# 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<br>15 A 28 VDC resistive<br>15 A 28 VDC inductive<br>5 A 28 VDC lamp |
| ON OFF ON | 10,000 cycles, T20 °C<br>15 A 28 VDC resistive<br>15 A 28 VDC inductive<br>5 A 28 VDC lamp |
| OTHER FUNCTIONS | 10,000 cycles, T20 °C<br>15 A 28 VDC resistive<br>10 A 28 VDC inductive<br>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

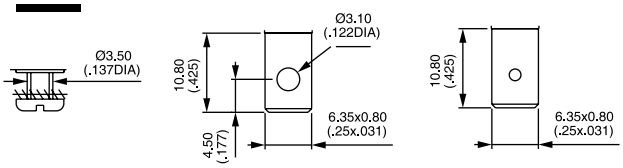
- Case : mineral filled polyester UL94-V0
- Bushing and cover : zamac
- Actuator : brass, nickel or chrome plated, or anodized aluminum
- Contacts : silver alloy

## AGENCY APPROVAL

CECC 96201-004

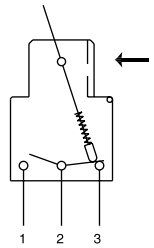
**Availability :** consult factory for details of approved models.
**Marking :** to order switches marked CECC, complete appropriate box of ordering format.

## TERMINALS




## ELECTRICAL FUNCTIONS

→ KEYWAY




## PANEL CUT-OUT

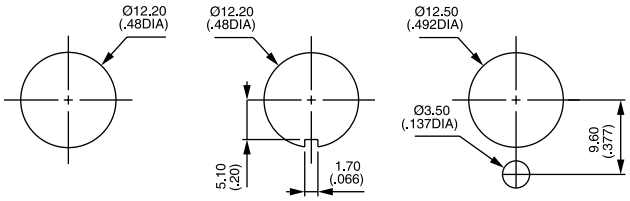



Figure 1 Figure 2 Figure 3

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## BUILD YOUR PART NUMBER

### BASIC PART NUMBER

35 — SERIES

**NUMBER OF POLES**

| | |
|---|---|
| 3 | Single pole |
| 4 | Double pole |

**ELECTRICAL FUNCTIONS**

| | | | |
|---|---|---|---|
| 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 |

▲ Function 4 : double pole only

**TERMINALS**

| | |
|---|---|
| 0 | Screw |
| 2 | Solder lug/ quick-connect |
| 3 | Normalized quick-connect |
| 4 | Screw + clamp |

### OPTIONS

**LEVER FINISH**

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

*Black finish on bushing too.

**AGENCY APPROVAL**

| | |
|---|---|
| 0 | None |
| 1 | CECC |

**LOCKING LEVER SPECIAL FINISH**

| | |
|---|---|
| (blank) | None |
| P5 | Painted yellow |
| A6 | Anodized red |

Order with lever finish type C. Other colors : on request.

**LEVER STYLES**

| | |
|---|---|
| 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) |

**LEVER LOCKING STYLES**

| | |
|---|---|
| 0 | No locking |
| A | Locked in 3 positions |
| D | Locked out of center position |
| G | Locked in keyway side |

See drawings on the following pages.

**ACCESSORIES**

| | |
|---|---|
| 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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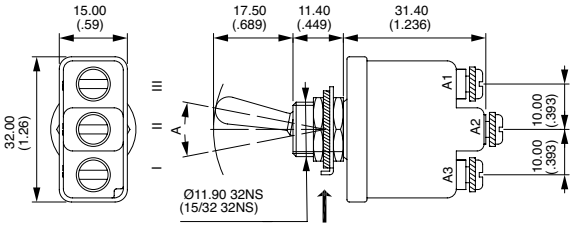
## SCREW TERMINALS SINGLE POLE

| | Angle of throw (A) | III A2-A3 | II | I A1-A2 |
|---|---|---|---|---|
| 3531-00 | 22° | ON | - | 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 |

→ KEYWAY

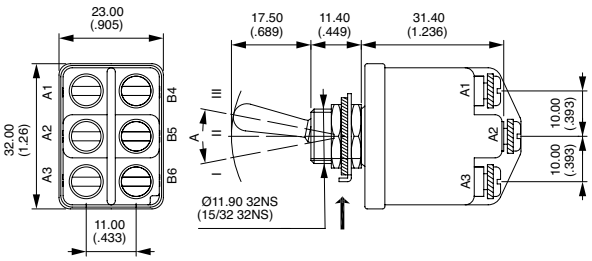
Shown with standard lever




## 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 |

→ KEYWAY

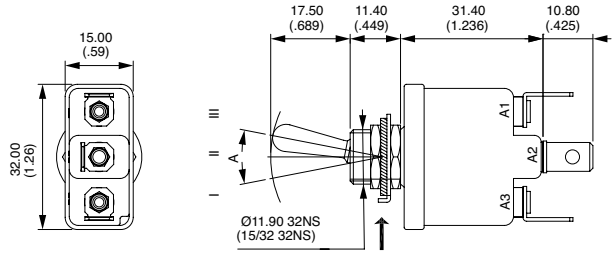



Also available in functions ON-m.OFF and OFF-MOM.

