ET Standard Size Toggle Switch

ET

RoHS RoHS Compliant

Introduction

The ET series is Copal's standard size high capacity toggle switch. The ET series are available in various current rating, switching functions, and terminals. The housing is made of self-extinguishing phenol resin which has excellent heat resistance, arc resistance, and tracking resistance. The contacts are designed to eliminate chattering and bouncing to prevent insulation deterioration.

Part Numbering

E T 2 25 K 12 — Z

Series code | Actuator shape | No. of poles | Current | Swiching function | Terminal styles

Fig.	No. of poles
1	1pole
2	2poles
3	3poles
4	4poles
6	6poles

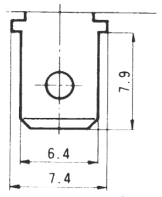
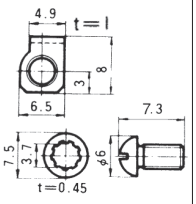
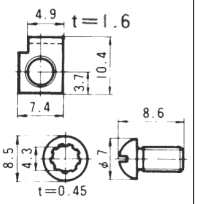
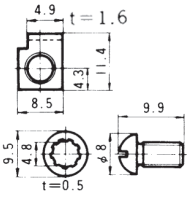
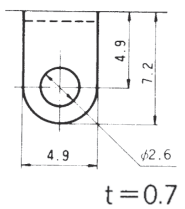
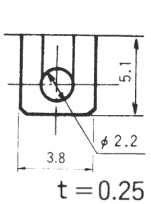
Fig.	AC125V	AC250V
03	3A	—
05	5A	3A
06	6A	(2A)
10	10A	(7A)

Fig.	AC125V	AC250V
15	15A	10A
20	20A	12A
25	25A	15A
30	30A	(25A)

1pole 3pole	2pole 4pole 6pole	Key way	Key way	Key way
A	K	ON	—	OFF
C	M	OFF	—	(ON)
D•V	N	ON	—	ON
E	P	ON	OFF	ON
F	R	ON	—	(ON)
G	S	(ON)	OFF	(ON)
H	—	ON	OFF	(ON)
—	PA	ON	ON	OFF

Fig.	Terminal style
None	TAB#250
10	Screw Terminal
12	Solder Terminal
13	Plate Connect SolderTerminal

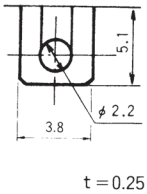
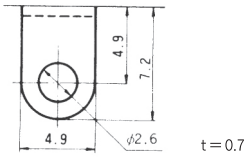
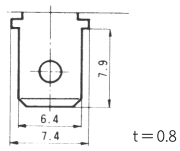
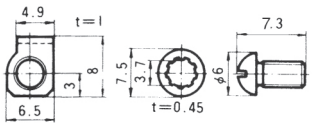
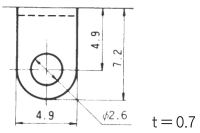
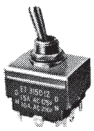
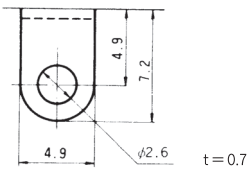
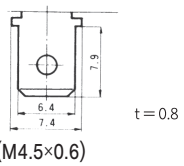
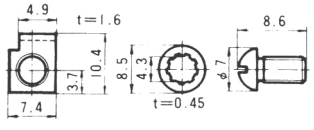
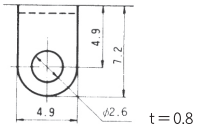
Terminal Style and Dimentions

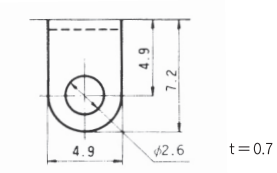
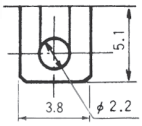
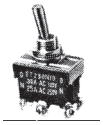
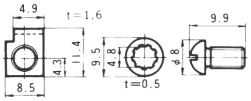
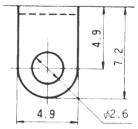
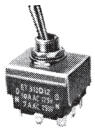
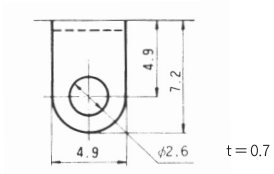
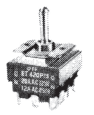
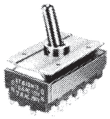
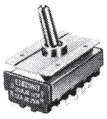
TAB#250 (Style:—)	Screw Terminal (Style:10)			Solder Terminal	
				Solder Terminal (Style:12•13)	Style:12
	M3.5×0.6	M4×0.7	M4.5×0.75		ET103□12 ET206□12 Type
 t=0.8	 ET115•215Type	 ET120•220Type	 ET125•225•230Type	 t=0.7	 t=0.25

(ON) and (OFF) : Momentary.

Please refer to P.564 for Common Specifications

ET Series Selection Table

Part No.	Appearance	No. of poles	Rating	Switching function	Terminal style	Page
ET103		1	AC125V 3A	ON – OFF ON – ON	Solder Terminal 	**416**
ET105		1	AC125V 5A AC250V 3A	ON – OFF ON – ON ON – OFF – ON	Solder Terminal 	**416**
ET205		2				**418**
ET110		1	AC125V 10A AC250V 7A	ON – OFF ON – ON ON – OFF – ON ON – (ON) ON – OFF – (ON)	TAB # 250 	**417**
ET210		2			Screw Terminal (M3.5×0.6) 	**419**
			AC125V 10A	ON – ON – OFF		
ET115		1	AC125V 15A AC250V 10A	ON – OFF OFF – (ON) ON – ON ON – OFF – ON ON – (ON) (ON) – OFF – (ON) ON – OFF – (ON)		**417**
ET215		2			Solder Terminal 	**419**
ET315		3			Solder Terminal 	**421**
ET415		4				
ET120		1	AC125V 20A AC250V 12A	ON – OFF ON – ON	TAB # 250 	**417**
ET125		1	AC125V 25A AC250V 15A	ON – OFF ON – ON ON – OFF – ON	Screw Terminal (M4.5×0.6) 	**418**
ET225		2			Solder Terminal 	**420**

