

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 (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: diallyphthalate (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

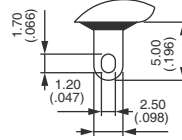


CECC 96201-005
CECC 96201-008

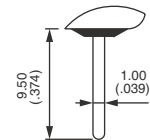
Availability: consult factory for details of approved models.

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

TERMINALS



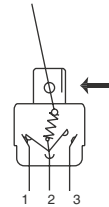
Solder lugs



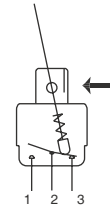
Straight PC

ELECTRICAL FUNCTIONS

→ KEYWAY

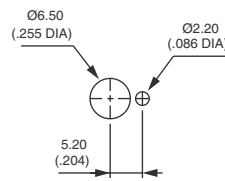


Function 6

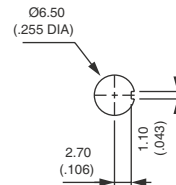


Other functions

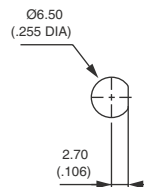
PANEL CUT-OUT



Standard



With K sealing option



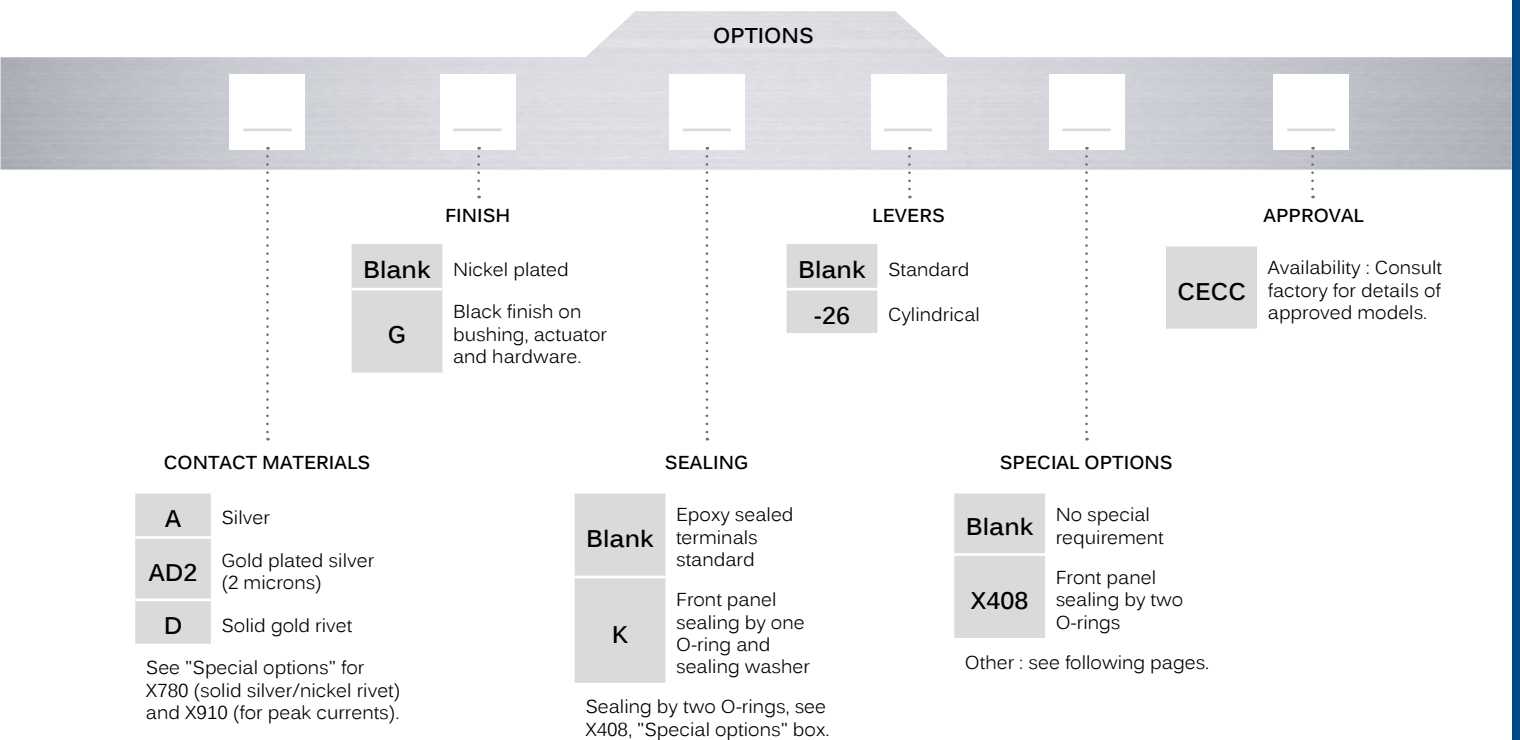
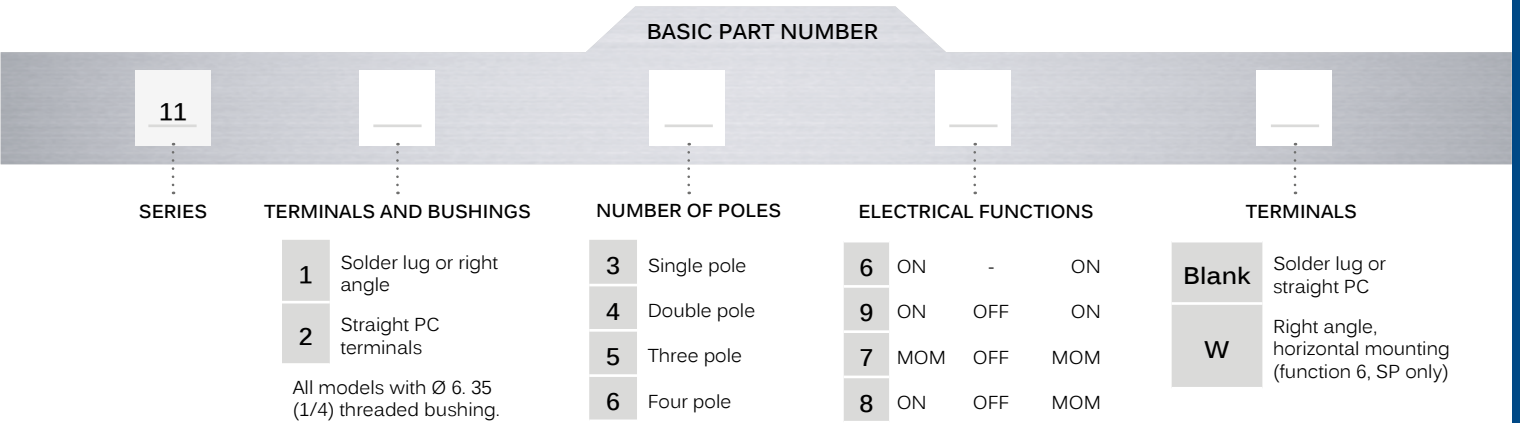
With X408 sealing option

