

# 11000 series

Professional toggle switches •  
threaded bushing Ø 6.35 mm



## DISTINCTIVE FEATURES

CECC approved

Robust switches for high specification environments

Toggle action on 2-position models for a smooth mechanical operation

Several front panel sealing options



## ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load:
  - silver contacts (A-AD2-X780): 4 A 30 VDC
  - gold contacts (D): 100 mA 30 VDC
- Minimum load : AD2-X780-D contacts: 10 mA 50 mV, 10 µA 5 V min.
- Peak currents, refer to "Special options".
- Initial contact resistance: 10 mΩ max.
- Insulation resistance: 1,000 MΩ min. at 500 VDC
- Dielectric strength:
  - 1,000 Vrms 50 Hz min. between terminals
  - 2,000 Vrms 50 Hz min. between poles and between terminals and frame
- Contact bounce: 2 ms max.
- Electrical life at full load:

| Contacts | Max. current/voltage rating                     | Number of cycles |             |
|----------|-------------------------------------------------|------------------|-------------|
|          |                                                 | 2 positions      | 3 positions |
| A        | 4 A 30 VDC                                      | 50,000           | 50,000      |
| AD2 X780 | 4 A 30 VDC<br>(Gold plating : 100mA 30VDC max.) | 20,000           | 20,000      |
| D        | 100 mA 30 VDC                                   | 80,000           | 50,000      |
|          | Low level or mechanical life                    | 150,000          | 100,000     |



## GENERAL SPECIFICATIONS

- Torque: 1.25 Nm (.92 Ft.lb) max. applied between the 2 nuts
- Standard panel thickness: 2.5 mm (.098) max.
- Operating temperature: -40 °C to +85 °C (-40 °F to +185 °F)

The company reserves the right to change specifications without notice.



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## MATERIALS

- Case: diallylphthalate (DAP)
- Actuator: brass, nickel plated
- Bushing: brass, nickel plated
- Housing: brass, nickel plated
- Contacts
  - A: silver
  - AD2: gold plated silver (2 microns gold)
  - X780: solid rivet - gold plated, silver/nickel alloy
  - D: solid gold rivet
  - X910: silver/nickel alloy (for peak currents, see "Special options")
- Terminal seal: epoxy

Note: AD2 and X780 contacts can be used for high level applications. In this case, the gold layer is considered only as a protection against oxidation during storage.

## AGENCY APPROVALS



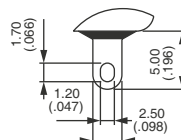
CECC 96201-005  
CECC 96201-008

**Availability:** consult factory for details of approved models.

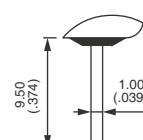
**Marking:** to order switches marked CECC, complete appropriate box of ordering format.



