

3500 series

High performance toggle switches •
environmentally sealed



DISTINCTIVE FEATURES

- Completely sealed switches withstanding 0.1 bar pressure
- Approved to European standards CECC 96000
- Three types of terminals
- Many lever styles available



ENVIRONMENTAL SPECIFICATIONS

- Front sealing to IP67 or IP69K by a silicone membrane (for sealed panel mounting, add washer U60).
- Rear sealing to IP64 provided by moulded-in terminal inserts
- Operating temperature : -40 °C to + 85°C (-40 °F to +185 °F)
- Moisture resistance : 56 days



ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load and electrical life at full load: see table below
- Initial contact resistance : 10 mΩ max. at 1 A 2 VDC
- Insulation resistance : 1,000 MΩ
- Dielectric strength : 2,500 Vrms 50 Hz min. between terminals
3,000 Vrms 50 Hz min. between terminals and frame

| FUNCTIONS | GENERAL PERFORMANCES |
|------------------------|--|
| ON-OFF and ON-ON | 10,000 cycles, T20 °C 15 A 28 VDC resistive 15 A 28 VDC inductive 5 A 28 VDC lamp |
| ON OFF ON | 10,000 cycles, T20 °C 15 A 28 VDC resistive 15 A 28 VDC inductive 5 A 28 VDC lamp |
| OTHER FUNCTIONS | 10,000 cycles, T20 °C 15 A 28 VDC resistive 10 A 28 VDC inductive 3 A 28 VDC lamp |

The company reserves the right to change specifications without notice.



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GENERAL SPECIFICATIONS

- Mechanical life : 40,000 cycles
- Torque : 2 Nm (1.47 Ft.lb) max. applied to nut
- Panel thickness :
For NON-SEALED mounting (panel cut-out fig. 1, 2 or 3) : 5 mm (.196) max.
For SEALED mounting (panel cut-out fig. 2) : 4 mm (.157) max.



MATERIALS

- Case : mineral filled polyester UL94-V0
- Bushing and cover : zamac
- Actuator : brass, nickel or chrome plated, or anodized aluminum
- Contacts : silver alloy

AGENCY APPROVAL



CECC 96201-004

Availability : consult factory for details of approved models.

Marking : to order switches marked CECC, complete appropriate box of ordering format.