Part No.	Appearance	No. of poles	Rating	Switching function	Terminal style	Page
ET425		4	AC125V 25A AC250V 15A	ON – OFF ON – ON	Solder Terminal 	**424**
ET206		2	AC125V 6A	ON – OFF	Solder Terminal 	**418**
			AC125V 6A AC250V 2A	ON – ON		
ET220		2	AC125V 20A AC250V 12A	ON – OFF ON – ON (ON) – OFF – (ON)	Solder Terminal	**420**
ET230		2	AC125V 30A AC250V 25A	ON – OFF ON – ON ON – OFF – ON	Screw Terminal (M4.5×0.75) 	**420**
ET330		3			Solder Terminal 	**422**
ET310		3	AC125V 10A AC250V 7A	ON – OFF ON – ON ON – OFF – ON	Solder Terminal	**421**
ET410		4			Solder Terminal 	**422**
ET420		4	AC125V 20A AC250V 12A	ON – ON		**423**
ET420 Plate type						**424**
ET610N Plate type		6	AC125V 10A AC250V 7A	ON – ON		**424**
ET620N Plate type		6	AC125V 20A AC250V 12A	ON – ON		**425**

● Ratings are based on resistance load.

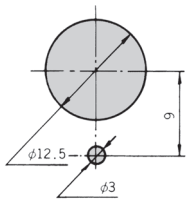
● Refer to P.425 for UL-recognized and CSA, PSE-certified products.

(ON) and (OFF) : Momentary.

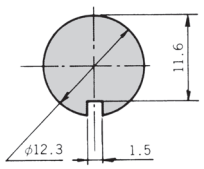
■Panel Cut-Out Dimensions

●Refer to P.426 for a list of accessories.

Panel thickness : 5.5mm max.



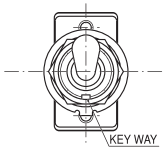
With Locking Ring

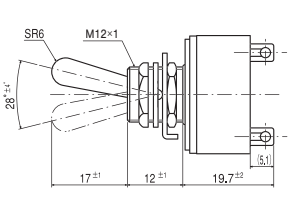


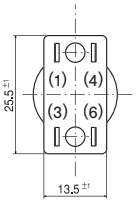
Without Locking Ring

Note : Panel thickness should be 5.5 mm max. unless otherwise specified.

ET103□12 (1 pole)







Terminal numbers are shown on the bottom of the switch.

Part No. \ Switching function	Key way	Key way	Key way
ET103A12-Z	ON	—	OFF
Connecting terminals	1–4	—	—
★ **ET103V12-Z**	ON	—	ON
Connecting terminals	1–4	—	3–6

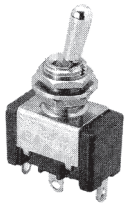
Terminal pins No.3 and No.6 are not available in switches with Switching Function "A".

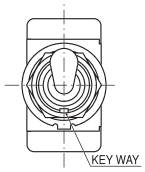
■Specifications

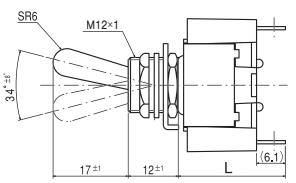
Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET103A12	AC125V 3A	30mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	10,000回 cycles
ET103V12					

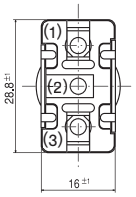
ET105□12 (1 pole)

Terminal pin No.2 is not available in switches with Switching Function "**A**".









Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET105A12	AC125V 5A AC250V 3A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000回 cycles
ET105D12					
ET105E12					

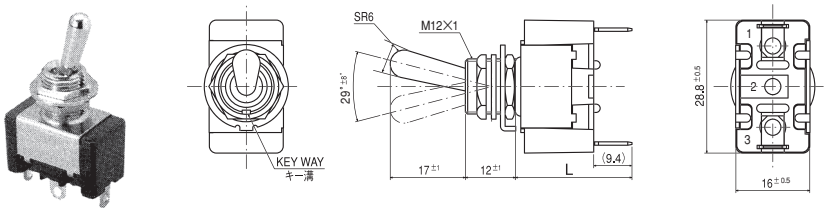
L dimensions

Part No. \ Terminal style	Solder Terminal
ET105A12-Z	24.6±1
ET105D12-Z	24.6±1
ET105E12-Z	24.6±1

Part No. \ Switching function	Key way	Key way	Key way
☆ **ET105A12-Z**	ON	—	OFF
Connecting terminals	1–3	—	—
☆ **ET105D12-Z**	ON	—	ON
☆ **ET105E12-Z**	ON	OFF	ON
Connecting terminals	2–3	—	2–1

ET110 (1 pole)

Terminal pin No.2 is not available in switches with Switching Function "**A**".



Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET110A■ **ET110D■** **ET110E■**	AC125V 10A AC250V 7A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	30,000 cycles
ET110F■ **ET110H■**	AC125V 10A AC250V 7A				20,000 cycles

L dimensions

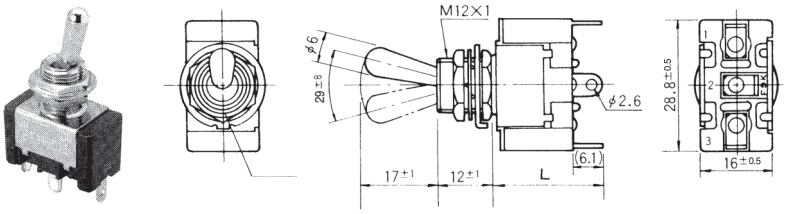
Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET110A■•D■–Z	–	–	$24.6^{\pm1}$
ET110E■–Z	–	–	$24.6^{\pm1}$
ET110F■–Z	$27.6^{\pm1}$	–	$24.6^{\pm1}$
ET110H■–Z	$27.6^{\pm1}$	$25.4^{\pm1}$	$24.6^{\pm1}$

Part No. \ Switching function	Key way	Key way	Key way
ET110A■–Z	ON	—	OFF
Connecting terminals	1–3	—	—
ET110D■–Z	ON	—	ON
ET110E■–Z	ON	OFF	ON
ET110F■–Z	ON	—	(ON)
ET110H■–Z	ON	OFF	(ON)
Connecting terminals	2–3	—	2–1

■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

ET115 (1 pole)

Terminal pin No.2 is not available in switches with Switching Function "**A**", "**B**", or " ".



Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET115A■ **ET115D■** **ET115E■**	AC125V 15A AC250V 10A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	30,000 cycles
ET115C■ **ET115G■** **ET115H■**	AC125V 15A AC250V 10A				20,000 cycles

L dimensions

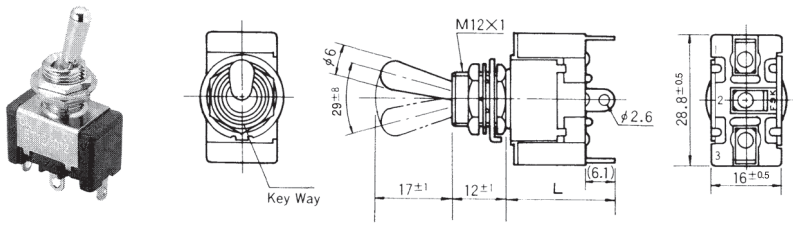
Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET115A■•D■–Z	$27.6^{\pm1}$	$25.4^{\pm1}$	$24.6^{\pm1}$
ET115E■–Z	$27.6^{\pm1}$	$25.4^{\pm1}$	$24.6^{\pm1}$
ET115C■•F～H■–Z	–	$25.4^{\pm1}$	$24.6^{\pm1}$

Part No. \ Switching function	Key way	Key way	Key way
ET115A■–Z	ON	—	OFF
Connecting terminals	1–3	—	—
ET115C■–Z	OFF	—	(ON)
Connecting terminals	—	—	1–3
ET115D■–Z	ON	—	ON
ET115E■–Z	ON	OFF	ON
ET115G■–Z	(ON)	OFF	(ON)
ET115H■–Z	ON	OFF	(ON)
Connecting terminals	2–3	—	2–1

■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

ET120 (pole)

Terminal pin No.2 is not available in switches with Switching Function "**A**".



Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET120A■ **ET120D■**	AC125V 20A AC250V 12A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

L dimensions

Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET120A■•D■–Z	—	—	$24.6^{\pm1}$

Part No. \ Switching function	Key way	Key way	Key way
ET120A■–Z	ON	—	OFF
Connecting terminals	1–3	—	—
ET120D■–Z	ON	—	ON
Connecting terminals	2–3	—	2–1

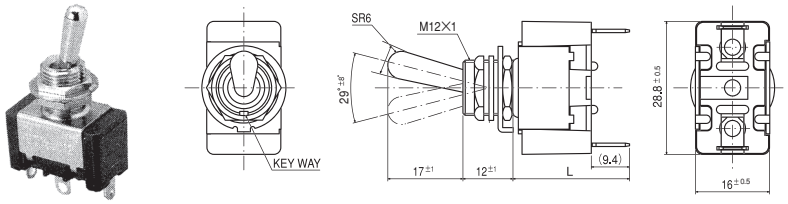
■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

(ON) : Momentary.

■ shows the terminal style "(blank)", "10", or "12".

ET125 (1 pole)

Terminal pin No.2 is not available in switches with Switching Function "**A**".



Terminal numbers are shown on the bottom of the switch.

L dimensions

Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET125A■–Z **ET125D■–Z**	27.6±1	28.8±1	24.6±1

Part No. \ Switching function	Key way	Key way	Key way
ET125A■–Z	ON	—	OFF
Connecting terminals	1–3	—	—
ET125D■–Z	ON	—	ON
Connecting terminals	2–3	—	2–1

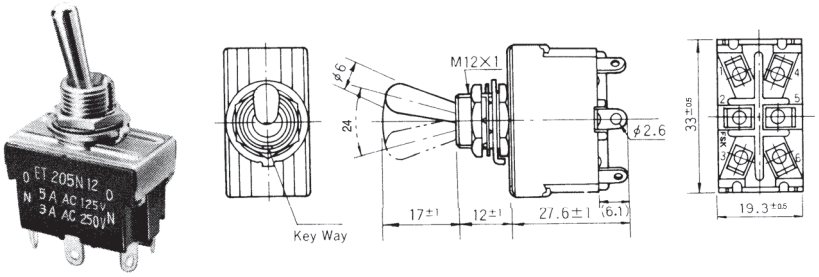
■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET125A■ **ET125D■**	AC125V 25A AC250V 15A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

ET205 (2 poles)

Terminal pins No.2 and No.5 are not available in switches with Switching Function "**K**".



Terminal numbers are shown on the bottom of the switch.