## TERMINALS



Solder lugs

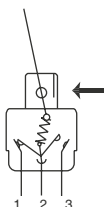


Straight PC

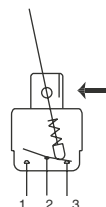


## ELECTRICAL FUNCTIONS

→ KEYWAY



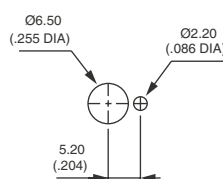
Function 6



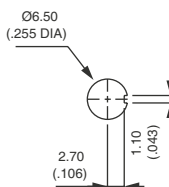
Other functions



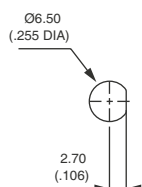
## PANEL CUT-OUT



Standard



With K sealing option



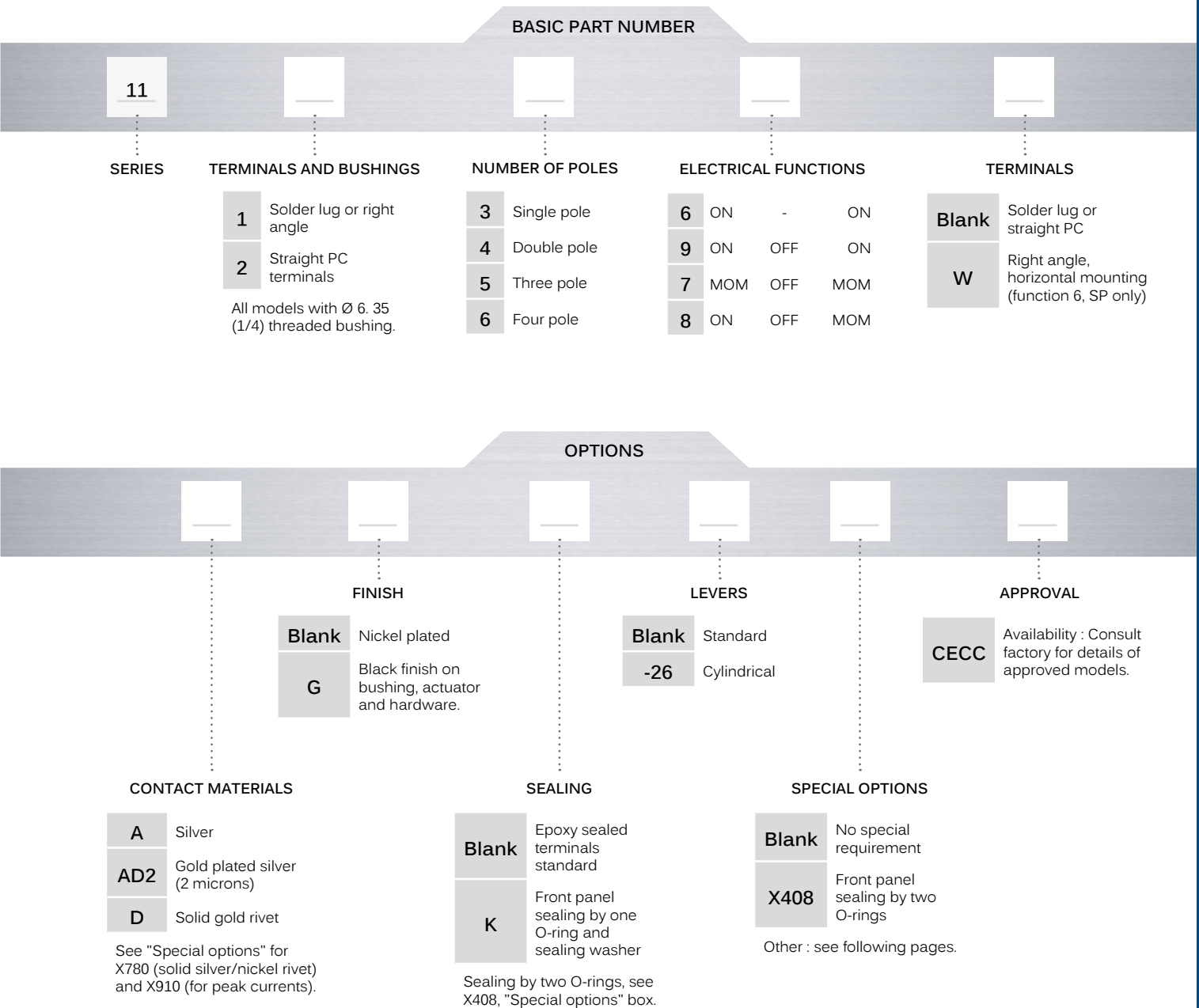
With X408 sealing option

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## BUILD YOUR PART NUMBER



## 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 [www.apem.com](http://www.apem.com) for further information.
- 💧 **Sealing boots** are available to protect the switches against dust and water. See "Sealing Boots" section of website.
- 🔧 **Mounting accessories** : standard hardware supplied with all models: 2 hex nuts 8 (314) across flats, 1 locking ring and 1 lockwasher. Standard and special hardware is presented in the "Hardware" section of website.