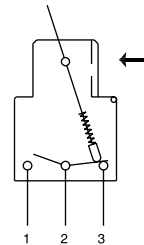


TERMINALS



ELECTRICAL FUNCTIONS

→ KEYWAY



PANEL CUT-OUT



Figure 1

Figure 2

Figure 3

3500 series

High performance toggle switches • environmentally sealed



BUILD YOUR PART NUMBER

BASIC PART NUMBER

| SERIES | NUMBER OF POLES | ELECTRICAL FUNCTIONS | TERMINALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|------------------------------|-------------|---|-------------|--|-----|----|---|-----|-----|----|---|-------|-----|-----|---|-----|-----|----|------------------------------|------|-----|----|------------------------------|-------|-----|-----|------------------------------|-------|-----|----|------------------------------|------|-----|----|------------------------------|-------|--|-----|-----|------------------------------|-------|-----|----|---|-----|-----|----|---|----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|-----|----|--|---|-------|---|------------------------------|---|-----------------------------|---|---------------|
| 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>3</td><td>Single pole</td></tr> <tr><td>4</td><td>Double pole</td></tr> </table> | 3 | Single pole | 4 | Double pole | <table border="1"> <tr><td>1-0</td><td>ON</td><td>-</td><td>OFF</td></tr> <tr><td>2-0</td><td>ON</td><td>-</td><td>m.OFF</td></tr> <tr><td>3-0</td><td>OFF</td><td>-</td><td>MOM</td></tr> <tr><td>4-1</td><td>ON</td><td>³ON⁴</td><td>ON ▲</td></tr> <tr><td>4-2</td><td>ON</td><td>³ON⁴</td><td>MOM ▲</td></tr> <tr><td>4-3</td><td>MOM</td><td>³ON⁴</td><td>MOM ▲</td></tr> <tr><td>4-4</td><td>ON</td><td>¹ON⁶</td><td>ON ▲</td></tr> <tr><td>4-5</td><td>ON</td><td>¹ON⁶</td><td>MOM ▲</td></tr> </table> | 1-0 | ON | - | OFF | 2-0 | ON | - | m.OFF | 3-0 | OFF | - | MOM | 4-1 | ON | ³ ON ⁴ | ON ▲ | 4-2 | ON | ³ ON ⁴ | MOM ▲ | 4-3 | MOM | ³ ON ⁴ | MOM ▲ | 4-4 | ON | ¹ ON ⁶ | ON ▲ | 4-5 | ON | ¹ ON ⁶ | MOM ▲ | <table border="1"> <tr><td>4-6</td><td>MOM</td><td>¹ON⁶</td><td>MOM ▲</td></tr> <tr><td>5-0</td><td>ON</td><td>-</td><td>MOM</td></tr> <tr><td>6-0</td><td>ON</td><td>-</td><td>ON</td></tr> <tr><td>7-0</td><td>MOM</td><td>OFF</td><td>MOM</td></tr> <tr><td>8-0</td><td>ON</td><td>OFF</td><td>MOM</td></tr> <tr><td>9-0</td><td>ON</td><td>OFF</td><td>ON</td></tr> </table> | 4-6 | MOM | ¹ ON ⁶ | MOM ▲ | 5-0 | ON | - | MOM | 6-0 | ON | - | ON | 7-0 | MOM | OFF | MOM | 8-0 | ON | OFF | MOM | 9-0 | ON | OFF | ON | <table border="1"> <tr><td>0</td><td>Screw</td></tr> <tr><td>2</td><td>Solder lug/ quick-connect</td></tr> <tr><td>3</td><td>Normalized quick-connect</td></tr> <tr><td>4</td><td>Screw + clamp</td></tr> </table> | 0 | Screw | 2 | Solder lug/ quick-connect | 3 | Normalized quick-connect | 4 | Screw + clamp |
| 3 | Single pole | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Double pole | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-0 | ON | - | OFF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2-0 | ON | - | m.OFF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3-0 | OFF | - | MOM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-1 | ON | ³ ON ⁴ | ON ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-2 | ON | ³ ON ⁴ | MOM ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-3 | MOM | ³ ON ⁴ | MOM ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-4 | ON | ¹ ON ⁶ | ON ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-5 | ON | ¹ ON ⁶ | MOM ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-6 | MOM | ¹ ON ⁶ | MOM ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5-0 | ON | - | MOM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6-0 | ON | - | ON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7-0 | MOM | OFF | MOM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8-0 | ON | OFF | MOM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9-0 | ON | OFF | ON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | Screw | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Solder lug/ quick-connect | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Normalized quick-connect | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Screw + clamp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

