

Panel Mounted

Push Button



Type	TP2	TP5	TP4	TP8	TP9
Panel cut-out (mm)	Ø 16.2/22.5	Ø 16.2/22.5	Ø 16.2/22.5	Ø 22.5	Ø 16.2/22.5
Characteristics	<ul style="list-style-type: none"> momentary or latching sealed IP40, IP65 or IP67 wide range of bezels with or without illumination NO, NC, CO gold plated single or double pole contact blocks 	<ul style="list-style-type: none"> momentary or latching sealed IP40 or IP65 wide range of bezels shallow mounting depth with or without illumination NO, NC gold plated contact blocks 	<ul style="list-style-type: none"> mushroom momentary or latching sealed IP40 or IP65 wide range of bezels NO, NC gold plated contact blocks 	<ul style="list-style-type: none"> momentary sealed IP67 round metal bezels 1NO + 1 NC, 2 NC, 2 NO gold plated contact block 	<ul style="list-style-type: none"> momentary short stroke switch sealed IP65 or IP67 round metal bezels NO snap-in mounting option Ø 22.5 mm (IP65 only)
Rating	250 VAC, 5 A	250 VAC, 5 A	250 VAC, 5 A	230 VAC, 6 A	50 VAC/VDC, 50 mA
Dimensions (mm)	18 × 24 18 × 18 Ø 18 Ø 25	18 × 24 18 × 18 Ø 18 Ø 25	18 × 24 24 × 24 Ø 24 Ø 30	Ø 25	Ø 18 Ø 25
Actuator	<ul style="list-style-type: none"> lenses in different shapes and colours 	<ul style="list-style-type: none"> lenses in different shapes and colours 	<ul style="list-style-type: none"> mushroom cap in different shapes and colours 	<ul style="list-style-type: none"> button and housing in different colours 	<ul style="list-style-type: none"> button and housing in different colours
Approvals	UL, CSA, VDE	UL, CSA, VDE	UL, CSA, VDE	none	none
Page	220	227	232	236	239

Panel Mounted

Push Button



Type	TP7	3300
Panel cut-out (mm)	Ø 16.2/22.5/30.3/43.3	Ø 44
Characteristics	<ul style="list-style-type: none"> piezo technology momentary sealed IP68 with or without illumination, two colours solid state output NO 	<ul style="list-style-type: none"> momentary function short travel 0.4 mm ca. sealed IP67 vandal resistant with or without illumination, two colours
Rating	3 to 35 VAC/VDC, 200 mA	12–24 VDC/30 mA
Dimensions (mm)	Ø 18 Ø 25 Ø 36 Ø 48	Ø 82
Actuator	<ul style="list-style-type: none"> housing in different colours 	<ul style="list-style-type: none"> anodised surface plated surface powder coated surface
Approvals	none	on request
Page	243	251

Panel Mounted

Indicators



Emergency Stop



Type	TI2	TI5	TI9	TE8
Panel cut-out (mm)	Ø 16.2/22.5	Ø 16.2/22.5	Ø 22.5	Ø 16.2/22.5
Characteristics	<ul style="list-style-type: none"> illuminated sealed IP40, IP65 or IP67 wide range of bezels midget grooved lamp/LED 	<ul style="list-style-type: none"> illuminated sealed IP40 or IP65 wide range of bezels midget grooved lamp/LED 	<ul style="list-style-type: none"> illuminated sealed IP67 round metal bezels red LED green LED red-green LED 	<ul style="list-style-type: none"> meets EN418 directives (Ø 27 mm only) sealed IP66 or IP67 rotary pull or key reset yellow disk bezel (optional) 1NO + 1 NC or 2 NC
Rating	max. 60 VAC/VDC	max. 60 VAC/VDC	24 VDC, 20 mA	250 VAC, 6 A
Dimensions (mm)	18 × 24 18 × 18 Ø 18 Ø 25	18 × 24 18 × 18 Ø 18 Ø 25	Ø 25	Ø 27 Ø 40
Actuator	<ul style="list-style-type: none"> lenses in different shapes and colours 	<ul style="list-style-type: none"> lenses in different shapes and colours 	<ul style="list-style-type: none"> aluminium housing in different colours 	<ul style="list-style-type: none"> red mushroom cap (Ø 27 mm only) reset by KABA key (Ø 40 mm only)
Approvals	UL, CSA, VDE	UL, CSA, VDE	none	IEC 947-5-1/947-5-5 (Ø 27 mm only)
Page	252	257	261	264

