



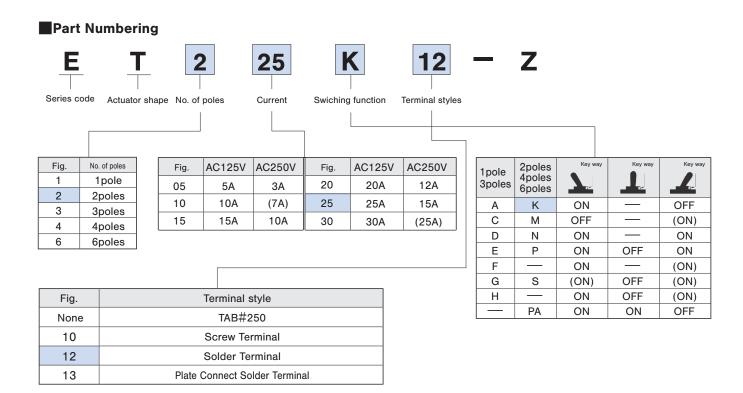
Standard Size Toggle Switches



RoHS Compliant

Introduction

The ET series is our standard size high capacity toggle switch. The ET series is 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.



Terminal shape and dimensions

TAB#250	Screw Termin	nal(Style:10)	Solder Terminal
(Style:-)	M3.5×0.6	M4.5×0.75	Solder Terminal (Style:12•13)
6.4	4.9 t=1 6.5 0 0 0 7.3	4.9 t = 1.6	4.9 42.6
t=0.8	t=0.45 ET115•215 Type	ET125•230 Type	t = 0.7

ET Series Selection Table					
Part No.	Appearance	No. of poles	Rating	Switching function	Terminal style
ET105		1	AC125 V 5 A AC250 V 3 A	ON - OFF ON - ON ON - OFF - ON	Solder Terminal
ET110		1	AC125 V 10 A AC250 V 7 A	ON - OFF ON - ON ON - OFF - ON	TAB # 250
ET210		2	AC125 V 10 A	ON - (ON) ON - ON - OFF	Screw Terminal (M3.5×0.6)
ET115		1			Solder Terminal
ET215		2	AC125 V 15 A AC250 V 10 A	ON - OFF OFF - (ON) ON - ON ON - OFF - ON	4.9 %2.6 t=0.7
ET315		3		(ON) - OFF - (ON) ON - OFF - (ON)	Solder Terminal 4.9 42.6 t = 0.7
ET120		1	AC125 V 20 A AC250 V 12 A	ON – OFF	TAB # 250 t = 0.8 Screw Terminal (M4.5×0.6)
ET125		1	10105 11 05 1	ON - OFF	3.5cew Terminal (W4.3×0.6)
ET225		2	AC125 V 25 A AC250 V 15 A	ON – ON ON – OFF – ON	Solder Terminal

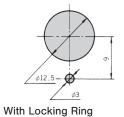
Part No.	Appearance	No. of poles	Rating	Switching function	on Terminal style
ET425		4	AC125 V 25 A AC250 V 15 A		Solder Terminal OFF ON t = 0.7
ET220		2	AC125 V 20 A AC250 V 12 A		OFF ON Solder Terminal
ET230		2	AC125 V 30 A AC250 V 25 A		Screw Terminal (M4.5×0.75) ON ON Signature 1.6 Signature
ET310	11334	3	AC125 V 10 A AC250 V 7 A	ON -	OFF ON Solder Terminal ON
ET610N Plate type		6	AC125 V 10 A AC250 V 7 A	ON -	Solder Terminal
ET620N Plate type		6	AC125V 20A AC250V 12A	ON - (0N

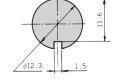
Ratings are based on resistance load.

Panel Cut-Out Dimensions -

Panel thickness: 5.5mm max.

Without Locking Ring





ET10512 (1 pole)

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

Refer to for a list of accessories.

specified.

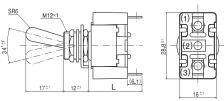
Note : Panel thickness should be $5.5\ \mathrm{mm}$ max. unless otherwise

L dimensions

Terminal style Part No.	Solder Terminal
ET105A12-Z	24.6 ^{±1}
ET105D12-Z	24.6 ^{±1}
ET105E12-Z	24.6 ^{±1}

30





Terminal numbers are shown on the bottom of the switch.