▲ Function 4 : double pole only

OPTIONS

| LEVER FINISH | AGENCY APPROVAL | LOCKING LEVER SPECIAL FINISH | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---|----------------------|----|------------------------------|----|---|---|----------------------|---|---------------------------------|--|---|------------|--|-----------------------|------|-------------------------------|----------------|-----------------------|---|---|---|---|---|
| <table border="1"> <tr><td>N</td><td>Bright nickel</td></tr> <tr><td>B</td><td>Satin chrome</td></tr> <tr><td>G*</td><td>Black</td></tr> <tr><td>F*</td><td>Black with fluorescent tip (lever type 1 only)</td></tr> <tr><td>C</td><td>Painted or anodized</td></tr> </table> <p>*Black finish on bushing too.</p> | N | Bright nickel | B | Satin chrome | G* | Black | F* | Black with fluorescent tip (lever type 1 only) | C | Painted or anodized | <table border="1"> <tr><td>0</td><td>None</td></tr> <tr><td>1</td><td>CECC</td></tr> </table> | 0 | None | 1 | CECC | <table border="1"> <tr><td>(blank)</td><td>None</td></tr> <tr><td>P5</td><td>Painted yellow</td></tr> <tr><td>A6</td><td>Anodized red</td></tr> </table> <p>Order with lever finish type C. Other colors : on request.</p> | (blank) | None | P5 | Painted yellow | A6 | Anodized red | | | | |
| N | Bright nickel | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | Satin chrome | | | | | | | | | | | | | | | | | | | | | | | | | |
| G* | Black | | | | | | | | | | | | | | | | | | | | | | | | | |
| F* | Black with fluorescent tip (lever type 1 only) | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | Painted or anodized | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | None | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | CECC | | | | | | | | | | | | | | | | | | | | | | | | | |
| (blank) | None | | | | | | | | | | | | | | | | | | | | | | | | | |
| P5 | Painted yellow | | | | | | | | | | | | | | | | | | | | | | | | | |
| A6 | Anodized red | | | | | | | | | | | | | | | | | | | | | | | | | |
| LEVER STYLES | LEVER LOCKING STYLES | ACCESSORIES | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr><td>1</td><td>Standard, length 17.5 mm (.688) or locking, length 20 mm (.787)</td></tr> <tr><td>2</td><td>Length 30 mm (1.181)</td></tr> <tr><td>3</td><td>Flatted, length 24 mm (.944)</td></tr> <tr><td>4</td><td>Length 40 mm (1.574)</td></tr> <tr><td>5</td><td>Length 50 mm (1.968)</td></tr> <tr><td>6</td><td>Locking, length 25.4 mm (1.000)</td></tr> </table> | 1 | Standard, length 17.5 mm (.688) or locking, length 20 mm (.787) | 2 | Length 30 mm (1.181) | 3 | Flatted, length 24 mm (.944) | 4 | Length 40 mm (1.574) | 5 | Length 50 mm (1.968) | 6 | Locking, length 25.4 mm (1.000) | <table border="1"> <tr><td>0</td><td>No locking</td></tr> <tr><td>A</td><td>Locked in 3 positions</td></tr> <tr><td>D</td><td>Locked out of center position</td></tr> <tr><td>G</td><td>Locked in keyway side</td></tr> </table> <p>See drawings on the following pages.</p> | 0 | No locking | A | Locked in 3 positions | D | Locked out of center position | G | Locked in keyway side | <table border="1"> <tr><td>0</td><td>2 hex nuts, 1 locking ring and 1 lockwasher (non-sealed mounting)</td></tr> <tr><td>2</td><td>2 hex nuts and 1 sealing washer (sealed mounting)</td></tr> </table> | 0 | 2 hex nuts, 1 locking ring and 1 lockwasher (non-sealed mounting) | 2 | 2 hex nuts and 1 sealing washer (sealed mounting) |
| 1 | Standard, length 17.5 mm (.688) or locking, length 20 mm (.787) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Length 30 mm (1.181) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Flatted, length 24 mm (.944) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Length 40 mm (1.574) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Length 50 mm (1.968) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Locking, length 25.4 mm (1.000) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | No locking | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | Locked in 3 positions | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | Locked out of center position | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | Locked in keyway side | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 2 hex nuts, 1 locking ring and 1 lockwasher (non-sealed mounting) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 2 hex nuts and 1 sealing washer (sealed mounting) | | | | | | | | | | | | | | | | | | | | | | | | | |



ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

- ⚠ **Notice** : please note that not all combinations of above numbers are available. Refer to the following pages for further information.
- 🛡 **Switch guards** are available to prevent inadvertent lever operation. See "Switch Guards" section of website.
- 🔧 **Mounting accessories** : see above and on the following pages.

