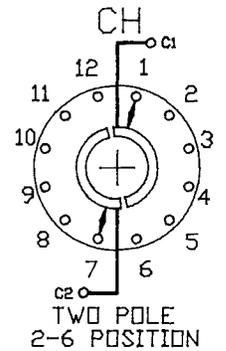
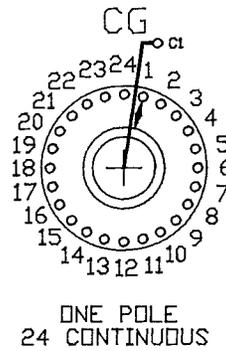
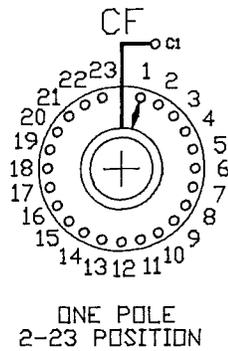
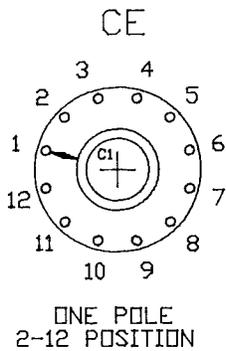
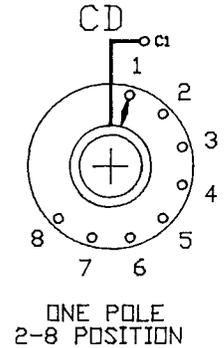
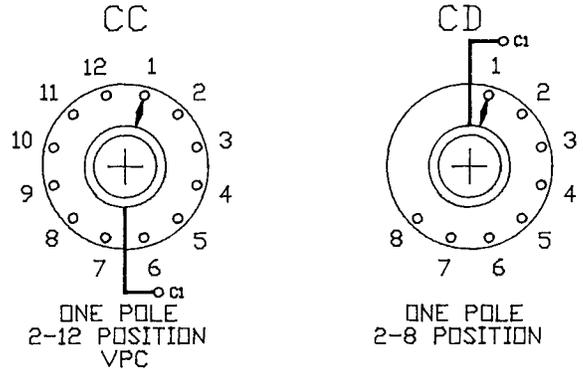
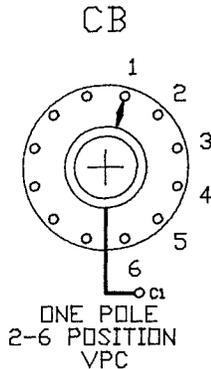
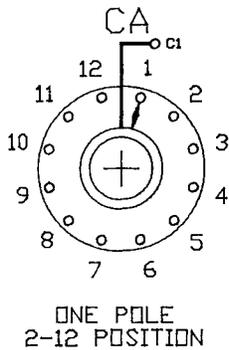
| | | | | | | | | |
|-----------------------|---------|----------|----------|----------|---------|---------|---------|---------|
| Part Number | P173 | P230 | P232 | P231 | P115 | P117 | P118 | P112 |
| Switch Angle | 15° | 20° | 20° | 20° | 30° | 30° | 30° | 30° |
| Numbering Description | 1-23 | 1-5 | 1-8 | 1-17 | 1-5 | 1-10 | 1-11 | 1-12 |
| Plate Diameter | 47.5 mm | 69.85 mm | 69.85 mm | 69.85 mm | 47.5 mm | 47.5 mm | 47.5 mm | 47.5 mm |