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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 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

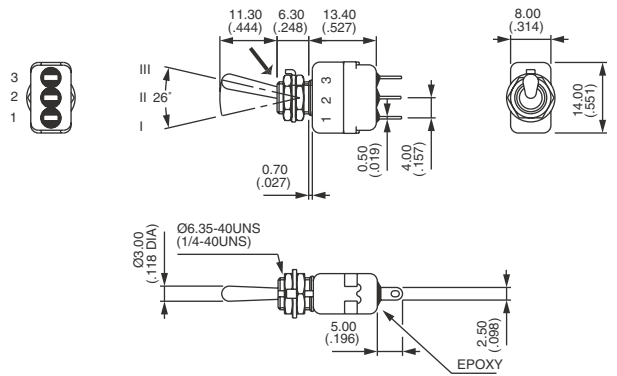
SOLDER LUG TERMINALS - FOUR POLE



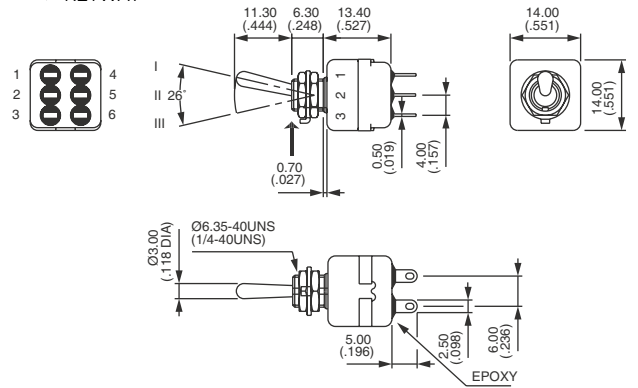
BASIC P/N	I	II	III
11166	ON	-	ON
11169	ON	OFF	ON
11167	MOM	OFF	MOM
11168	ON	OFF	MOM