Panel Mounted

Keyswitch



Rotary



Type	TK2	TR2
Panel cut-out (mm)	Ø 16.2/22.5	Ø 16.2/22.5
Characteristics	<ul style="list-style-type: none"> 2 and 3 position sealed IP40 or IP65 plastic or aluminium bezels wide range of bezels NO, NC gold plated, single or double pole, contact blocks key trapping options 	<ul style="list-style-type: none"> 2 and 3 position sealed IP40 or IP65 plastic or aluminium bezels NO, NC gold plated, single or double pole, contact blocks
Rating	250 VAC, 5 A	250 VAC, 5 A
Dimensions (mm)	18 × 24 18 × 18 Ø 18 Ø 25	18 × 24 18 × 18 Ø 18 Ø 25
Actuator	<ul style="list-style-type: none"> key-KABA MICRO 	<ul style="list-style-type: none"> black knob, with white indicating bar
Approvals	UL, CSA, VDE	UL, CSA, VDE
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Panel Mounted

Keyswitches



Type	E1	M1	K2	P2	P5
Panel cut-out (mm)	∅ 15.1 × 15.1	∅ 15.1 × 15.1	∅ 19.1	∅ 19.1	∅ 20.6
Characteristics	<ul style="list-style-type: none"> ■ tamper proof ■ 2 positions ■ key trapping options ■ gold-plated contacts ■ PCB terminals 	<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 ■ PCB terminals 	<ul style="list-style-type: none"> ■ choice of off-on or change-over centre off or spring return options ■ key trapping option ■ solder terminals 	<ul style="list-style-type: none"> ■ up to 12 contact pairs ■ 2 security options with key actuation ■ from 2 to 4 switch positions ■ key trapping option ■ solder terminals 	<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
Rating	250 VAC, 100 mA	250 VAC, 100 mA	up to 250 VAC, 2 A	250 VAC, 2 A	up to 125 VAC, 10 A up to 250 VAC, 5 A
Dimensions (mm)	18 × 16	18 × 16 body style A 18 × 18 body style E	∅ 22	∅ 22	∅ 38.1 × 45.7 off-on ∅ 38.1 × 58.4 change-over
Actuator	■ plastic key	■ key (common or differs)	■ key (common or differs)	■ key (common or differs)	■ key (common or differs)
Approvals	none	none	UL and CSA	UL (optional)	UL and CSA
Page	280	283	286	289	292

Joystick

Microswitches



Microswitch/Potentiometer



Type	700	J8	H70	C700
Panel cut-out (mm)	∅ 22 × 20	∅ 22.5	∅ 36.8 × 22.2	∅ 12 × 40
Characteristics	<ul style="list-style-type: none"> ■ single or double pole ■ choice of directional gating options ■ miniature or subminiature microswitch types 	<ul style="list-style-type: none"> ■ choice of directional gating options ■ choice of microswitch functions 	<ul style="list-style-type: none"> ■ single axis joystick controllers ■ positive movement to full travel – central dead band ■ single or double pole versions 	<ul style="list-style-type: none"> ■ choice of directional gating options to IP66 and IP67 ■ choice of potentiometer, microswitch and switched knob functions
Rating	up to 15 A, 250 VAC, miniature microswitches up to 6 A, 250 VAC, subminiature microswitches	up to 16 A, 250 VAC up to 5 A, 250 VAC	250 VAC, 6 A	Snap-action Microswitches up to 2 A, 250 VAC up to 1 A, 250 VAC
Dimensions (mm)	55 × 55 × 57.2 miniature microswitches 41.3 × 41.3 × 57.2 subminiature microswitches	up to 74.5 × 74.5 × 105 up to ∅ 60 × 60 × 103.5	60 × 31.9 × 57.1	up to 58 × 58 × 93
Actuator	■ knob	■ knob	■ paddle style	■ knob
Approvals	ENEC, UL and CSA (switch only)	ENEC, UL and CSA (switch only)	ENEC, UL and CSA (switch only)	ENEC, UL and CSA (switch only)
Page	298	301	304	307