FIGURES/CIRCUIT DIAGRAMS

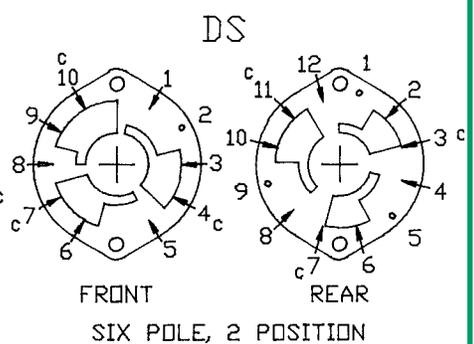
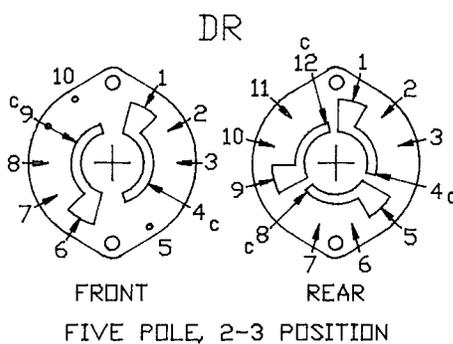
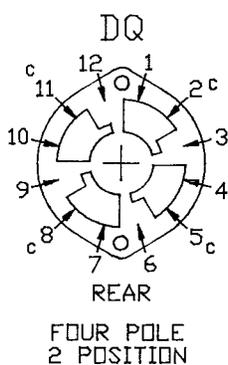
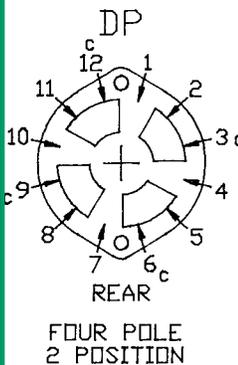
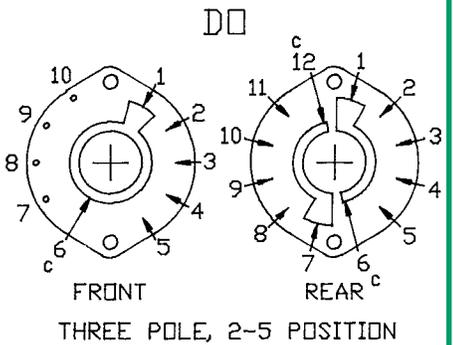
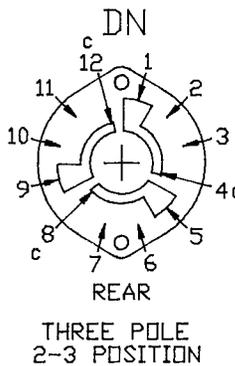
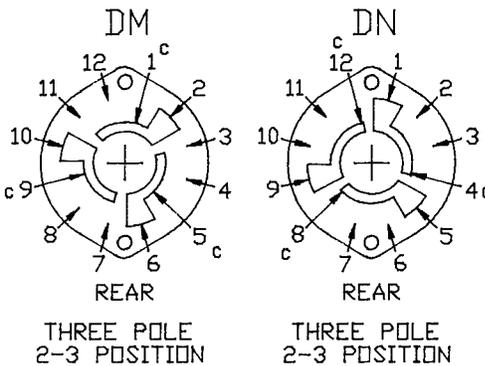
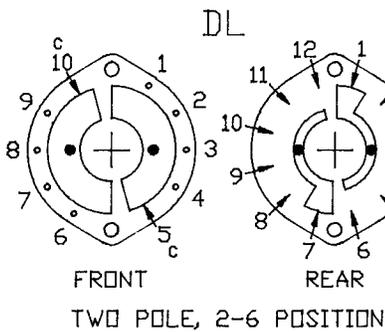
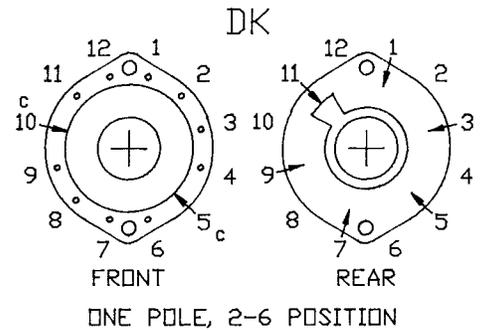
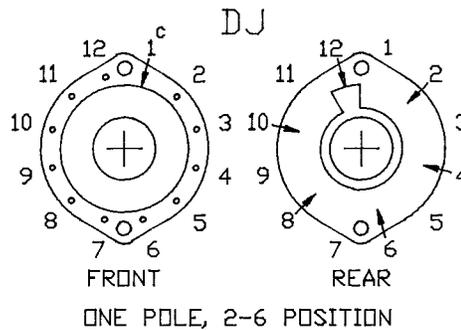
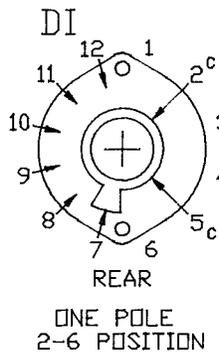
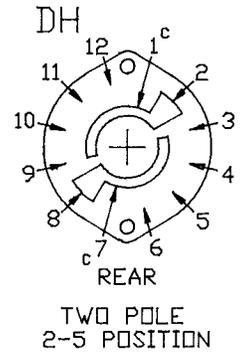
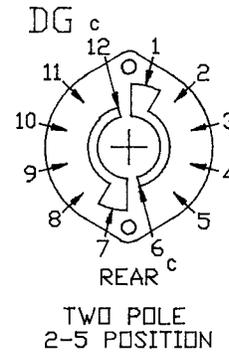
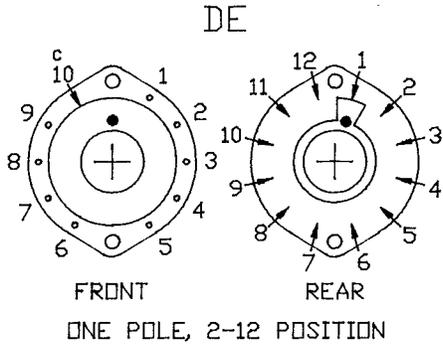


ALL DIAGRAMS ARE DRAWN AS VIEWED FROM THE KNOB END OF THE SWITCH, WITH THE LOCATING LUG IN THE 9 O'CLOCK POSITION AND THE SHAFT IN THE EXTREME COUNTER CLOCKWISE POSITION.