Specifications

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET105A12	AC105 V 5 A	20 mO May	AC1500 V	100 MΩ Min.	20.000回
ET105D12	AC125 V 5 A	(DC2 V 100 mA)	AC1500 V minute	(DC500V)	20,000ப்ப
ET105E12	A0230 V 0 A	(DOZ V 100 IIIA)	minute	(DO300V)	Cycles

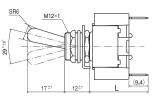
Switching function	Key way	Key way	Key way
Part No.			
☆ ET105A12-Z	ON	_	OFF
Connecting terminals	1-3	_	_
☆ ET105D12-Z	ON	_	ON
☆ ET105E12-Z	ON	OFF	ON
Connecting terminals	2-3	_	2-1

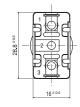
ET110 (1 pole)

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









Terminal numbers are shown on the bottom of the switch.

L dimensions

Part No.	TAB#250	ScrewTerminal	Solder Terminal
ET110A D D Z	_	_	24.6 ^{±1}
ET110E■-Z	_	_	24.6 ^{±1}
ET110F■-Z	27.6 ^{±1}	_	24.6 ^{±1}

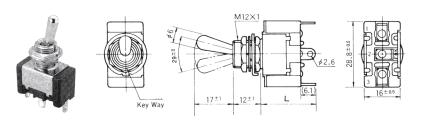
Switching function	Key way	Key way	Key way
Part No.	7	1	
ET110A■-Z	ON	_	OFF
Connecting terminals	1-3	_	_
ET110D■-Z	ON	_	ON
ET110E■-Z	ON	OFF	ON
ET110F■-Z	ON	_	(ON)
Connecting terminals	2-3	_	2-1

Refer to "Table of Part Numbers" for a full list of part numbers.

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET110A ET110D ET110E	AC125 V 10 A AC250 V 7 A		AC1500V	100 MΩ Min.	30,000 cycles
ET110F■	AC125 V 10 A AC250 V 7 A		minute	(DC500 V)	20,000 cycles

ET115 (1 pole)

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



Terminal numbers are shown on the bottom of the switch.

Specifications

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET115A ET115D ET115E	AC125 V 15 A AC250 V 10 A	20 mΩ Max.	AC1500 V	100 MΩ Min.	30,000 cycles
ET115C■ ET115G■ ET115H■	AC125 V 15 A AC250 V 10 A	(DC2V 100 mA)	minute	(DC500 V)	20,000 cycles

L dimensions

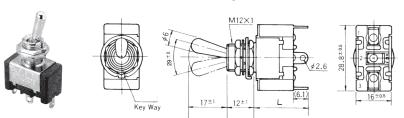
Terminal style Part No.	TAB#250	ScrewTerminal	Solder Terminal
ET115A■•D■-Z	27.6 ^{±1}	25.4 ^{±1}	24.6 ^{±1}
ET115EM-Z	27.6 ^{±1}	25.4 ^{±1}	24.6 ^{±1}
ET115CE•F~HE-Z	_	25.4 ^{±1}	24.6 ^{±1}

Switching function	Key way	Key way	Key way
Part No.	1	1	
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" for a full list of part numbers.

ET120 (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.	TAB#250	ScrewTerminal	Solder Terminal
ET120A■-Z	_	_	24.6 ^{±1}

Switching function		Key way	Key way
Part No.			
ET120A■-Z	ON	_	OFF
Connecting terminals	1-3	_	

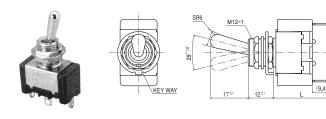
■ : Refer to "Table of Part Numbers" for a full list of part numbers.