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## SOLDER LUG TERMINALS - SINGLE POLE



| BASIC P/N | I   | II  | III |
|-----------|-----|-----|-----|
| 11136     | ON  | -   | ON  |
| 11139     | ON  | OFF | ON  |
| 11137     | MOM | OFF | MOM |
| 11138     | ON  | OFF | MOM |

## SOLDER LUG TERMINALS - DOUBLE POLE



| BASIC P/N | I   | II  | III |
|-----------|-----|-----|-----|
| 11146     | ON  | -   | ON  |
| 11149     | ON  | OFF | ON  |
| 11147     | MOM | OFF | MOM |
| 11148     | ON  | OFF | MOM |

## SOLDER LUG TERMINALS - THREE POLE



| BASIC P/N | I   | II  | III |
|-----------|-----|-----|-----|
| 11156     | ON  | -   | ON  |
| 11159     | ON  | OFF | ON  |
| 11157     | MOM | OFF | MOM |
| 11158     | ON  | OFF | MOM |

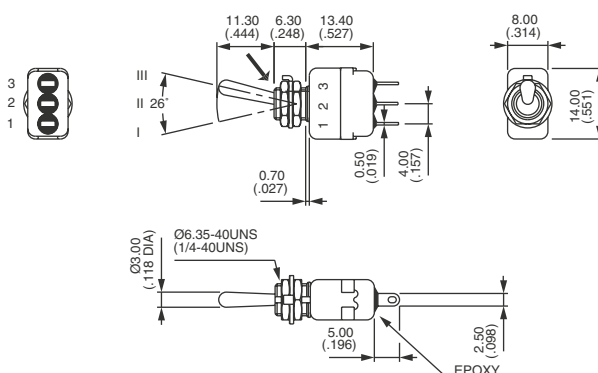
## SOLDER LUG TERMINALS - FOUR POLE



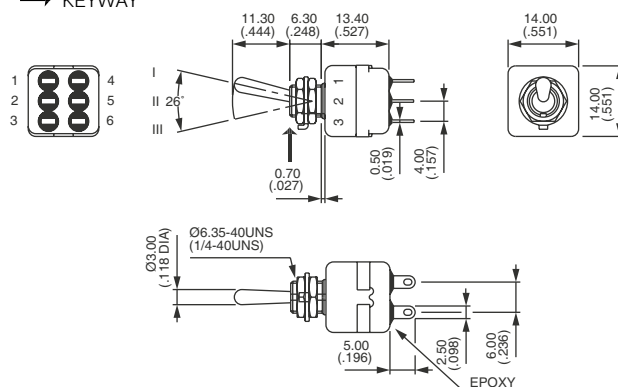
| BASIC P/N | I   | II  | III |
|-----------|-----|-----|-----|
| 11166     | ON  | -   | ON  |
| 11169     | ON  | OFF | ON  |
| 11167     | MOM | OFF | MOM |
| 11168     | ON  | OFF | MOM |

→ KEYWAY

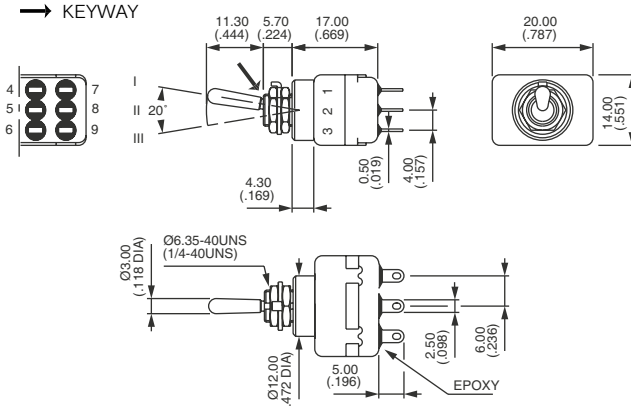
Shown with standard lever



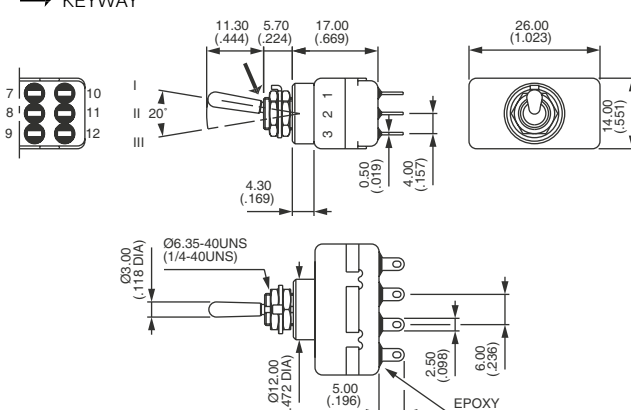
→ KEYWAY



→ KEYWAY



→ KEYWAY



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## STRAIGHT PC TERMINALS - SINGLE POLE ▲