## SOLDER LUG/QUICK-CONNECT TERMINALS SINGLE POLE

| | Angle of throw (A) | III A2-A3 | II | I A1-A2 |
|---|---|---|---|---|
| 3531-02 | 22° | ON | - | 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 |

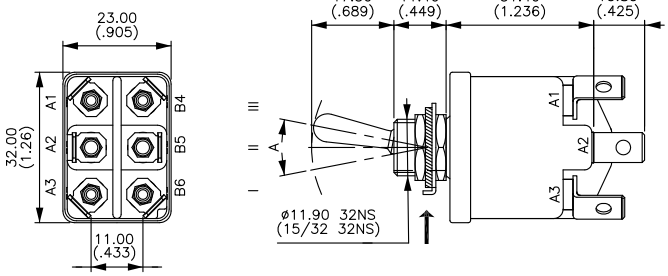
→ KEYWAY




## 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




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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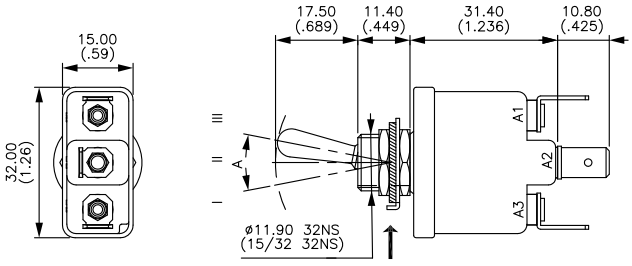
## NORMALIZED QUICK-CONNECT TERMINALS SINGLE POLE

| | 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

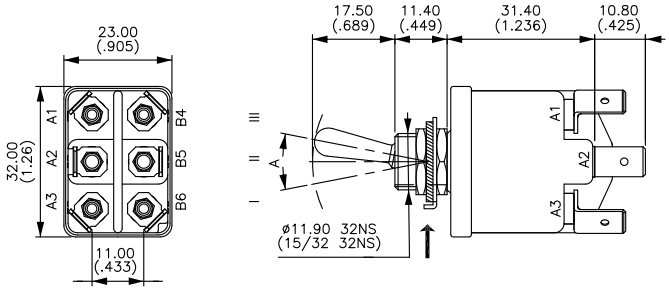
**Shown with standard lever**




## 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 |

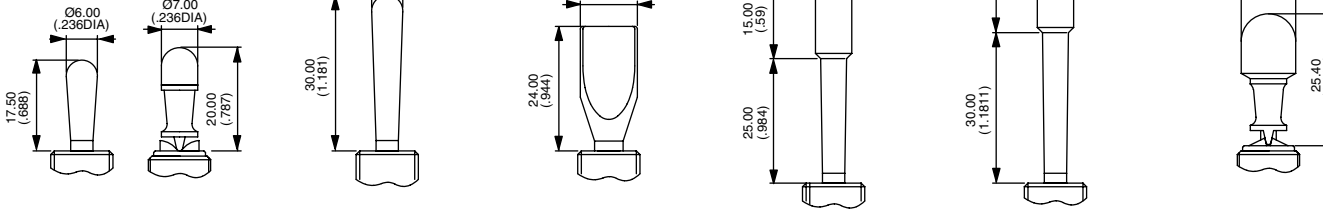
→ KEYWAY




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

BASIC P/N




| 1 Standard | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

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### LEVER FINISH

BASIC P/N

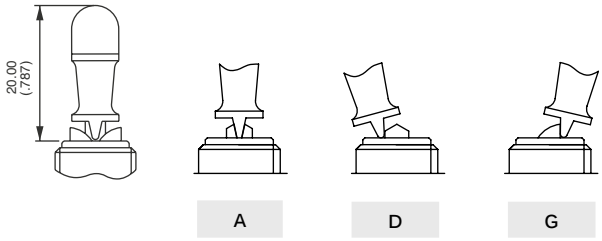
| | |
|---|---|
| **N** | Bright nickel |
| **B** | Satin chrome |
| **G*** | Black |
| **F*** | Black with fluorescent tip (available with lever type 1 only) |
| **C** | Painted or anodized (for locking lever only) |

* Black finish on bushing too.

### LOCKING LEVER STYLES

BASIC P/N

| | |
|---|---|
| **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

BASIC P/N

| | |
|---|---|
| **0** | None |
| **1** | CECC |

### MOUNTING ACCESSORIES

BASIC P/N

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

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

### LOCKING LEVER SPECIAL FINISH

BASIC P/N

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

LifeElectronics
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