→ KEYWAY

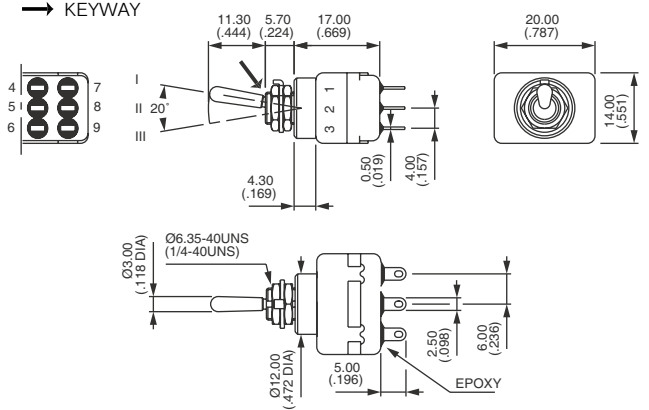
Shown with standard lever



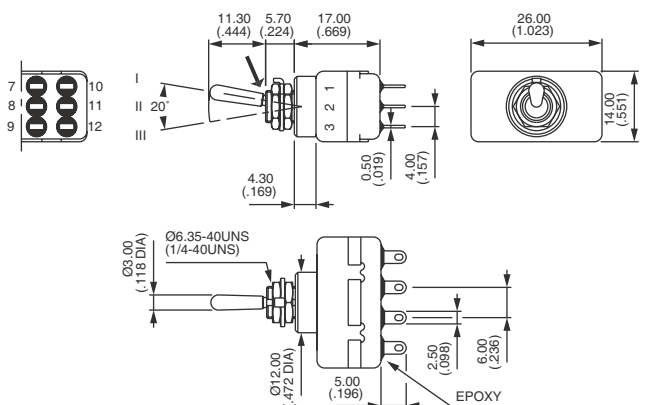
→ KEYWAY



→ 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 ▲



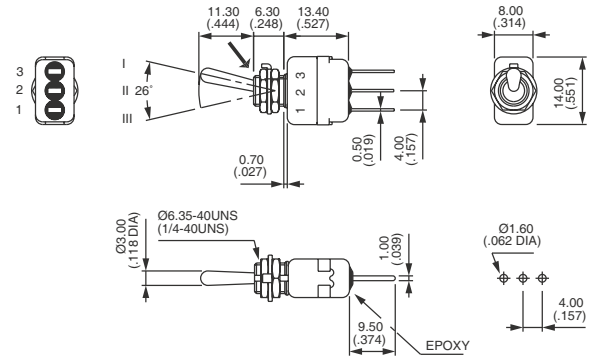
BASIC P/N	I	II	III
11256	ON	-	ON

STRAIGHT PC TERMINALS - FOUR POLE ▲

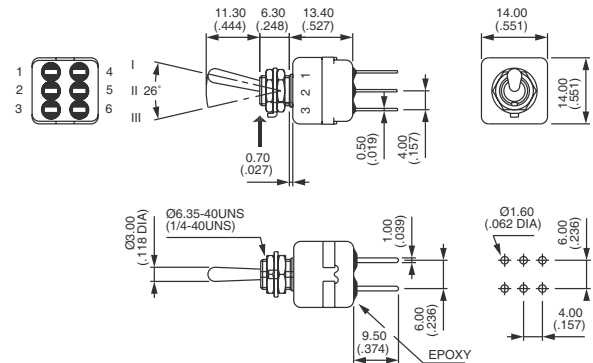


BASIC P/N	I	II	III
11266	ON	-	ON

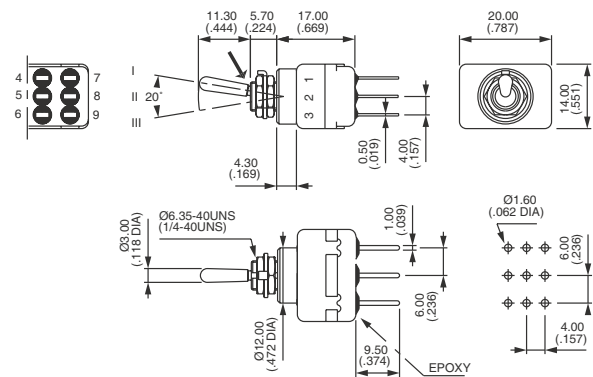
KEYWAY



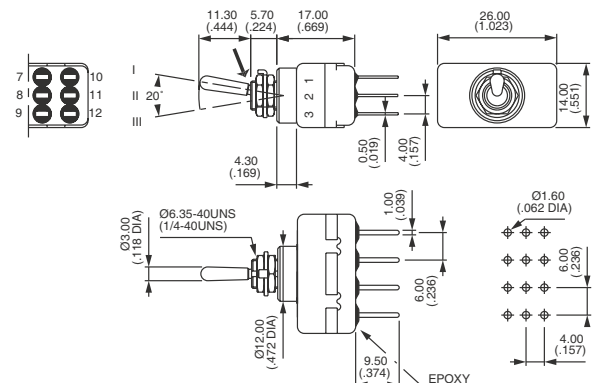
KEYWAY



KEYWAY



KEYWAY



11000 series

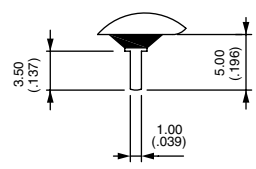
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RIGHT ANGLE TERMINALS - HORIZONTAL - SINGLE POLE

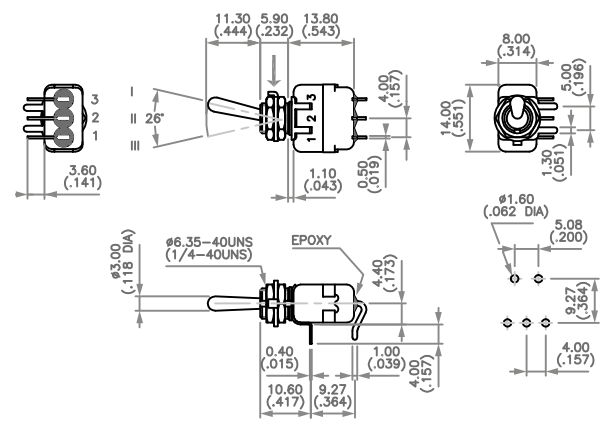


BASIC P/N	I	II	III
11136W	ON	-	ON

▲ 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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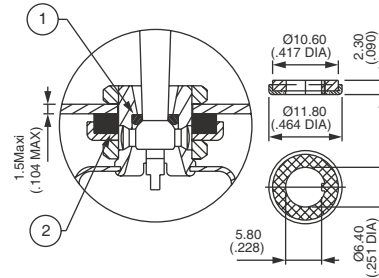
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SEALING