| BASIC P/N | I  | II | III |
|-----------|----|----|-----|
| 11236     | ON | -  | ON  |

## STRAIGHT PC TERMINALS - DOUBLE POLE ▲



| BASIC P/N | I  | II | III |
|-----------|----|----|-----|
| 11246     | ON | -  | ON  |

## STRAIGHT PC TERMINALS - THREE POLE ▲



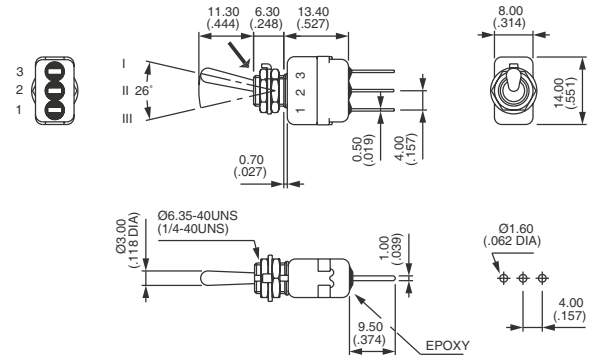
| BASIC P/N | I  | II | III |
|-----------|----|----|-----|
| 11256     | ON | -  | ON  |

## STRAIGHT PC TERMINALS - FOUR POLE ▲

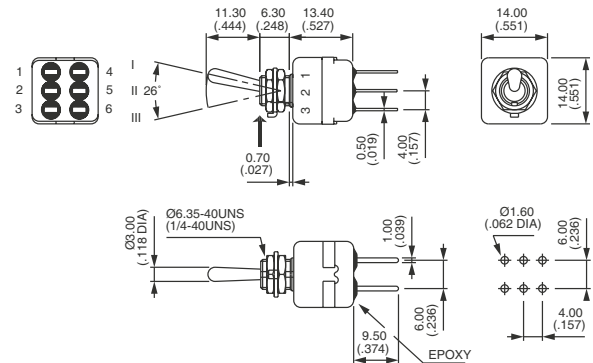


| BASIC P/N | I  | II | III |
|-----------|----|----|-----|
| 11266     | ON | -  | ON  |

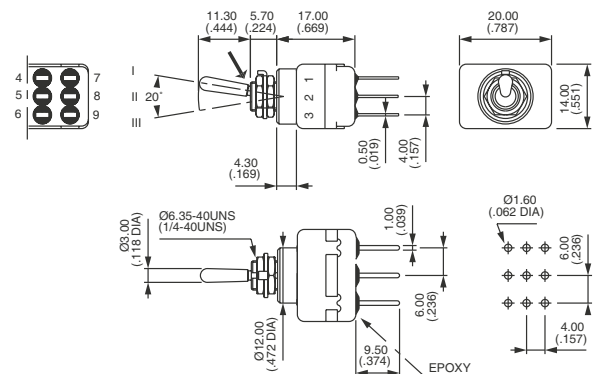
### → KEYWAY



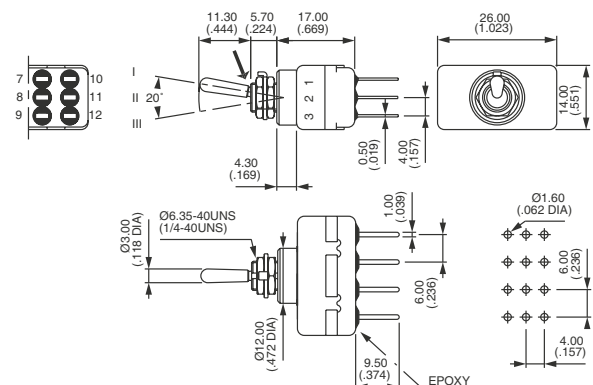
### → KEYWAY



### → KEYWAY



### → KEYWAY



# 11000 series

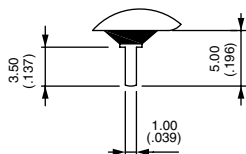
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## RIGHT ANGLE TERMINALS - HORIZONTAL - SINGLE POLE