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SCREW TERMINALS SINGLE POLE



| | Angle of throw (A) | III A2-A3 | II | I |
|---------|--------------------|--------------|-----|--------------|
| 3531-00 | 22° | ON | - | A1-A2 OFF |
| 3532-00 | 22° | ON | - | m.OFF |
| 3533-00 | 22° | OFF | - | MOM |
| 3535-00 | 22° | ON | - | MOM |
| 3536-00 | 22° | ON | - | ON |
| 3537-00 | 22° | MOM | OFF | MOM |
| 3538-00 | 30° | ON | OFF | MOM |
| 3539-00 | 30° | ON | OFF | ON |

SCREW TERMINALS DOUBLE POLE



| | Angle of throw (A) | III A2-A3 B5-B6 | II *A3-B5 **A1-B5 | I A1-A2 B5-B4 |
|---------|--------------------|-----------------------|-------------------------|---------------------|
| 3541-00 | 22° | ON | - | OFF |
| 3544-10 | 22° | ON | ON* | ON |
| 3544-20 | 22° | ON | ON* | MOM |
| 3544-30 | 22° | MOM | ON* | MOM |
| 3545-00 | 22° | ON | - | MOM |
| 3546-00 | 22° | ON | - | ON |
| 3547-00 | 22° | MOM | OFF | MOM |
| 3548-00 | 30° | ON | OFF | MOM |
| 3549-00 | 30° | ON | OFF | ON |

SOLDER LUG/QUICK-CONNECT TERMINALS SINGLE POLE



| | Angle of throw (A) | III A2-A3 | II | I |
|---------|--------------------|--------------|-----|--------------|
| 3531-02 | 22° | ON | - | A1-A2 OFF |
| 3532-02 | 22° | ON | - | m.OFF |
| 3533-02 | 22° | OFF | - | MOM |
| 3535-02 | 22° | ON | - | MOM |
| 3536-02 | 22° | ON | - | ON |
| 3537-02 | 22° | MOM | OFF | MOM |
| 3538-02 | 30° | ON | OFF | MOM |
| 3539-02 | 30° | ON | OFF | ON |

SOLDER LUG/QUICK-CONNECT TERMINALS DOUBLE POLE



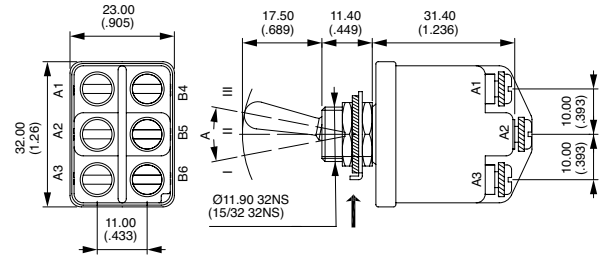
| | Angle of throw (A) | III A2-A3 B5-B6 | II *A3-B5 **A1-B5 | I A1-A2 B5-B4 |
|---------|--------------------|-----------------------|-------------------------|---------------------|
| 3541-02 | 22° | ON | - | OFF |
| 3544-12 | 22° | ON | ON* | ON |
| 3544-22 | 22° | ON | ON* | MOM |
| 3544-32 | 22° | MOM | ON* | MOM |
| 3545-02 | 22° | ON | - | MOM |
| 3546-02 | 22° | ON | - | ON |
| 3547-02 | 22° | MOM | OFF | MOM |
| 3548-02 | 30° | ON | OFF | MOM |
| 3549-02 | 30° | ON | OFF | ON |

→ KEYWAY

Shown with standard lever

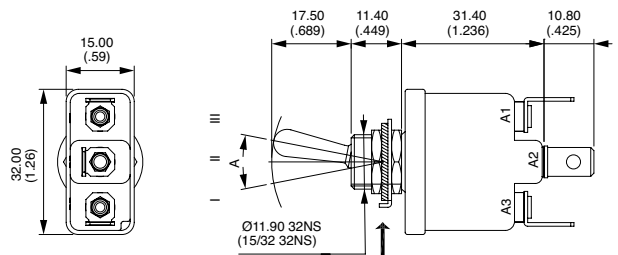


→ KEYWAY

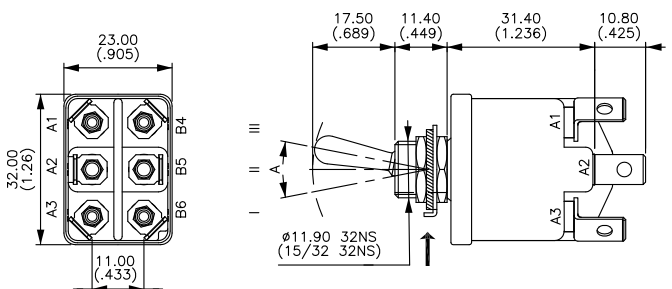


Also available in functions ON-m.OFF and OFF-MOM.

