



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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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 μ A 5 V min.
- Peak currents, refer to "Special options".
- Initial contact resistance: 10 m Ω max.
- Insulation resistance: 1,000 M Ω 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

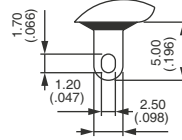


CECC 96201-005
CECC 96201-008

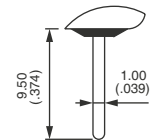
Availability: consult factory for details of approved models.

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

TERMINALS



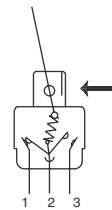
Solder lugs



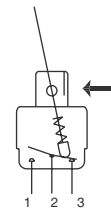
Straight PC

ELECTRICAL FUNCTIONS

→ KEYWAY

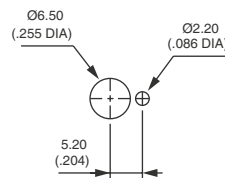


Function 6

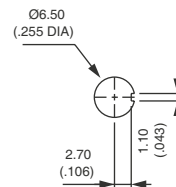


Other functions

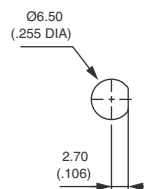
PANEL CUT-OUT



Standard



With K sealing option



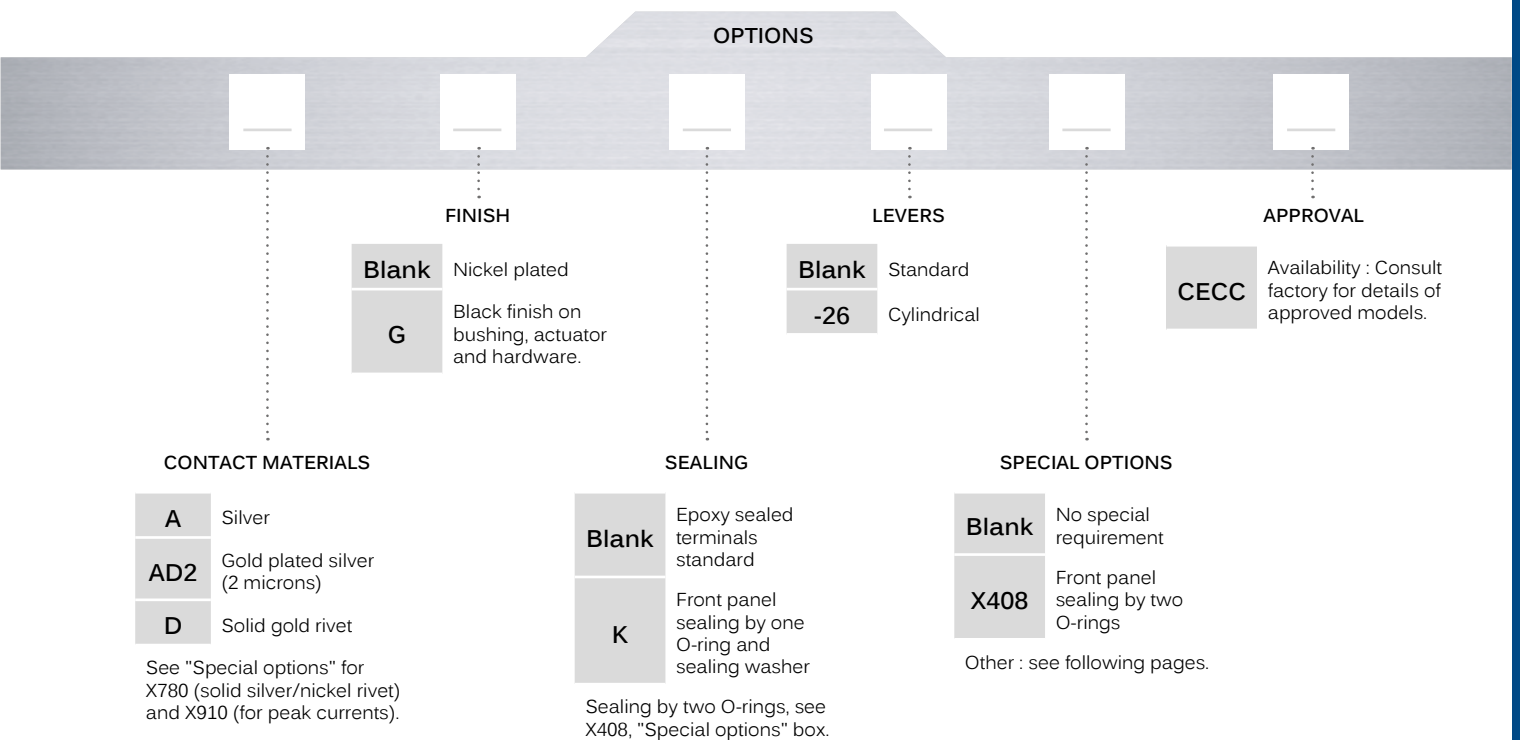
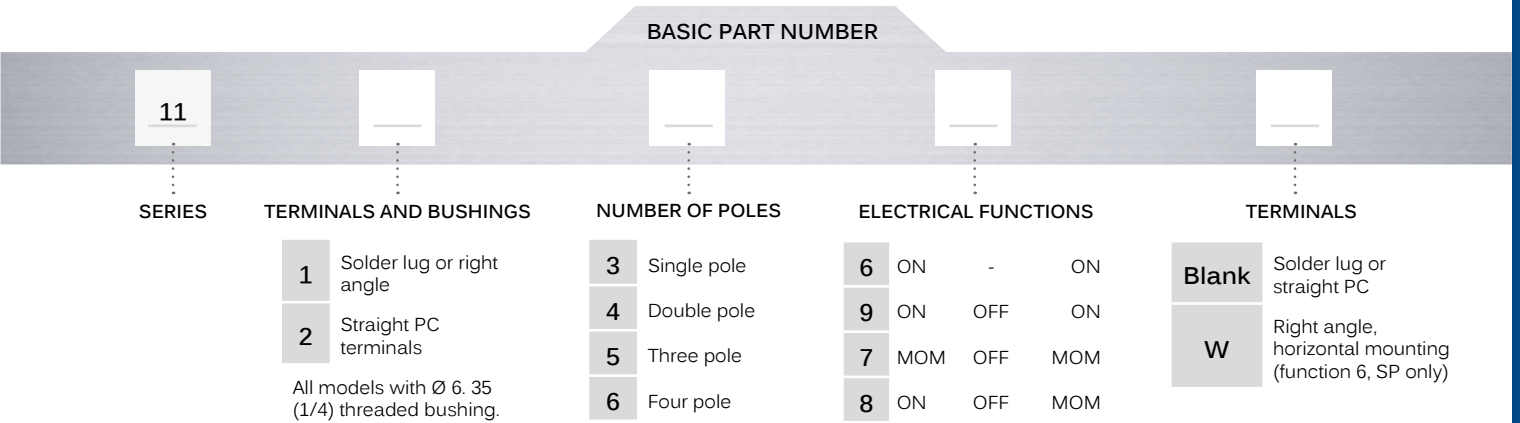
With X408 sealing option

