

Switches

Snap-action Microswitches

Ultraminiature



Type **X5**



F1



F1NS



F4



F5

Characteristics	<ul style="list-style-type: none"> ■ small size ■ low current ■ PCB mounting 	<ul style="list-style-type: none"> ■ small size ■ low current ■ high mechanical life ■ PCB mounting from side 	<ul style="list-style-type: none"> ■ small size ■ low current ■ high mechanical life ■ PCB mounting from side 	<ul style="list-style-type: none"> ■ small size ■ high mechanical and electrical life ■ solder terminals ■ 2.8 mm quick connect ■ PCB terminals 	<ul style="list-style-type: none"> ■ small size ■ high mechanical and electrical life ■ PCB mounting
Rating	250 VAC, 1.5 A	250 VAC, 1 A	up to 250 VAC, 1 A	250 VAC, 5 A	250 VAC, 5 A
Dimensions (mm)	13 x 6.5 x 6	16 x 6 x 6.5	16 x 6.5 x 6	12.8 x 10 x 5	12.8 x 7 x 5
Actuator	<ul style="list-style-type: none"> ■ plunger ■ plain levers 	<ul style="list-style-type: none"> ■ plunger ■ plain levers ■ simulated roller levers 	<ul style="list-style-type: none"> ■ plunger ■ plain lever cam follower ■ simulated roller levers 	<ul style="list-style-type: none"> ■ plunger ■ plain levers ■ simulated roller levers 	<ul style="list-style-type: none"> ■ plunger ■ plain levers ■ simulated roller levers
Approvals	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA

Snap-action Microswitches

Ultraminiature



Type **F6**

Subminiature



XC



X4



V4NS



V4NCS

Characteristics	<ul style="list-style-type: none"> ■ small size ■ sealed construction (IP67) ■ PCB mounting 	<ul style="list-style-type: none"> ■ wide number of force variants ■ high mechanical and electrical life ■ solder terminals ■ 2.8 mm quick connect ■ PCB terminals 	<ul style="list-style-type: none"> ■ thermoplastic housing ■ micro disconnection 	<ul style="list-style-type: none"> ■ peg mounting option ■ solder terminals ■ 2.8 mm quick connect ■ PCB terminals ■ wide variety of levers 	<ul style="list-style-type: none"> ■ peg mounting option ■ pre-wired ■ sealed (IP67) ■ wide variety of levers
Rating	250 VAC, 50 mA	250 VAC, 10 A	250 VAC, 12 A	250 VAC, 5 A	250 VAC, 5 A
Dimensions (mm)	14.65 x 9 x 5.35	20 x 9.5 x 6.5	19.9 x 9.65 x 6.4	20 x 17.5 x 6.4	20 x 17.5 x 6.4
Actuator	<ul style="list-style-type: none"> ■ plunger ■ plain levers ■ simulated roller levers 	<ul style="list-style-type: none"> ■ plunger ■ plain levers ■ roller levers 	<ul style="list-style-type: none"> ■ plain levers ■ simulated roller levers ■ roller levers 	<ul style="list-style-type: none"> ■ plunger ■ plain levers ■ roller levers 	<ul style="list-style-type: none"> ■ plunger ■ plain levers ■ roller levers
Approvals	—	ENEC, UL, CSA	UL, cUL, CSA, ENEC, CCEE	UL, CSA	

Snap-action Microswitches

	Subminiature	Miniature			
Type	V4L	XG	V3Q	X3	G3
Characteristics	<ul style="list-style-type: none"> long overtravel of 2.2 mm minimum available sealed to IEC 1167 pre-wired option available 	<ul style="list-style-type: none"> wide number of force variants high mechanical and electrical life solder terminals quick connect PCB terminals 	<ul style="list-style-type: none"> long overtravel assemblies with single or double pole options position of the actuator can be adjusted to match the available movement of the actuating medium IEC IP67, pre-wired option 	<ul style="list-style-type: none"> 8 mm creepage and 8 mm clearance distance to the actuator long mechanical and electrical life 	<ul style="list-style-type: none"> low force variants high mechanical and electrical life quick connect and solder terminals
Rating	250 VAC, 5 A	250 VAC, 25 A (XGT 86)	up to 250 VAC, 10 A	250 VAC, 21 A	250 VAC, 18 A
Dimensions (mm)	20 x 6.4 x 16.4	28 x 16 x 10	36.5 x 33.6 x 17.3 single pole 36.5 x 33.6 x 26.2 double pole	27.8 x 15.9 x 10.3	28 x 16 x 10
Actuator	<ul style="list-style-type: none"> plain lever ice break lever 	<ul style="list-style-type: none"> plunger plain levers roller levers 	<ul style="list-style-type: none"> plunger roller plunger 	<ul style="list-style-type: none"> straight lever simulated roller cam follower levers roller levers 	<ul style="list-style-type: none"> plunger ramp plunger
Approvals	VDE (EN)	ENEC, UL, CSA	UL, CSA	UL, cUL, CSA, ENEC, CCEE	ENEC, UL, CSA