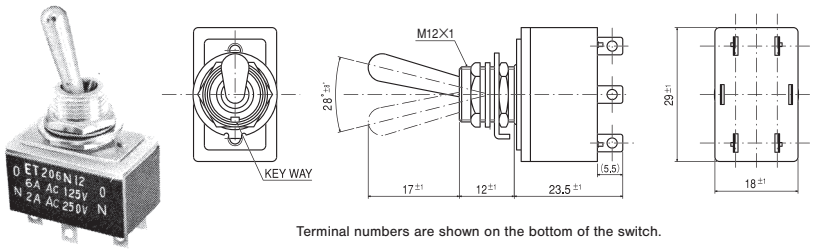
Part No. \ Switching function	Key way	Key way	Key way
★ **ET205K12–Z**	ON	—	OFF
Connecting terminals	1–3 4–6	—	—
★ **ET205N12–Z**	ON	—	ON
★ **ET205P12–Z**	ON	OFF	ON
Connecting terminals	2–3 5–6	—	2–1 5–4

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET205K12 **ET205N12** **ET205P12**	AC125V 5A AC250V 3A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

ET206□12 (2 poles)

Terminal pins No.3 and No.6 are not available in switches with Switching Function "**K**".



Terminal numbers are shown on the bottom of the switch.

Part No. \ Switching function	Key way	Key way	Key way
★ **ET206K12–Z**	ON	—	OFF
Connecting terminals	2–1 5–4	—	—
★ **ET206N12–Z**	ON	—	ON
Connecting terminals	2–1 5–4	—	2–3 5–6

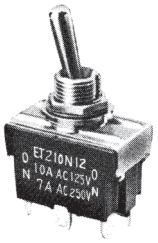
■Specifications

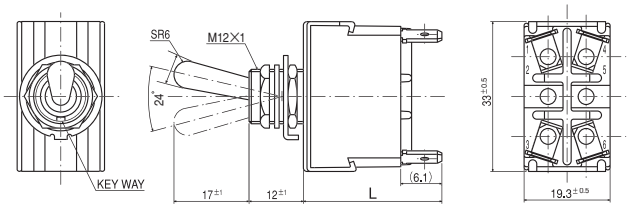
Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET206K12	AC125V 6A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	10,000 cycles
ET206N12	AC125V 6A AC250V 2A				

■ shows the terminal style "(blank)", "**10**", or "**12**". ☆ : Semi-standard products. ★ : Made to order products.

ET210 (2 poles)

Terminal pins No.2 and No.5 are not available in switches with Switching Function "**K**".





Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET210K■ **ET210N■** **ET210P■**	AC125V 10A AC250V 7A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	30,000 cycles
ET210PA12	AC125V 10A				20,000 cycles

L dimensions

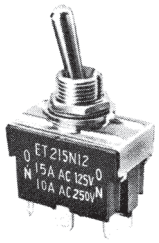
Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET210K■•N■–Z	$30.6^{\pm 1}$	$28.4^{\pm 1}$	$27.6^{\pm 1}$
ET210P■–Z	$30.6^{\pm 1}$	$28.4^{\pm 1}$	$27.6^{\pm 1}$
ET210PA12–Z	–	–	$27.6^{\pm 1}$

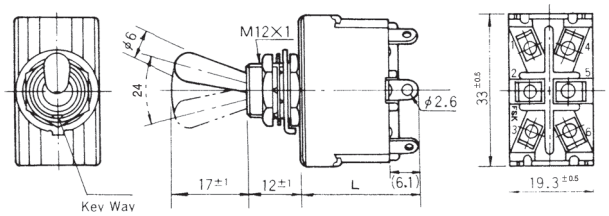
Part No. \ Switching function	Key way	Key way	Key way
ET210K■–Z	ON	—	OFF
Connecting terminals	1–3 4–6	—	—
ET210N■–Z	ON	—	ON
ET210P■–Z	ON	OFF	ON
Connecting terminals	2–3 5–6	—	2–1 5–4
★ **ET210PA12–Z**	ON	ON	OFF
Connecting terminals	2–3 5–6	5–6	—

■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.of part numbers.

ET215 (2 poles)

Terminal pins No.2 and No.5 are not available in switches with Switching Function "**K**", "**L**", or "**M**".





Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET215K■ **ET215N■**	AC125V 15A AC250V 10A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	30,000 cycles
ET215P■ **ET215M■** **ET215R■** **ET215S■**	AC125V 15A AC250V 10A				20,000 cycles

L dimensions

Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET215K■•N■–Z	$30.6^{\pm 1}$	$28.4^{\pm 1}$	$27.6^{\pm 1}$
ET215P■–Z	$30.6^{\pm 1}$	$28.4^{\pm 1}$	$27.6^{\pm 1}$
ET215M·R·S ■–Z	–	$28.4^{\pm 1}$	$27.6^{\pm 1}$

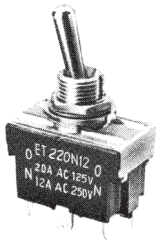
Part No. \ Switching function	Key way	Key way	Key way
ET215K■–Z	ON	—	OFF
Connecting terminals	1–3 4–6	—	—
ET215M■–Z	OFF	—	(ON)
Connecting terminals	—	—	1–3 4–6
ET215N■–Z	ON	—	ON
ET215P■–Z	ON	OFF	ON
ET215R■–Z	ON	—	(ON)
ET215S■–Z	(ON)	OFF	(ON)
Connecting terminals	2–3 5–6	—	2–1 5–4

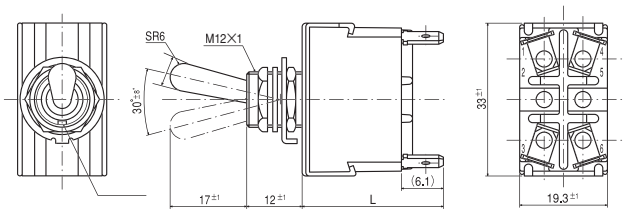
■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.of part numbers.