→ KEYWAY



→ KEYWAY



Also available in functions ON-m.OFF and OFF-MOM.

*and** : A2-B4 and A2-B6 = jumper to be wired by the user.

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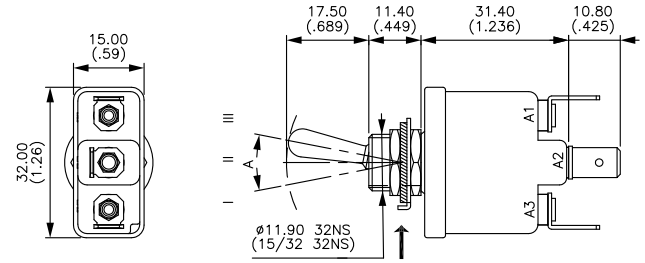
NORMALIZED QUICK-CONNECT TERMINALS SINGLE POLE



| | Angle of throw (A) | III A2-A3 | II | I A1-A2 |
|---------|--------------------|--------------|-----|------------|
| 3531-03 | 22° | ON | - | OFF |
| 3532-03 | 22° | ON | - | m.OFF |
| 3533-03 | 22° | OFF | - | MOM |
| 3535-03 | 22° | ON | - | MOM |
| 3536-03 | 22° | ON | - | ON |
| 3537-03 | 22° | MOM | OFF | MOM |
| 3538-03 | 30° | ON | OFF | MOM |
| 3539-03 | 30° | ON | OFF | ON |

→ KEYWAY

Shown with standard lever

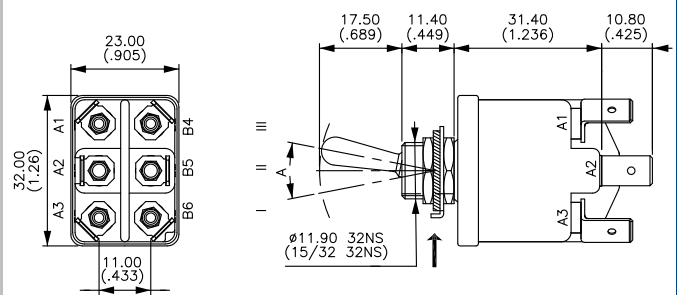


NORMALIZED QUICK-CONNECT TERMINALS DOUBLE POLE



| | Angle of throw (A) | III A2-A3 B5-B6 | II *A3-B5 **A1-B5 | I A1-A2 B5-B4 |
|---------|--------------------|-----------------------|-------------------------|---------------------|
| 3541-03 | 22° | ON | - | OFF |
| 3544-13 | 22° | ON | ON* | ON |
| 3544-23 | 22° | ON | ON* | MOM |
| 3544-33 | 22° | MOM | ON* | MOM |
| 3545-03 | 22° | ON | - | MOM |
| 3546-03 | 22° | ON | - | ON |
| 3547-03 | 22° | MOM | OFF | MOM |
| 3548-03 | 30° | ON | OFF | MOM |
| 3549-03 | 30° | ON | OFF | ON |