11000 series

Professional toggle switches • threaded bushing Ø 6.35 mm



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

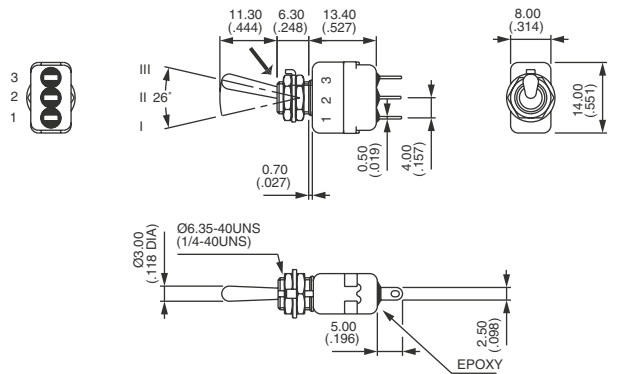
SOLDER LUG TERMINALS - FOUR POLE



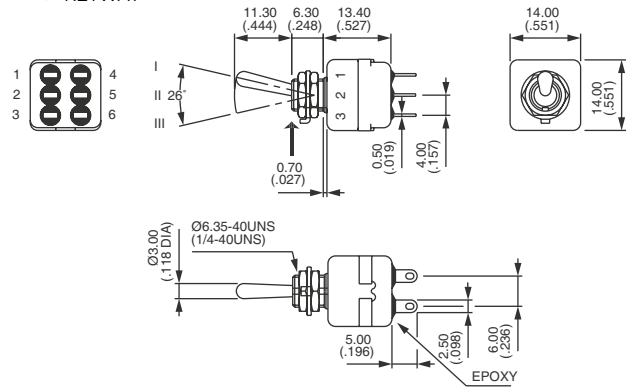
BASIC P/N	I	II	III
11166	ON	-	ON
11169	ON	OFF	ON
11167	MOM	OFF	MOM
11168	ON	OFF	MOM