Epoxy sealed terminals are standard.

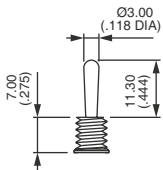
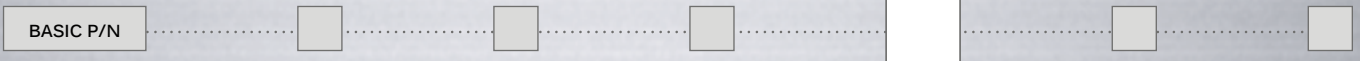
- Blank** No sealing except standard
- K** Front panel sealing by one O-ring and sealing washer. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
 - ⚠ Not available on 11000W model.



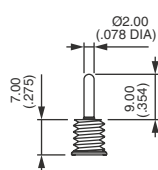
1 O-ring 2 Sealing washer

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

LEVERS



Blank Standard

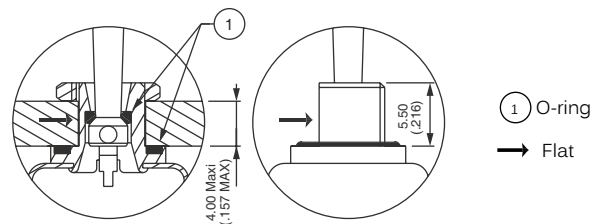


-26 Cylindrical

SPECIAL OPTIONS

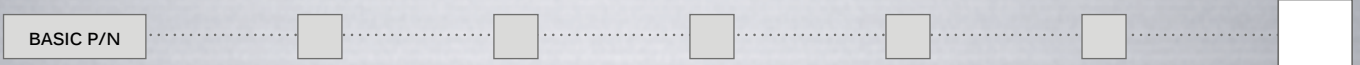


- X408** Front panel sealing by two O-rings. Flatted bushing for precise orientation. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
 - ⚠ Not available on 11000W model.
- X780** Solid rivet - gold plated silver/nickel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



X408

AGENCY APPROVAL



- 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.