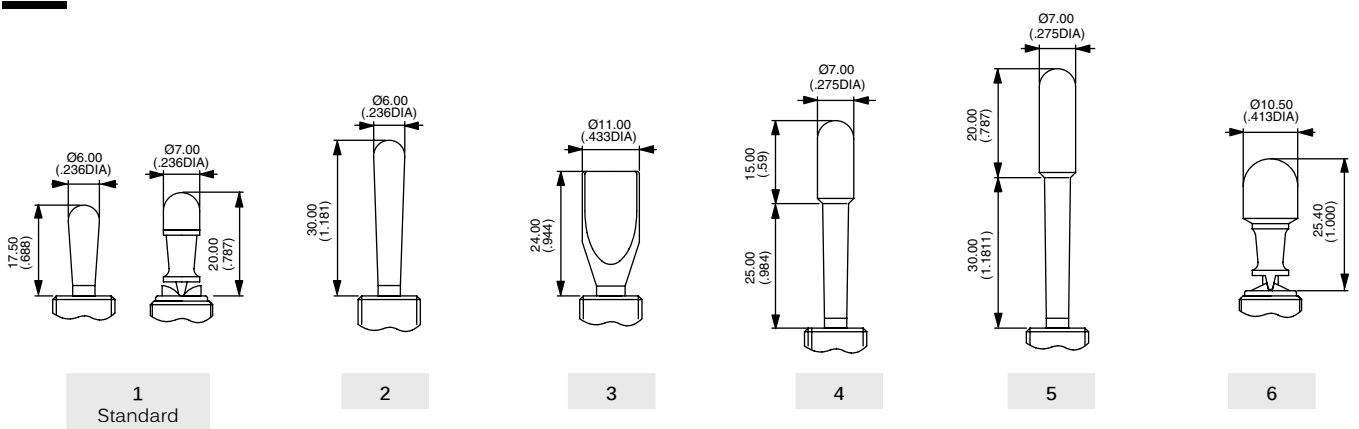
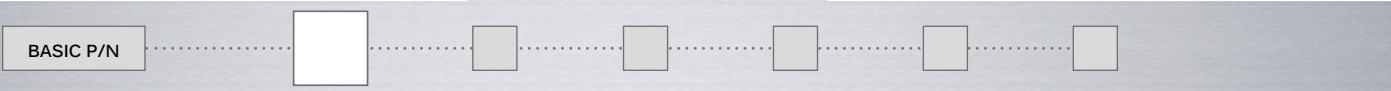
→ KEYWAY



Also available in functions ON-m.OFF and OFF-MOM.

*and**: A2-B4 and A2-B6 = jumper to be wired by the user.

LEVER STYLES



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LEVER FINISH



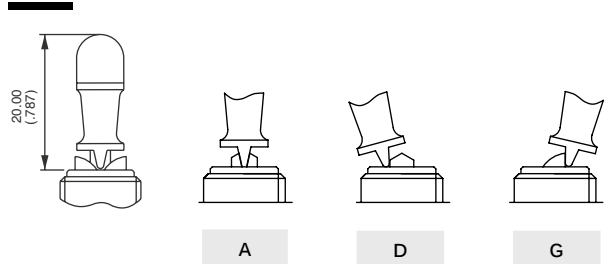
- N Bright nickel
- B Satin chrome
- G* Black
- F* Black with fluorescent tip (available with lever type 1 only)
- C Painted or anodized (for locking lever only)

* Black finish on bushing too.

LOCKING LEVER STYLES



- 0 No locking
- A Locked in 3 positions. For functions 4-1, 4-4 and 9-0.
- D Locked out of center position. For functions 1-0 and 6-0.
- G Locked in keyway. For functions 1-0 and 6-0.



AGENCY APPROVAL



- 0 None
- 1 CECC

MOUNTING ACCESSORIES



- 0 For NON-SEALED mounting (panel cut-out fig. 1, 2 or 3)
2 hex nuts 14 mm (.551) across flats, 1 locking ring U121 or U12, 1 lockwasher U13
Panel thickness : 5 mm (.196) max.
- 2 For SEALED mounting (panel cut-out fig. 2)
2 hex nuts 14 mm (.551) across flats and 1 sealing washer U60
Panel thickness : 4 mm (.157) max.

Special hardware : black cap nut U129. Order separately. See "Hardware" section of website.

LOCKING LEVER SPECIAL FINISH



- (blank) None
 - P5 Painted yellow
 - A6 Anodized red
- Order with lever finish type C.
Other colors on request.