Snap-action Microswitches

	Miniature		Standard		
Type	V3S	V9N	4BR	4CR	M2V3 / C2V3
Characteristics	<ul style="list-style-type: none"> sealed construction (IP67) flying leads robust construction 	<ul style="list-style-type: none"> metal housed sealed construction screw terminals flying leads 	<ul style="list-style-type: none"> choice of IP54 or IP67 sealed versions precise movements and exceptional repeat accuracy robust metal housing 	<ul style="list-style-type: none"> precise movements and exceptional repeat accuracy robust metal housing 	<ul style="list-style-type: none"> sealed to IP65 (NEMA Type 13) contains two electrically independent change-over switches rotary action levers can be mounted in four different positions and then adjusted through 360° M20 or ½ inch NPS conduit entry options
Rating	250 VAC, 5 A	250 VAC, 10 A	up to 250 VAC, 15 A	up to 250 VAC, 15 A	up to 250 VAC, 10 A
Dimensions (mm)	32 x 24 x 10	42 x 24.5 x 16	53.1 x 20.6 x 29.2	53.1 x 20.6 x 30.8	66.9 x 38.3 x 30.2
Actuator	<ul style="list-style-type: none"> plunger plain levers roller levers 	<ul style="list-style-type: none"> plunger plain levers reverse action levers roller levers 	<ul style="list-style-type: none"> plunger 	<ul style="list-style-type: none"> spring plunger spring plunger with in-line roller 	<ul style="list-style-type: none"> spring plunger roller levers rod lever wobble stick
Approvals	UL, CSA, ENEC	UL, CSA	UL, CSA	UL, CSA	UL, CSA

Snap-action Microswitches

Standard



Type **M9 / C9**



Type **PN4**



Type **3BR**

Characteristics	<ul style="list-style-type: none"> ■ sealed to IEC IP67 (NEMA Type 13) ■ internal earth (ground) screw provided ■ trident spring mechanism for precise movements and exceptional repeat accuracy ■ M20 or ½ inch NPS conduit entry options 	<ul style="list-style-type: none"> ■ precision switching ■ high mechanical life ■ screw terminals 	<ul style="list-style-type: none"> ■ choice of IP54 or IP67 sealed versions ■ precise movements and exceptional repeat accuracy ■ robust metal housing
Rating	up to 250 VAC, 15 A	250 VAC, 15 A	up to 125 VAC, 10 A
Dimensions (mm)	76.7 x 45.8 x 26	49 x 22 x 17.5	53.1 x 20.6 x 30.8
Actuator	<ul style="list-style-type: none"> ■ spring plunger ■ adjustable roller lever ■ wobble stick 	<ul style="list-style-type: none"> ■ plunger ■ plain lever ■ roller lever 	<ul style="list-style-type: none"> ■ plunger
Approvals	UL, CSA	UL, CSA	UL, CSA