THE 'REAR' SIDE DIAGRAM OF THE SECTION IS VIEWED AS TRANSPARENT FROM THE KNOB END.

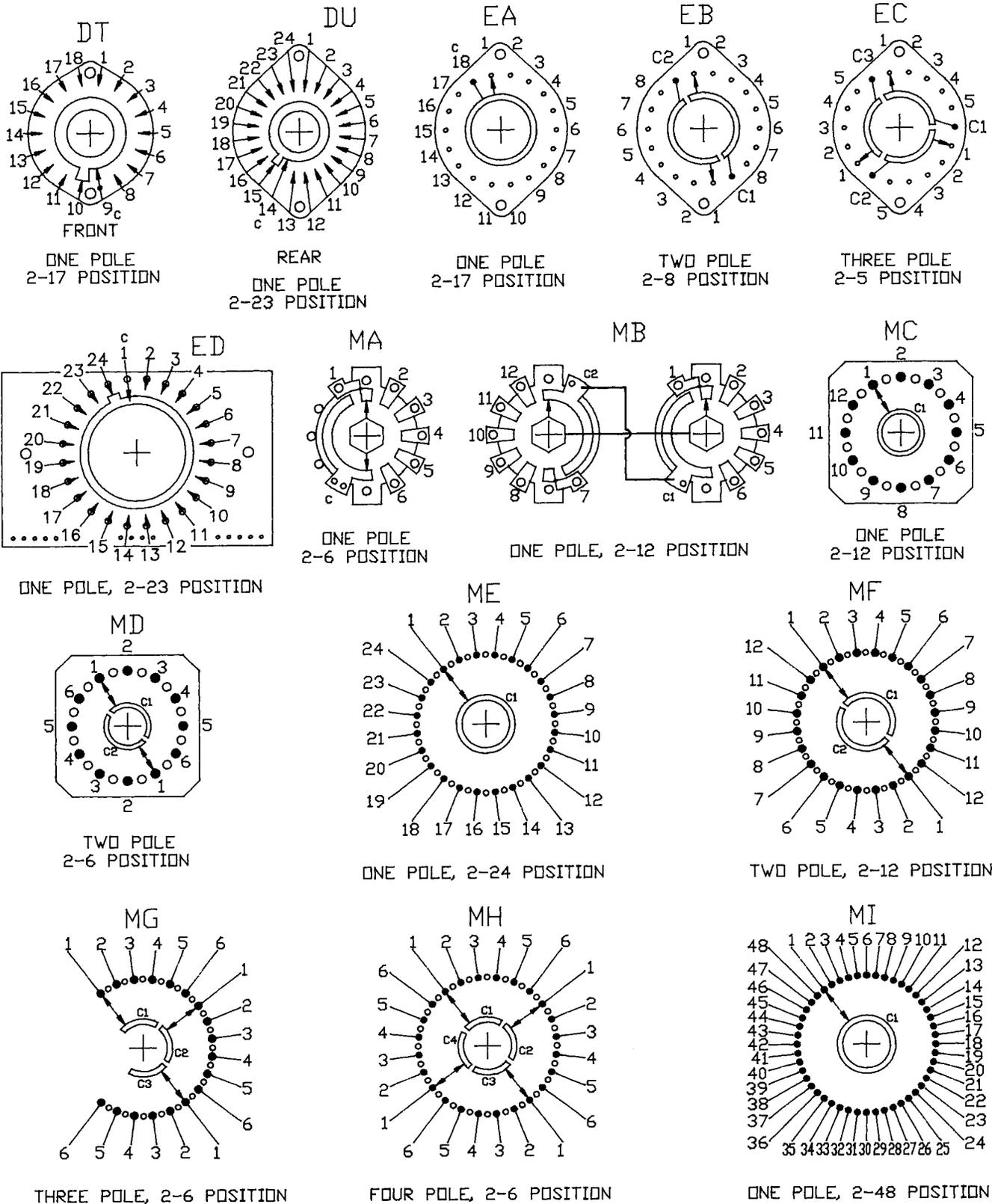


FIGURES/CIRCUIT DIAGRAMS



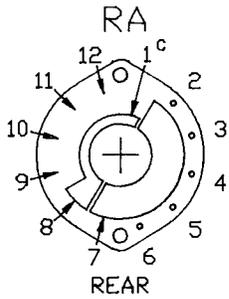
VIEWED FROM THE KNOB END OF SWITCH

FIGURES/CIRCUIT DIAGRAMS

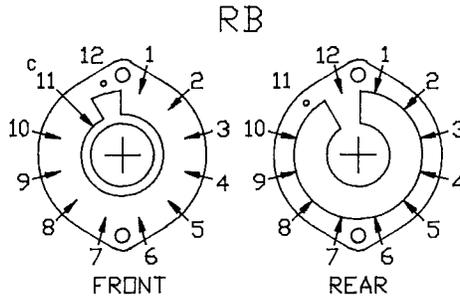


VIEWED FROM THE KNOB END OF SWITCH

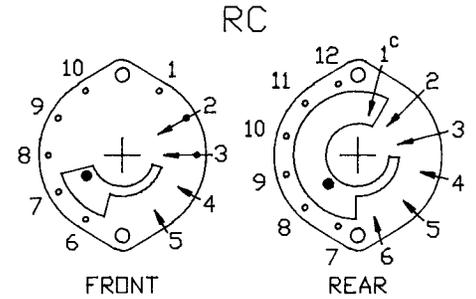
FIGURES/CIRCUIT DIAGRAMS



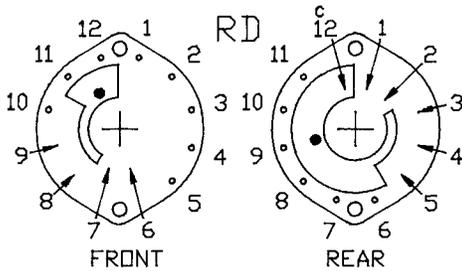
ONE POLE, 2-5 POSITION.
UNUSED CLIPS ARE PROGRESSIVELY
SHORTED BY SEPARATE CONTACT
WITH CW ROTATION.



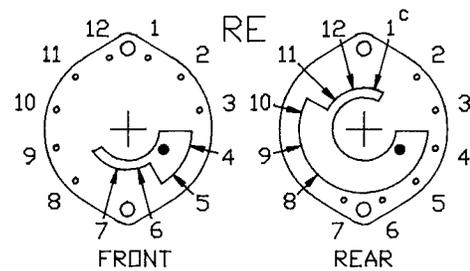
TWO POLE, 2-11 POSITION
ALL UNUSED CLIPS CONNECTED
AND SHORTED OUT.



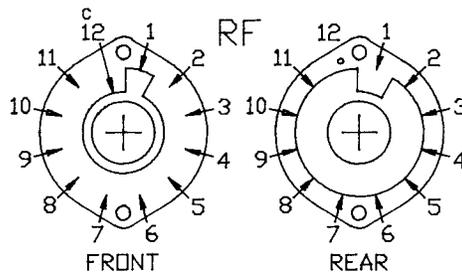
ONE POLE, 2-10 POSITION. NINE