(ON) and (OFF) : Momentary. ■ shows the terminal style "(blank)", "**10**", or "**12**".

ET220 (2 poles)

Terminal pins No.2 and No.5 are not available in switches with Switching Function "**K**", "**L**", or "**M**".





Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET220K■ **ET220N■**	AC125V 20A AC250V 12A	20mΩMax. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles
ET220S■	AC125V 20A AC250V 12A				

L dimensions

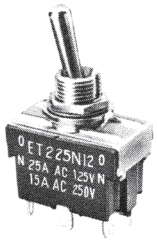
Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET220K■•N■–Z	–	–	$27.6^{\pm 1}$
ET220S–Z	$30.6^{\pm 1}$	$31.8^{\pm 1}$	$27.6^{\pm 1}$

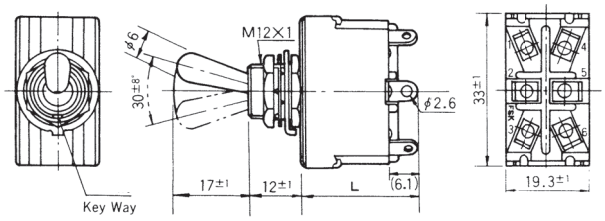
Part No. \ Switching function	Key way	Key way	Key way
ET220K■–Z	ON	—	OFF
Connecting terminals	1–3 4–6	—	—
ET220N■–Z	ON	—	ON
ET220S■–Z	(ON)	OFF	(ON)
Connecting terminals	2–3 5–6	—	2–1 5–4

■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

ET225 (2 poles)

Terminal pins No.2 and No.5 are not available in switches with Switching Function "**K**".





Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET225K■ **ET225N■** **ET225P■**	AC125V 25A AC250V 15A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

L dimensions

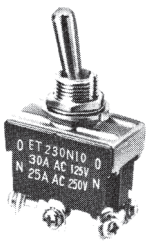
Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET225K■•N■–Z **ET225P■–Z**	$30.6^{\pm 1}$	$31.8^{\pm 1}$	$27.6^{\pm 1}$

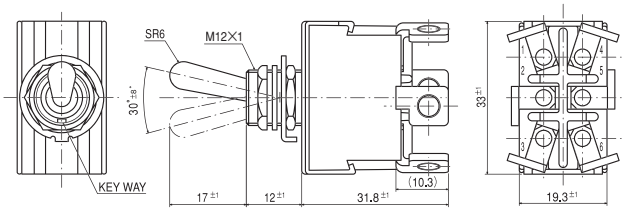
Part No. \ Switching function	Key way	Key way	Key way
ET225K■–Z	ON	—	OFF
Connecting terminals	1–3 4–6	—	—
ET225N■–Z	ON	—	ON
ET225P■–Z	ON	OFF	ON
Connecting terminals	2–3 5–6	—	2–1 5–4

■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

ET230 (2 poles)

Terminal pins No.2 and No.5 are not available in switches with Switching Function "**K**".





Terminal numbers are shown on the bottom of the switch.

■Specifications

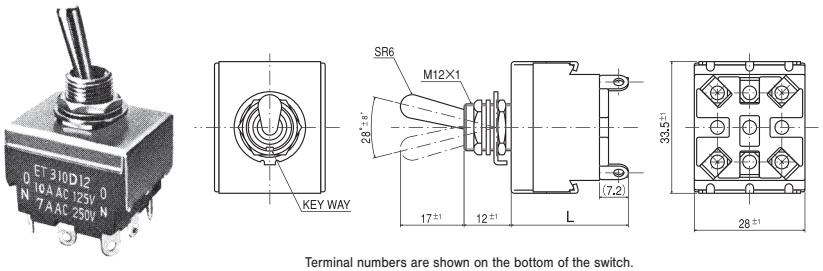
Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET230N10 **ET230P10**	AC250V 25A AC125V 30A	20mΩMax. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

Part No. \ Switching function	Key way	Key way	Key way
★ **ET230N■–Z**	ON	—	ON
★ **ET230P■–Z**	ON	OFF	ON
Connecting terminals	2–3 5–6	—	2–1 5–4

(ON) : Momentary. ■ shows the terminal style "(blank)", "**10**", or "**12**". ★ : Made to order products.

ET310 (3 poles)

Terminal pins No.2, No.5, and No.8 are not available in switches with Switching Function "**A**".



Terminal numbers are shown on the bottom of the switch.

L寸法/L dimensions

Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET310A■–Z	$34^{\pm 2}$	–	$29.1^{\pm 1}$
ET310D■–Z **ET310E■–Z**	$36.4^{\pm 1}$		

Part No. \ Switching function	Key way	Key way	Key way
ET310A■–Z	ON	—	OFF
Connecting terminals	1–3 4–6 7–9	—	—
ET310D■–Z	ON	—	ON
ET310E■–Z	ON	OFF	ON
Connecting terminals	2–3 5–6 8–9	—	2–1 5–4 8–7

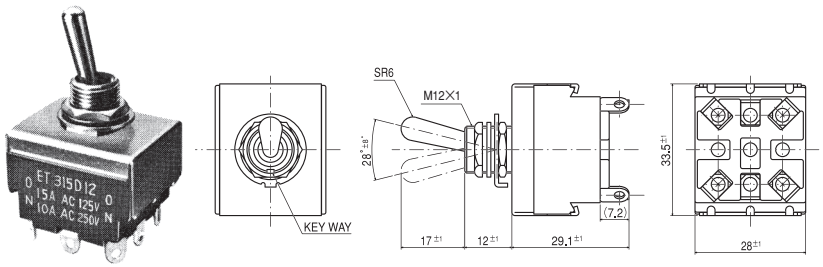
■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET310A■ **ET310D■** **ET310E■**	AC125V 10A AC250V 7A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

ET315□12 (3 poles)

Terminal pins No.2, No.5, and No.8 are not available in switches with Switching Function "**A**".