→ KEYWAY

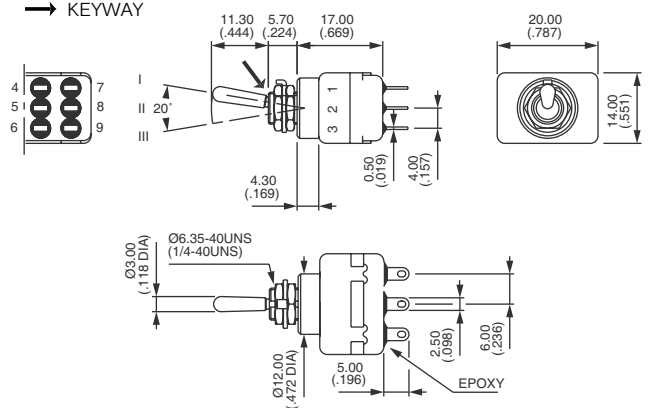
Shown with standard lever



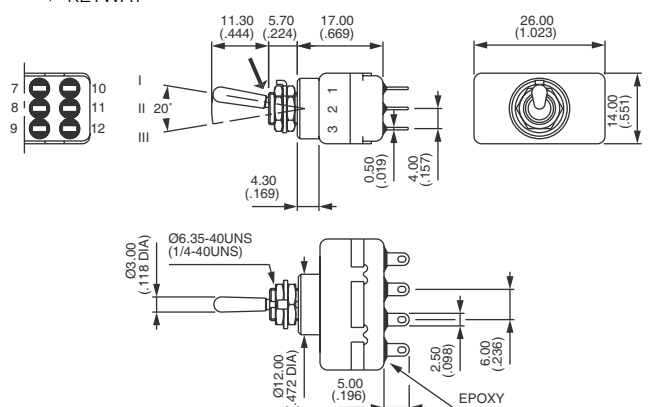
→ KEYWAY



→ KEYWAY



→ KEYWAY



11000 series

Professional toggle switches • threaded bushing Ø 6.35 mm

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 ▲



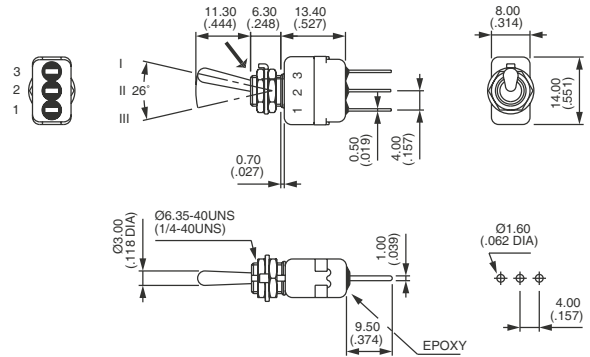
BASIC P/N	I	II	III
11256	ON	-	ON

STRAIGHT PC TERMINALS - FOUR POLE ▲

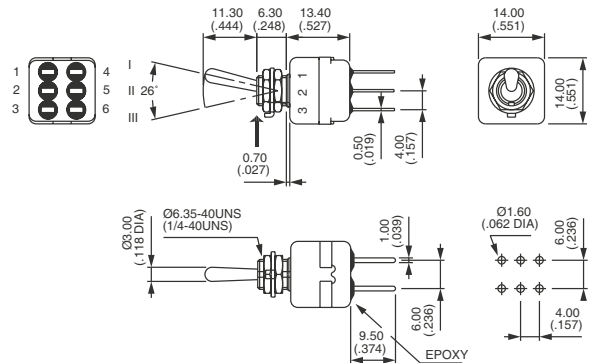


BASIC P/N	I	II	III
11266	ON	-	ON

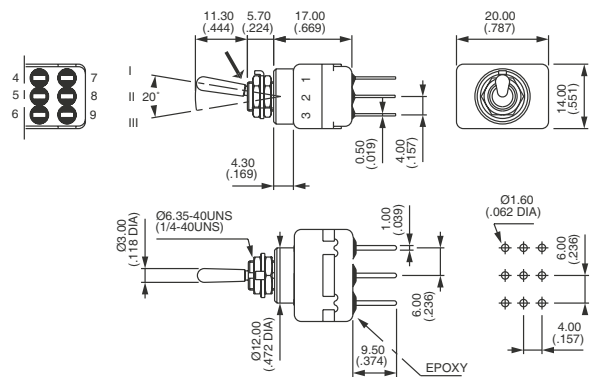
KEYWAY



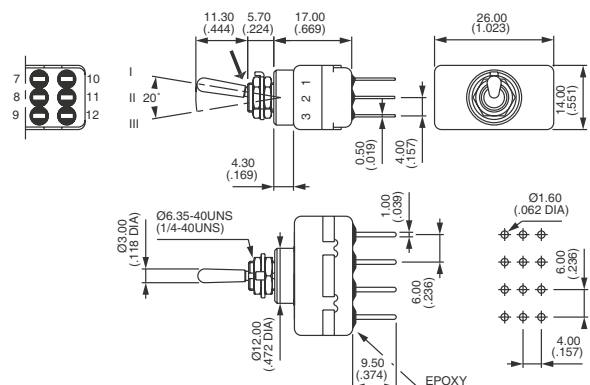
KEYWAY



KEYWAY



KEYWAY



11000 series

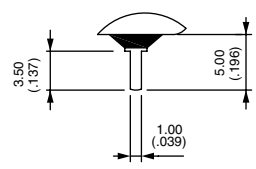
Professional toggle switches • threaded bushing Ø 6.35 mm

RIGHT ANGLE TERMINALS - HORIZONTAL - SINGLE POLE

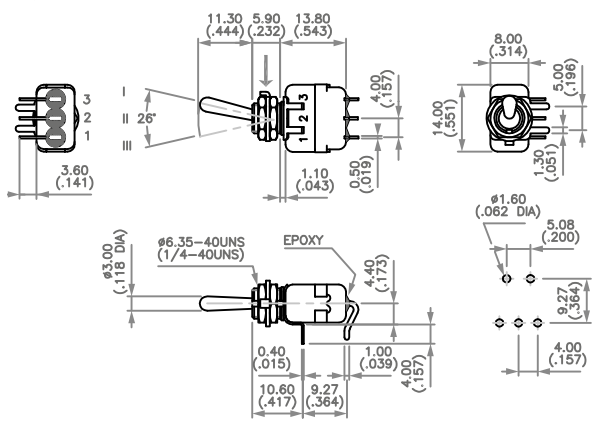


BASIC P/N	I	II	III
11136W	ON	-	ON

▲ 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

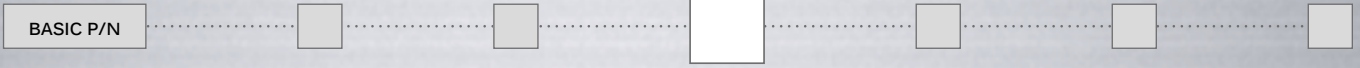
BASIC P/N						

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