Special Switches



Type **K5**



Type **M0**



Type **FK4**

Characteristics	<ul style="list-style-type: none"> ■ double break switching ■ high mechanical life ■ high electrical rating ■ 6.4 mm quick connect terminals 	<ul style="list-style-type: none"> ■ mid-off function 	<ul style="list-style-type: none"> ■ double break switching ■ high mechanical and electrical life ■ solder terminals ■ 2.8 mm quick connect PCB terminals
Rating	250 VAC, 25 A	12 VDC, 100 mA	<ul style="list-style-type: none"> ■ 250 VAC, 5 A
Dimensions (mm)	41 x 19 x 15.5	13 x 25.5 x 5.5	<ul style="list-style-type: none"> ■ 18 x 8 x 5
Actuator	<ul style="list-style-type: none"> ■ plunger ■ plain levers, roller levers 	<ul style="list-style-type: none"> ■ pendulum 	<ul style="list-style-type: none"> ■ plunger plain lever ■ simulated roller levers
Approvals	UL, CSA	–	UL, CSA

Positive-action Switches

	Miniature		Standard	
Type	BVM3	V9B	KB5	KB5EQ
Characteristics	<ul style="list-style-type: none"> positive action forced break contacts internationally recognised V3 housing quick connect terminals 	<ul style="list-style-type: none"> positive action forced break contacts metal housed with screw terminals or flying leads sealed construction (IP67) 	<ul style="list-style-type: none"> positive action double break switching high electrical rating quick connect terminals 	<ul style="list-style-type: none"> positive action double break switching enclosed design long overtravel
Rating	250 VAC, 10 A	250 VAC, 10 A	250 V, 25 A	250 VAC, 25 A
Dimensions (mm)	28 x 16 x 10.5	42 x 24.5 x 16	41 x 19 x 15.5	54 x 50 x 17.5
Actuator	<ul style="list-style-type: none"> plunger plain levers roller levers 	<ul style="list-style-type: none"> plunger plain levers roller levers 	<ul style="list-style-type: none"> plunger plain lever roller levers 	<ul style="list-style-type: none"> plunger plunger roller
Approvals	UL, CSA	UL, CSA	UL, CSA	UL, CSA

Keylock Switches

Type	E1	M1	K2	P2	P5
Characteristics	<ul style="list-style-type: none"> double pole change-over or three circuit selector switching functions key trapping option gold-plated contacts 	<ul style="list-style-type: none"> double pole change-over or three circuit selector switching functions key trapping option two body style options gold-plated contacts 	<ul style="list-style-type: none"> choice of off-on or change-over centre off UL and CSA approved 	<ul style="list-style-type: none"> up to 12 contact pairs 5 security options with key actuation from 2 to 8 switch positions 	<ul style="list-style-type: none"> high electrical rating key trapping option choice of off-on, change-over with spring return or change-over with separate circuits UL and CSA approved
Rating	250 VAC, 100 mA	250 VAC, 100 mA	up to 125 VAC, 4 A	250 VAC, 2 A	up to 125 VAC, 10 A
Dimensions (mm)	28 x 18 x 16	28 x 18 x 16 body style A 28 x 18 x 18 body style E	39.7 x 19.1 dia	∅ 22 x 35 (single contact pair)	78.2 x 20.6 dia off-on 91.9 x 20.6 dia change-over
Actuator	<ul style="list-style-type: none"> key 	<ul style="list-style-type: none"> key 	<ul style="list-style-type: none"> key 	<ul style="list-style-type: none"> keys from 100 codes to 2 million codes 	<ul style="list-style-type: none"> key or spindle
Approvals	–	–	UL and CSA	UL (optional)	UL and CSA

Momentary Switches



Type **XT**



Type **XP**



Type **TPS**



Type **DS**



Type **1427 / 1429 / 1430**

Characteristics	<ul style="list-style-type: none"> ■ 8 mm contact gap and 8 mm creepage and air-gaps between individual and accessible parts ■ safe mechanical separation by reset springs ■ optional insulation accessory and key for maintenance purpose 	<ul style="list-style-type: none"> ■ long overtravel ■ single/double pole switching ■ quick connect terminals 	<ul style="list-style-type: none"> ■ enclosed with snap action ■ long overtravel ■ adjustable operating position 	<ul style="list-style-type: none"> ■ enclosed with snap action ■ long overtravel ■ compact construction 	<ul style="list-style-type: none"> ■ single pole ■ momentary function NC ■ quick connect ■ life 1E5 ■ snap-in mounting
Rating	up to 400 VAC, 16.5 A	250 VAC, 16 A	250 VAC, 15 A 380 VAC, 10 A	250 VAC, 15 A	250 VAC, 0.25 [0.25] A
Dimensions (mm)	30 x 32 x 12	30 x 32 x 12	54 x 50 x 18	48 x 51 x 16	10 x 27 x 28
Actuator	<ul style="list-style-type: none"> ■ shrouded plunger 	<ul style="list-style-type: none"> ■ plain plunger ■ mushroom/shrouded plunger 	<ul style="list-style-type: none"> ■ plain spindle plunger 	<ul style="list-style-type: none"> ■ plain spindle plunger 	<ul style="list-style-type: none"> ■ different lengths
Approvals	UL, cUL, CSA, ENEC	ENEC, UL, CSA	UL, CSA	UL, CSA	ENEC