Terminal numbers are shown on the bottom of the switch.

Part No. \ Switching function	Key way	Key way	Key way
★ET315D12–Z	ON	—	ON
★ET315E12–Z	ON	OFF	ON
Connecting terminals	2–3 5–6 8–9	—	2–1 5–4 8–7

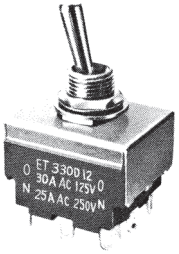
■Specifications

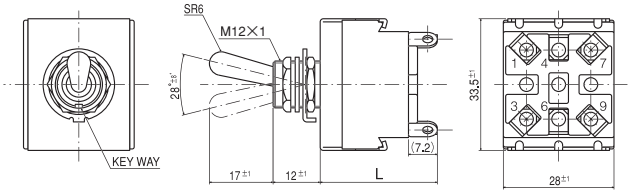
Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET315D12 **ET315E12**	AC125V 15A AC250V 10A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

★ : Made to order products. (ON) : Momentary. ■ shows the terminal style "(blank)" or "**12**".

ET330□12 (3 poles)

Terminal pins No.2, No.5, and No.8 are not available in switches with Switching Function "**A**".





Terminal numbers are shown on the bottom of the switch.

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET330A■ **ET330D12** **ET330E12**	AC125V 30A AC250V 25A	20mΩMax. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

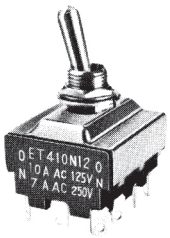
L dimensions

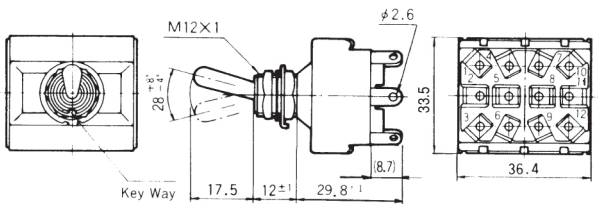
Part No. \ Terminal style	TAB#250	ScrewTerminal	Solder Terminal
ET330A■–Z	$33.9^{\pm 2}$	–	$29.1^{\pm 1}$
ET330D12–Z **ET330E12–Z**	–		

Part No. \ Switching function	Key way	Key way	Key way
ET330A■–Z	ON	—	OFF
Connecting terminals	1–3 4–6 7–9	—	—
☆**ET330D12–Z**	ON	—	ON
★**ET330E12–Z**	ON	OFF	ON
Connecting terminals	2–3 5–6 8–9	—	2–1 5–4 8–7

■ : Refer to "Table of Part Numbers" on P.425 for a full list of part numbers.

ET410□12 (4 poles)





Terminal numbers are shown on the bottom of the switch.

■Specifications

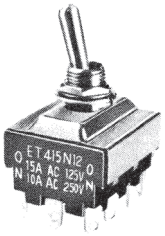
Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET410N12	AC125V 10A AC250V 7A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

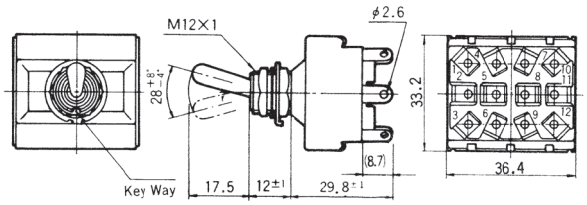
Part No. \ Switching function	Key way	Key way	Key way
★**ET410N12–Z**	ON	—	ON
Connecting terminals	2–3 5–6 8–9 11-12	—	2–1 5–4 8–7 11-10

■ shows the terminal style "(blank)", "10", or "12". (ON) : Momentary. ☆ : Semi-standard products. ★ : Made to order products.

ET415□12 (4 poles)

Terminal pins No.2, No.5, No.8, and No.11 are not available in switches with Switching Function "**K**".





Terminal numbers are shown on the bottom of the switch.

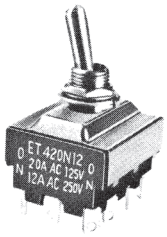
Part No. \ Switching function	Key way	Key way	Key way
★ET415P12-Z	ON	OFF	ON
Connecting terminals	2-3 5-6 8-9 11-12	—	-1 5-4 8-7 11-10

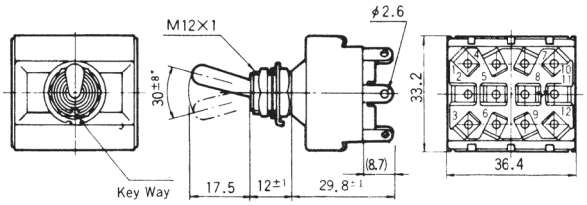
■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET415P12	AC125V 15A AC250V 10A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

ET420□12 (4 poles)

Terminal pins No.2, No.5, No.8, and No.11 are not available in switches with Switching Function "**K**".





Terminal numbers are shown on the bottom of the switch.