ACTIVE CLIPS, ALL OPEN IN FULL
CCW POSITION AND PROGRESSIVELY
PICKED UP AND SHORTED TO COMMON
CONTACT WITH CW ROTATION.



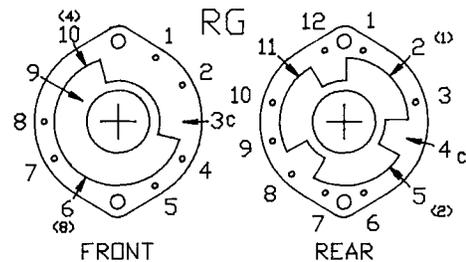
ONE POLE, 2-10 POSITION. NINE ACTIVE CLIPS,
ALL OPEN IN FULL CCW POSITION AND
PROGRESSIVELY PICKED UP AND SHORTED TO
COMMON CONTACT WITH CW ROTATION.



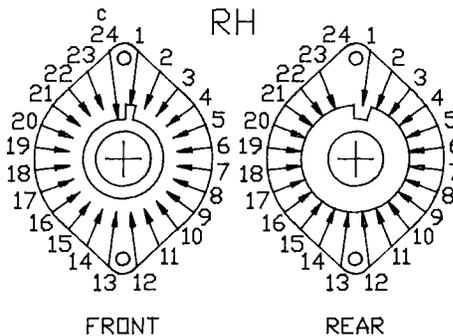
ONE POLE, 2-10 POSITION. NINE ACTIVE
CLIPS, ALL SHORTED TO COMMON CONTACT
IN FULL CCW POSITION AND PROGRESSIVELY
OPENED AND DROPPED WITH CW ROTATION.



TWO POLE, 2-11 POSITION
ALL UNUSED CLIPS CONNECTED
AND SHORTED OUT



BCD OR COMPLEMENT



TWO POLE, 2-23 POSITION.
ALL UNUSED CLIPS CONNECTED
AND SHORTED OUT.

VIEWED FROM THE KNOB END OF SWITCH