Snap-action Microswitches

Torque



Type **600**

- Characteristics
- low and medium torque operation
 - horizontal or vertical actuation
 - 6.35 × 0.8 faston terminals

Rating 250 VAC, 5 A

Dimensions (mm) 39.6 × 22 × 16.4

Actuator ■ wire levers

Approvals none

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Push Button Snap-action

Momentary



Type **QA4/PBA4**



V3Q



C0911

Latching



ZB5

Panel cut-out (mm) Ø 6.1

Ø 12.7

Ø 12.7

Ø 12.7

- | | | | | |
|-----------------|--|---|--|---|
| Characteristics | <ul style="list-style-type: none"> ■ for use with V4N/V4NC series ■ long overtravel up to 5 mm ■ simple clip-on attachment ■ round or square bezels ■ push button options | <ul style="list-style-type: none"> ■ long overtravel assemblies with single or double pole options ■ IP67, pre-wired option | <ul style="list-style-type: none"> ■ single pole ■ change-over ■ momentary function | <ul style="list-style-type: none"> ■ single pole ■ change-over ■ latching function |
|-----------------|--|---|--|---|

Rating 250 VAC, 5 A

up to 250 VAC, 10 A

250 VAC, 15 A

250 VAC, 15 A

Dimensions (mm) 20 × 6.45 × 38.3

36.5 × 33.6 × 17.3
single pole
36.5 × 33.6 × 26.2
double pole

43 × 15

43 × 15

- | | | | | |
|----------|---|---|--|--|
| Actuator | <ul style="list-style-type: none"> ■ stainless steel plunger ■ polyamide (PA 6.6) plunger | <ul style="list-style-type: none"> ■ plunger ■ roller plunger | <ul style="list-style-type: none"> ■ round button ■ rectangular button ■ 4 colour options | <ul style="list-style-type: none"> ■ round button ■ rectangular button ■ 4 colour options |
|----------|---|---|--|--|

Approvals UL, CSA

UL, CSA

ENEC, UL, CSA

ENEC, UL, CSA

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Snap-action Microswitches

Standard



Snap-action

Plastic housed



Type	PN4	3BR	K5	V3S
Characteristics	<ul style="list-style-type: none"> precision switching long mechanical life screw terminals 	<ul style="list-style-type: none"> choice of IP54 or IP67 sealed versions precise movements and exceptional repeat accuracy flying lead version available long overtravel 	<ul style="list-style-type: none"> double break switching long mechanical life high electrical rating faston terminals 	<ul style="list-style-type: none"> sealed (IP67) flying leads robust construction
Rating	250 VAC, 15 A	250 VAC, 10 A max.	250 VAC, 16 A	250 VAC, 5 A
Dimensions (mm)	49 × 22 × 17.5	53.1 × 20.6 × 30.8	41 × 19 × 15.5	32 × 24 × 10
Actuator	<ul style="list-style-type: none"> plunger plain lever roller lever 	<ul style="list-style-type: none"> plunger 	<ul style="list-style-type: none"> plunger ramp plunger plain lever roller lever 	<ul style="list-style-type: none"> plunger plain levers roller levers
Approvals	UL, CSA	UL, CSA	UL, CSA	UL, CSA, ENEC
Page	102	106	109	114