Part No. \ Switching function	Key way	Key way	Key way
★ET420N12-Z	ON	—	ON
Connecting terminals	2-3 5-6 8-9 11-12	—	2-1 5-4 8-7 11-10

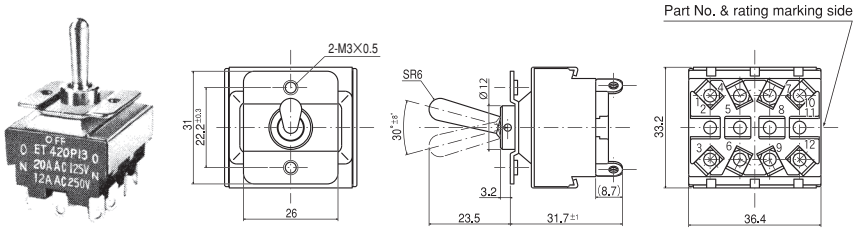
■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET420N12	AC125V 20A AC250V 12A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

★ : Made to order products.

ET420□13 (4 poles)

Terminal pins No.2, No.5, No.8, and No.11 are not available in switches with Switching Function "**K**".



Terminal numbers are shown on the bottom of the switch.

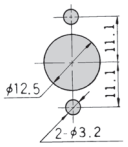
Part No. \ Switching function	Viewed from part No. and rating marking side		
★**ET420N13-Z**	ON	—	ON
Connecting terminals	2–3 5–6 8–9 11–12	—	2–1 5–4 8–7 11–10

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET420N13	AC125V 20A AC250V 12A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

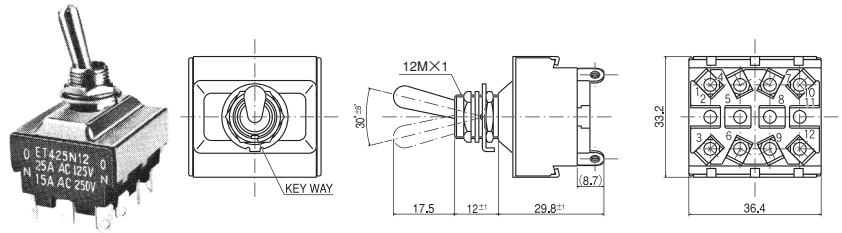
■Panel Cut-Out Dimensions

(Plate mounting type)



ET425□12 (4 poles)

Terminal pins No.2, No.5, No.8, and No.11 are not available in switches with Switching Function "**K**".



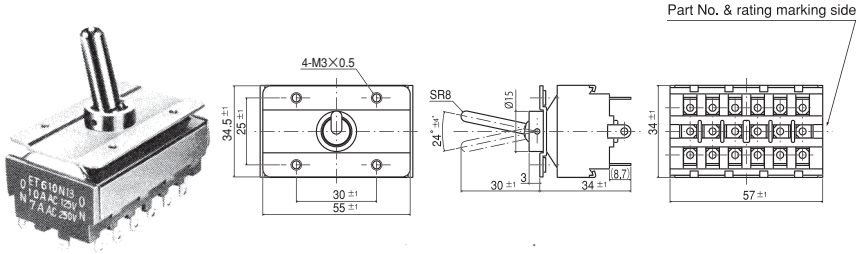
Terminal numbers are shown on the bottom of the switch.

Part No. \ Switching function	Key way	Key way	Key way
★**ET425K12-Z**	ON	—	OFF
Connecting terminals	1–3 4–6 7–9 10–12	—	—
★**ET425N12-Z**	ON	—	ON
Connecting terminals	2–3 5–6 8–9 11–12	—	2–1 5–4 8–7 11–10

■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET425K12 **ET425N12**	AC125V 25A AC250V 15A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	20,000 cycles

ET610N13 (6 poles)

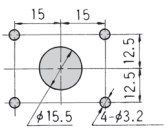


Terminal numbers are shown on the bottom of the switch.

Part No. \ Switching function	Viewed from part No. and rating marking side		
☆**ET610N13-Z**	ON	—	ON
Connecting terminals	2–3 5–6 8–9 11–12 14–15 17–18	—	2–1 5–4 8–7 11–10 14–13 17–16

■Panel Cut-Out Dimensions

(Plate mounting type)

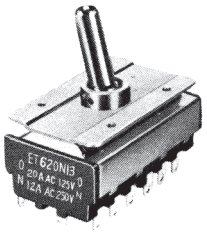


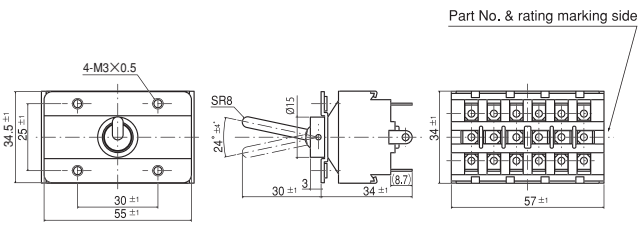
■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET610N13	AC125V 10A AC250V 7A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	5,000 cycles

☆ : Semi-standard products. ★ : Made to order products.

ET620N13 (6 poles)



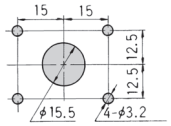


Part No. \ Switching function	Viewed from part No. and rating marking side		
★ET620N13-Z	ON	—	ON
Connecting terminals	2-3 5-6 8-9 11-12 14-15 17-18	—	2-1 5-4 8-7 11-10 14-13 17-16

Terminal numbers are shown on the bottom of the switch.