11000 series

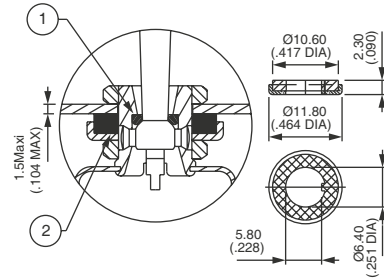
Professional toggle switches • threaded bushing Ø 6.35 mm

SEALING



Epoxy sealed terminals are standard.

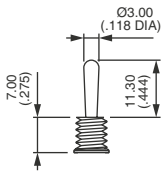
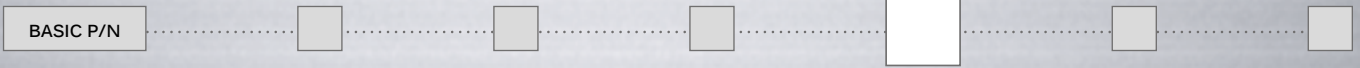
- Blank** No sealing except standard
- K** Front panel sealing by one O-ring and sealing washer. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
 - ⚠ Not available on 11000W model.



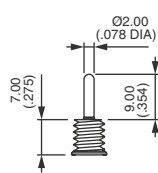
① O-ring ② Sealing washer

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

LEVERS



Blank Standard

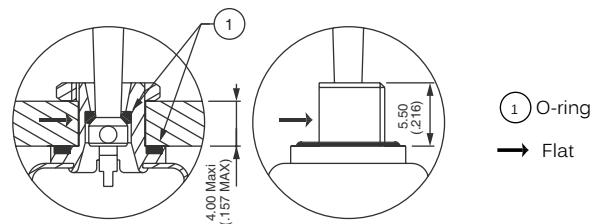


-26 Cylindrical

SPECIAL OPTIONS

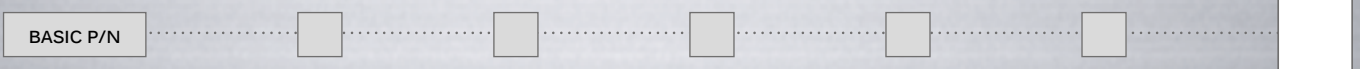


- X408** Front panel sealing by two O-rings. Flatted bushing for precise orientation. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
 - ⚠ Not available on 11000W model.
- X780** Solid rivet - gold plated silver/nickel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