Specifications

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET120A■	AC125 V 20 A AC250 V 12 A	20 mΩ Max. (DC2 V 100 mA)	AC1500V minute	100 MΩ Min. (DC500 V)	20,000 cycles

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.	TAB#250	ScrewTerminal	Solder Terminal
ET125D■-Z	27.6 ^{±1}	28.8 ^{±1}	24.6 ^{±1}

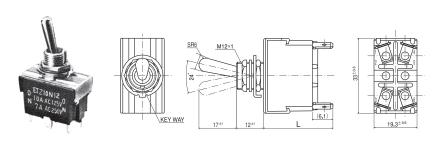
Switching function Part No.	Key way	Key way	Key way
ET125D■-Z	ON	_	ON
Connecting terminals	2-3	_	2-1

Refer to "Table of Part Numbers" for a full list of part numbers.

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET125D■	AC125 V 25 A	20 mΩ Max.	AC1500 V	100 MΩ Min.	20,000
	AC250 V 15 A	(DC2V 100 mA)	minute	(DC500 V)	cycles

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

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET210K■ ET210N■ ET210P■	AC125 V 10 A AC250 V 7 A		AC1500 V	100 MΩ Min.	30,000 cycles
ET210PA12	AC125 V 10 A	(DC2 V 100 mA)	minute	(DC500 V)	20,000 cycles

L dimensions

Part No.	TAB#250	ScrewTerminal	Solder Terminal
ET210K■•N■-Z	30.6 ^{±1}	28.4 ^{±1}	27.6 ^{±1}
ET210P■-Z	30.6 ^{±1}	28.4 ^{±1}	27.6 ^{±1}
ET210PA12-Z	-	-	27.6 ^{±1}

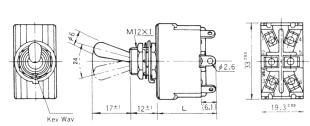
Switching function	Key way	Key way	Key way
Part No.	7	1	
ET210K■-Z	ON	_	OFF
Connecting terminals	1-3 4-6	_	_
ET210N■-Z	ON	_	ON
ET210P■-Z	ON	OFF	ON
Connecting terminals	2-3 5-6	_	2-1 5-4
★ ET210PA12-Z	ON	ON	OFF
Connecting terminals	2-3 5-6	5-6	

■ : Refer to "Table of Part Numbers" 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

R	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET215K■ ET215N■	AC125 V 15 A AC250 V 10 A	20 mΩ Max. (DC2 V 100 mA)	AC1500 V	100 MΩ Min.	30,000 cycles
ET215P■ ET215M■ ET215S■	AC125 V 15 A AC250 V 10 A			(DC500 V)	20,000 cycles

L dimensions

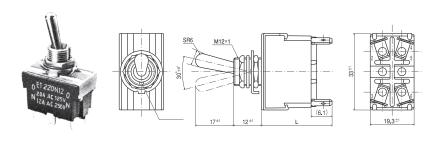
Part No.	TAB#250	ScrewTerminal	Solder Terminal
ET215K■•N■-Z	30.6 ^{±1}	28.4 ^{±1}	27.6 ^{±1}
ET215P■-Z	30.6 ^{±1}	28.4 ^{±1}	27.6 ^{±1}
ET215M·S ■-Z	_	28.4 ^{±1}	27.6 ^{±1}

Switching function	Key way	Key way	Key way
Part No.		1	
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
ET215S■-Z	(ON)	OFF	(ON)
Connecting terminals	2-3 5-6	_	2-1 5-4

Refer to "Table of Part Numbers" for a full list of part numbers.of part numbers.

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

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET220K■ ET220N■		20 mΩ Max. (DC2 V 100 mA)	AC1500 V minute	100 MΩ Min. (DC500 V)	20,000 cycles

L dimensions

Part No.	TAB#250	ScrewTerminal	Solder Terminal
ET220K■•N■−Z	_	_	27.6 ^{±1}

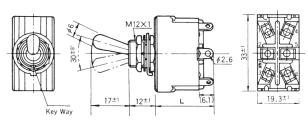
Switching function Part No.	Key way	Key way	Key way
ET220K■-Z	ON	_	OFF
Connecting terminals	1-3 4-6	_	_
ET220N■-Z	ON	_	ON
Connecting terminals	2-3 5-6	_	2-1 5-4

Refer to "Table of Part Numbers" 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