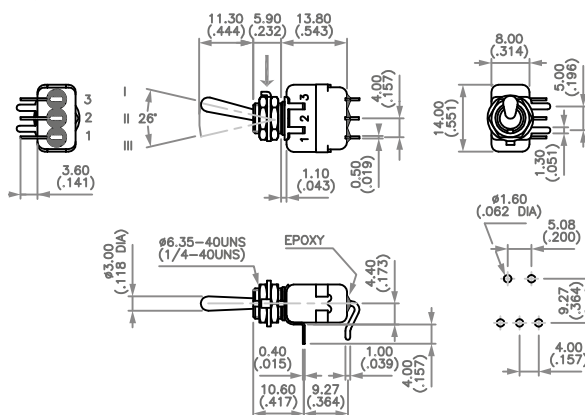


| BASIC P/N | I  | II | III |
|-----------|----|----|-----|
| 11136W    | ON | -  | ON  |

▲ 3.5 mm (.138) short terminals available on request for function 6, as well as for function 9, 7 and 8.



→ KEYWAY



### CONTACT MATERIALS

| BASIC P/N |  |  |  |  |  |  |  |
|-----------|--|--|--|--|--|--|--|
|-----------|--|--|--|--|--|--|--|

- A Silver
- AD2 Silver, gold plated (2 micron gold)
- D Solid gold rivet

See "Special options" for contacts X780 (solid silver/nickel rivet) and contacts X910 (for peak currents).

### FINISH

| BASIC P/N |  |  |  |  |  |  |  |
|-----------|--|--|--|--|--|--|--|
|-----------|--|--|--|--|--|--|--|

- Blank Nickel plated
  - G Black finish on bushing, lever and hardware
- Other finish, consult factory.

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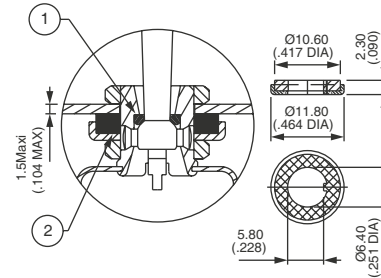
## SEALING

BASIC P/N

Epoxy sealed terminals are standard.

- Blank** No sealing except standard
- K** Front panel sealing by one O-ring and sealing washer. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
- ⚠ Not available on 11000W model.

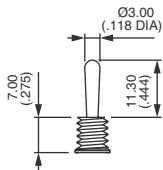
Sealing by two O-rings, see X408 under "Special options".  
Sealing boots: see "Sealing boots" section of website..



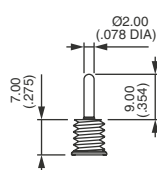
① O-ring ② Sealing washer

## LEVERS

BASIC P/N



Blank Standard

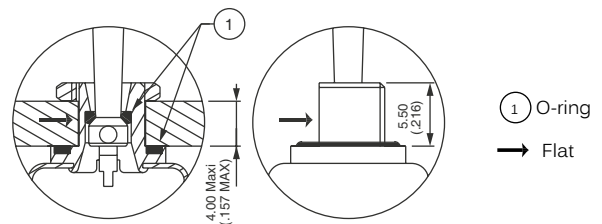


-26 Cylindrical

## SPECIAL OPTIONS

BASIC P/N

- X408** Front panel sealing by two O-rings. Flatted bushing for precise orientation. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
- ⚠ Not available on 11000W model.
- X780** Solid rivet - gold plated silver/nickel alloy contacts.
- X910** Switches for peak currents - double pole - on request.



X408

① O-ring  
→ Flat

## AGENCY APPROVAL

BASIC P/N

- CECC** CECC 96201-005 (high level - contacts X780) - CECC 96201-008 (low level - contacts AD2 or D)  
Availability: consult factory for details of approved models.  
Marking: to order switches marked CECC, complete above box with "CECC".
- Blank** No agency approval required.