■Panel Cut-Out Dimensions

(Plate mounting type)



■Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET620N13	AC125V 20A AC250V 12A	20mΩ Max. (DC2V 100mA)	AC1500V 1minute	100MΩ Min. (DC500V)	5,000 cycles

■Table of Part Numbers

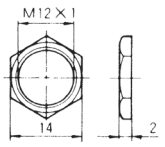
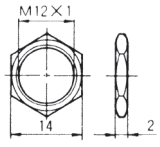
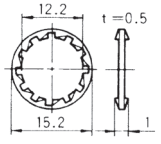
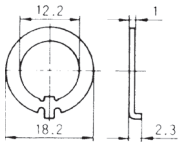
	Part No.	※1.	Part No.	※1.	Part No.	※1.	Part No.	※1.
TAB terminals	★ ET110F-Z		★ ET115D-Z		★ ET215N-Z	40.0	ET225P-Z	
	★ ET110H-Z		★ ET125A-Z	26.6	☆ ET215P-Z	39.7	★ ET330A-Z	
	ET115A-Z	29.4	★ ET215K-Z	39.3	☆ ET225K-Z	39.4		
Screw terminals	☆ ET115A10-Z		★ ET125A10-Z		☆ ET215N10-Z		★ ET230N10-Z	54.4
	★ ET115D10-Z		★ ET215K10-Z		★ ET215P10-Z		★ ET230P10-Z	
Solder terminals	ET103A12-Z	21.0	☆ ET120A12-Z		★ ET215M12-Z		★ ET315D12-Z	54.7
	★ ET103V12-Z	21.0	★ ET120D12-Z		☆ ET215N12-Z	38.1	★ ET315E12-Z	
	☆ ET105A12-Z		☆ ET125A12-Z	25.9	★ ET215P12-Z	37.8	★ ET330A12-Z	
	☆ ET105D12-Z	25.8	★ ET125D12-Z	26.0	★ ET215R12-Z		☆ ET330D12-Z	54.2
	☆ ET105E12-Z		★ ET205K12-Z		ET215S12-Z	38.4	★ ET330E12-Z	
	☆ ET110A12-Z	25.8	★ ET205N12-Z		★ ET220K12-Z		★ ET410N12-Z	57.4
	☆ ET110D12-Z		★ ET205P12-Z		★ ET220N12-Z		★ ET415P12-Z	
	★ ET110E12-Z		ET206K12-Z	26.1	★ ET220S12-Z		★ ET420N12-Z	
	ET115A12-Z	25.9	☆ ET206N12-Z	26.3	☆ ET225K12-Z	38.1	★ ET420N13-Z	
	★ ET115C12-Z		☆ ET210K12-Z		ET225N12-Z	38.6	★ ET425K12-Z	
	ET115D12-Z	25.9	☆ ET210N12-Z	38.0	ET225P12-Z		★ ET425N12-Z	
	★ ET115E12-Z	25.9	☆ ET210P12-Z	37.9	★ ET310A12-Z	54.0	☆ ET610N13-Z	105.0
	★ ET115G12-Z		★ ET210PA12-Z		☆ ET310D12-Z	54.6	★ ET620N13-Z	
	★ ET115H12-Z	25.0	☆ ET215K12-Z	37.9	☆ ET310E12-Z		——	—

As shown in the above table, not all products are UL-recognized or CSA-certified.Please check with your local sales representative if you have any questions.

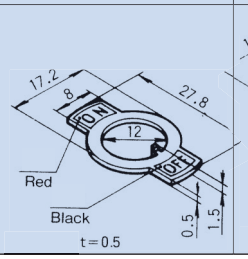
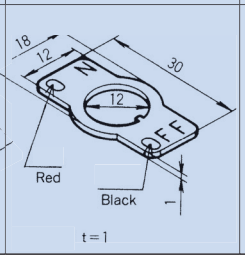
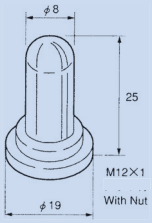
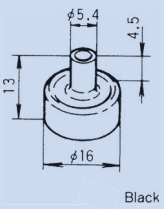
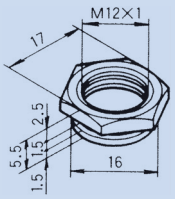
Note: For overseas standards, see P.627.

※1 : Switch mass (g) : includes accessories = hex nut, locking ring, lock washer and terminal screw

■ Standard Accessories ——— 《Supplied with switch》

Part Name	Hex Nut	Hex Nut	Lockwasher	Locking Ring
Part No.	**140008010235**	**140008010221**	**140008030055**	**140008020065**
Dimensions				
Finish	Nickel plated	Zinc plated	Zinc plated	Zinc plated

■Optional Accessories ——————————————————《Supplied separately》

Type	ET·8B		ET	ET	
Part Name	Plate	Plate	Waterproof boot	Boot	Bushing
Part No.	**140008040021**	**140008040025**	**Red 140000610335** **Gray 140000610334** **Black 140000610333**	**140000610080**	**140008010244**
Dimensions					

■Handling Precautions

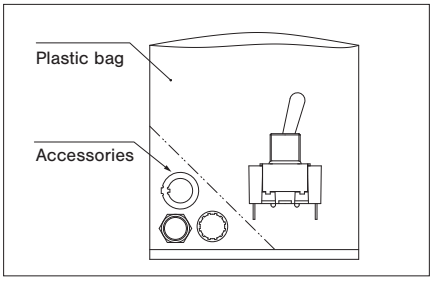
1. Soldering Specifications

(1)Manual Soldering
Device : Soldering iron
420℃, Max.; 3 seconds, Max.

(2) Waterproof boot
①The boot is fixed to the switch with the built-in screw.
②The boot cannot be used for plate-mounting switches.

2. Flux Cleaning

(1) Solvent : Fluorine or Alcohol type.

(2) The ET series are not washable. To wash the PC board, clean the soldering surface of the PC board with a brush so that the switch is not exposed to the cleaning solution.

■Packaging Specification