Momentary Switches








Type **XKA**

Characteristics	<ul style="list-style-type: none"> ■ long overtravel ■ micro disconnection
Rating	250 VAC, 1 A
Dimensions (mm)	28 x 20 x 15
Actuator	<ul style="list-style-type: none"> ■ plain lever ■ round levers
Approvals	UL, cUL, CSA, ENEC






Push Button Switches

Rotary Switch

Slide Switch

					
Type	3290	3292	3200	4022	3585
Characteristics	<ul style="list-style-type: none"> single pole on/off quick connect PCB terminals extended life (5E4) snap-in mounting or customised momentary function optional temp. 125° 	<ul style="list-style-type: none"> double pole on/off quick connect PCB terminals extended life (5E4) customised mounting momentary function optional temp. 100° 	<ul style="list-style-type: none"> illumination optional single pole change-over print- and customer specific terminals customised mounting optional with momentary function 	<ul style="list-style-type: none"> single pole with step function double pole with on/off-function solder terminals PCB terminals quick connect customised mounting temp. 100° 	<ul style="list-style-type: none"> single pole step function print-terminals customised mounting temp 85°
Rating	250 VAC, 8 (8) A 125 VAC, 12 A	250 VAC, 8 (8) A	12 VDC, 2 A	250 VAC, 12 (2) A 125 VAC, 10 A	250 VAC, 10 (2) A
Dimensions (mm)	13.5 x 19	13.5 x 19	11.6 x 11.6	30 x 14 x 15.3	39 x 20 x 15
Actuator	<ul style="list-style-type: none"> push button square 6 mm 	<ul style="list-style-type: none"> push button square 6 mm 	<ul style="list-style-type: none"> square 10.4 mm 	<ul style="list-style-type: none"> integral shaft square access hole 3.25 mm² 	<ul style="list-style-type: none"> specific lever
Approvals	ENEC, UL, CSA	ENEC		ENEC, UL, CSA	

Rocker Switches

					
Type	3670	3672	3673	3680	3600
Characteristics	<ul style="list-style-type: none"> single pole on/off illuminated/non-illum. snap-in mounting or customised quick connect optional with momentary function temp. 100/55° 	<ul style="list-style-type: none"> single pole on/off illuminated/non-illum. snap-in mounting or customised solder terminals PCB terminals quick connect optional with momentary function temp. 85/55° 	<ul style="list-style-type: none"> single pole change-over (with or without "zero-position") snap-in mounting or customised quick connect µ-gap temp. 100/55° 	<ul style="list-style-type: none"> single pole on/off illuminated/non-illum. snap-in mounting or customised quick connect optional with momentary function temp. 85/55° 	<ul style="list-style-type: none"> additional timer function single pole on/off illuminated/non-illum. snap-in mounting or customised temp. 100/55°
Rating	250 VAC, 6 (2) A 250 VAC, 10 (2) A	250 VAC, 6 (2) A 125 VAC, 7.5 A	250 VAC, 6 (3) A 125 VAC, 10 A (for version with "zero"-position)	250 VAC, 6 (2) A 125 VAC, 7.5 A	250 VAC, 10 (2) A 125 VAC, 15 A
Dimensions (mm)	various	various	various	various	37.2 x 17 x ~38
Actuator	rockers in different shapes/colours	rockers in different shapes/colours	rockers in different shapes/colours	rockers in different shapes/colours	standard rocker 25.4 x 10.7 mm
Approvals	ENEC, cUL, CSA	ENEC, UL, CSA	ENEC, cUL	ENEC, UL, CSA	ENEC, cUL