R	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET225K■ ET225N■ ET225P■		20 mΩ Max. (DC2 V 100 mA)	AC1500 V minute	100 MΩ Min. (DC500 V)	20,000 cycles

L dimensions

Part No.	TAB#250	ScrewTerminal	Solder Terminal
ET225KIII•NIII-Z ET225PIII-Z	30.6 ^{±1}	31.8 ^{±1}	27.6 ^{±1}

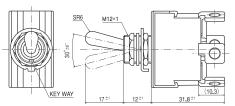
Switching function	Key way	Key way	Key way
Part No.	1	1	
ET225K■−Z	ON	_	OFF
Connecting terminals	1-3 4-6	_	_
ET225N■-Z	ON	_	ON
ET225P■-Z	ON	OFF	ON
Connecting terminals	2-3 5-6	_	2-1 5-4

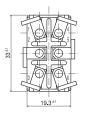
Refer to "Table of Part Numbers" for a full list of part numbers.

ET230 (2 poles)

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





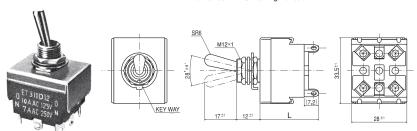


Terminal numbers are shown on the bottom of the switch.

Ra	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
		20 mΩ Max. (DC2 V 100 mA)	AC1500 V minute	100 MΩ Min. (DC500 V)	20,000 cycles

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

Specifications

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET310A■ ET310D■ ET310E■		20 mΩ Max. (DC2 V 100 mA)	AC1500 V minute	100 MΩ Min. (DC500 V)	20,000 cycles

L dimensions

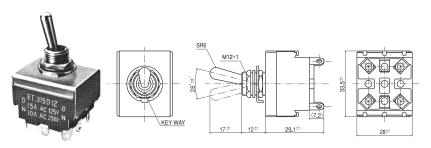
Part No.	TAB#250	ScrewTerminal	Solder Terminal
ET310A■-Z	34 ^{±2}		
ET310D■-Z	36.4 ^{±1}	_	29.1 ^{±1}
ET310E ■ -Z	00.4		

Switching		Key way	Key way	
function				
Part No.	<u> </u>			
ET310A■-Z	ON	_	OFF	
	1-3 4-6			
Connecting terminals	7-9	_	_	
ET310D■-Z	ON	_	ON	
ET310E■-Z	ON	OFF	ON	
0 1 1 1	2-3 5-6		2-1 5-4	
Connecting terminals	8-9	_	8-7	

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

ET315 (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.

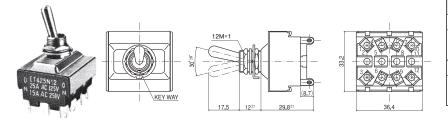
Key way Key way Key way Part No. ★ET315D12-Z ON ON ★ET315E12-Z ON OFF ON 2-3 5-6 2-1 5-4 Connecting terminals 8-9 8-7

Specifications

R	ating	Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
		20 mΩ Max. (DC2 V 100 mA)		100 MΩ Min. (DC500 V)	20,000 cycles

ET42512 (4 poles)

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

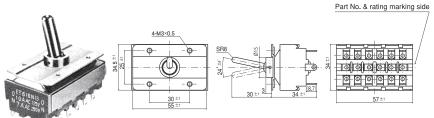


Switching function	Key way	Key way	Key way
Part No.	2	1	
★ET425K12-Z	ON	_	OFF
Connecting terminals	1-3 4-6 7-9 10-12	_	_
★ET425N12-Z	ON	_	ON
Connecting terminals	2-3 5-6 8-9 11-12	_	2-1 5-4 8-7 11-10

Terminal numbers are shown on the bottom of the switch.

Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
	AC125 V 25 A	20 mΩ Max.	AC1500 V	100 MΩ Min.	20,000
	AC250 V 15 A	(DC2 V 100 mA)	minute	(DC500 V)	cycles

ET610N13 (6 poles)



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

■ Panel Cut-Out Dimensions

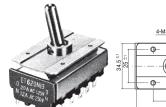
Specifications

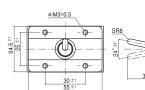
Rating		Initial contact resistance	Dielectric strength	Insulation resistance	Electrical life
ET610N13	AC125 V 10 A	20 mΩ Max.	AC1500 V	100 MΩ Min.	5,000
	AC250 V 7 A	(DC2 V 100 mA)	minute	(DC500 V)	cycles

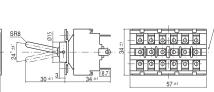
(Plate mounting type)



ET620N13 (6 poles)







Part No. & rating marking side

Terminal numbers are shown on the bottom of the switch.