Snap-action

Metal housed



Type	V9N	4BR	4CR	M9 / C9	M2V3 / C2V3
Characteristics	<ul style="list-style-type: none"> sealed (IP67) metal housed screw terminals or flying leads 	<ul style="list-style-type: none"> choice of IP54 or IP67 sealed versions precise movements and exceptional repeat accuracy robust metal housing flying lead version available long overtravel 	<ul style="list-style-type: none"> precise movements and exceptional repeat accuracy robust metal housing screw terminals single hole mounting long overtravel 	<ul style="list-style-type: none"> sealed (IP67) internal earth (ground) screw provided trident spring mechanism for precise movements hazardous area option (Atex) 	<ul style="list-style-type: none"> sealed (IP65) contains two electrically independent change-over switches rotary action levers can be mounted in four different positions and then adjusted through 360°
Rating	250 VAC, 10 A max.	250 VAC, 15 A max.	250 VAC, 15 A max.	250 VAC, 15 A max.	250 VAC, 10 A max.
Dimensions (mm)	42 × 24.5 × 16	53.1 × 20.6 × 29.2	53.1 × 20.6 × 30.8	76.7 × 45.8 × 26	66.9 × 38.3 × 30.2
Actuator	<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 adjustable roller lever wobble stick 	<ul style="list-style-type: none"> spring plunger roller levers rod lever wobble stick
Approvals	UL, CSA	UL, CSA	UL, CSA	UL, CSA, ATEX	UL, CSA
Page	117	121	124	127	130

Door Interlock

	Forced break		Snap-action		Positive-action
Type	XP	XT	DS	TPS	KB5EQ
Characteristics	<ul style="list-style-type: none"> ■ double break switching ■ positive-action force break option ■ > 3 mm contact gap at full travel option ■ faston terminals 	<ul style="list-style-type: none"> ■ 8 mm contact gap, creepage and clearance distances ■ double break contacts 	<ul style="list-style-type: none"> ■ enclosed snap-action switching ■ long overtravel ■ tapped plunger ■ screw terminals 	<ul style="list-style-type: none"> ■ snap-action switching ■ enclosed design ■ long overtravel ■ adjustable operating position ■ screw terminals 	<ul style="list-style-type: none"> ■ positive-action forced double break switching ■ > 3 mm contact gap ■ enclosed design ■ long overtravel ■ screw terminals
Rating	400 VAC, 16 A	400 VAC, 16.5 A max.	250 VAC, 15 A	250 VAC, 15 A	250 VAC, 25 A
Dimensions (mm)	30 × 32 × 12	30 × 32 × 12	48 × 51 × 16	54 × 50 × 18	54 × 50 × 17.5
Actuator	<ul style="list-style-type: none"> ■ plain plunger ■ mushroom plunger ■ plunger with external spring (for increased reset security) 	<ul style="list-style-type: none"> ■ shrouded plunger ■ optional key ■ plain 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"> ■ plunger ■ plunger roller
Approvals	ENEC, UL, CSA	UL, cUL, CSA, ENEC	UL, CSA	UL, CSA	UL, CSA
Page	136	139	142	145	148

Positive-action

	Miniature	Standard	Metal housed
Type	BVM3	KB5	V9B
Characteristics	<ul style="list-style-type: none"> ■ positive-action (forced break) contacts ■ > 3 mm contact gap at full travel ■ internationally recognized V3 housing ■ faston terminals 	<ul style="list-style-type: none"> ■ positive-action forced double break switching ■ > 3 mm contact gap at full travel ■ high electrical rating ■ faston terminals 	<ul style="list-style-type: none"> ■ positive-action (forced break) contacts ■ > 3 mm contact gap at full travel ■ robust metal housing ■ IEC (IP67) sealed mechanism ■ high temperature unwired versions ■ pre-wired options – vertical and horizontal leads
Rating	250 VAC, 10 A	up to 250 V, 25 A	250 VAC, 10 A max.
Dimensions (mm)	28 × 16 × 10.5	41 × 19.5 × 15.5	42.3 × 24.5 × 16
Actuator	<ul style="list-style-type: none"> ■ plunger ■ plain lever ■ roller lever 	<ul style="list-style-type: none"> ■ plunger ■ plain lever ■ roller levers 	<ul style="list-style-type: none"> ■ plunger ■ roller levers
Approvals	UL, CSA and ENEC	UL, CSA	UL, CSA
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