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

■ Panel Cut-Out Dimensions

Specifications

Rating		Initial contact resistance			Electrical life
ET620N13		20 mΩ Max. (DC2 V 100 mA)	AC1500 V minute	100 MΩ Min. (DC500 V)	5,000 cycles

Plate mounting type



■ Table of Part Numbers -

Terminal shape	Part No.	※1 .	Part No.	※1 .	Part No.	※1 .	Part No.	※ 1.
TAD to suit sale	★ ET110F-Z		★ ⑤ 9\ ET115D-Z	Z	₹ ∰ 9 Δ ET215P−Z	39.7	ET225P-Z	
TAB terminals	@ 93 ET115A-Z	29.4	★ @ 9\\ ET215N-Z	40.0 🕏	₹ ET225K-Z	39.4		
Screw terminals	☆��� 9 LT115A10−Z		★��� 9 \ ET215K10-Z	1	► ET230N10-Z	54.4		_
Screw terminals	★		☆ ® % ET215N10-Z	7	► ET230P10-Z		-	_
	☆ ET105A12-Z		★ ET115G12-Z	7	► ET215M12-Z		☆ ET310D12−Z	54.6
	☆ ET105D12-Z	25.8	★ ET115H12-Z	25.0 🕏	₹ ⊕ 91 ET215N12-Z	38.1	☆ ET310E12-Z	
	☆ ET105E12-Z		☆ ® ET120A12-Z	7	₩ 91 ET215P12-Z	37.8	☆ ET310D12-Z	54.6
	☆ ET110A12-Z	25.8	☆ ET125A12-Z	25.9	ET215\$12-Z	38.4	★ ® 9\\ ET315D12-Z	54.7
Solder terminals	☆ ET110D12-Z		★ ET125D12-Z	26.0	★ ⑤ ET220K12-Z		★ ® 9\\\ ET315E12-Z	
Solder terminals	★ ET110E12-Z		☆ ET210K12-Z	7	★ ⑤ ET220N12-Z		★ ET425K12−Z	
	® 93. ET115A12−Z	25.9	☆ ET210N12-Z	38.0 ₹	∀ ET225K12−Z	38.1	★ ET425N12-Z	
	★ ET115C12-Z		☆ ET210P12-Z	37.9	ET225N12-Z	38.6	☆ ET610N13-Z	105.0
	® 93. ET115D12−Z	25.9	★ ET210PA12-Z		ET225P12-Z		★ ET620N13-Z	
	★ ⑤ 93 ET115E12-Z	25.9	☆ @ 9\\ ET215K12-Z	37.9	ET310A12-Z	54.0		

Even if the products are of UL-or CSA-approved ones, The products in stock do not carry the UL mark of the CSA mark. When placing an order, be sure to specify "With UL/CSA Mark." For the products with the UL mark or the CSA mark, extra costs will be added. UL File No.E43275 CSA File No.LR38341

Standard Accessories

- 《Supplied with switch》

Part Name	Hex Nut	Hex Nut	Lockwasher	Locking Ring	
Part No.	140008010235	140008010221	140008030055	140008020065	
Dimensions	M12×1	M12×1	12.2 t =0.5	12.2	
Finish	Nickel plated	Zinc plated	Zinc plated	Zinc plated	

Optional Accessories

《Supplied separately》

Туре	ET·8B		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	Red Black t=0.5	Red Black - t = 1	#8 25 25 M12×1 With Nut	\$5,4 un 4 16 Black	M12X1		

■ Handling Precautions

1. Soldering Specifications

(1) Manual Soldering Device: Soldering iron

420°C, Max.; 3 seconds, Max.

- (2) Waterproof boot
 - 1) The 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

