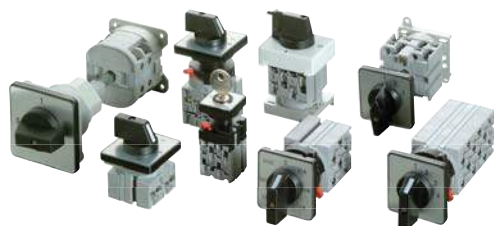




# CATALOGUE 2016



	$I_{th}$ A	AC23 kW	AC3 kW (3x400V)	U V	Connection cross mm <sup>2</sup>
D00	10	3,0	2,2	500	1,5
D0	25	7,5	5,5	690	4
D1-16	25	9,0	7,5	690	6
D1-20	32	10,5	9,0	690	6
D1-32	45	15,0	11,0	690	6
D1-40	80	18,0	15,0	690	16
D2-63	100	26,5	22,0	690	70
D2-100	125	32,5	27,0	690	70
D2-160	160	40,0	37,0	690	70
D2-126	200	45,5	40,0	690	70
D3-250	315	76,0	64,0	690	185

Other constructional forms and sizes available on request

Type	A	A1	C	F	L1	L2	L3	L4	L5	L6	L7	L8
D00-4	30	20	28	30	29	37	45	53	61	69	77	85
D00-6	30	20	30	28	33	45	57	69	81	93	105	117
D0-13	48	36	43	43	32	41	51	60	70	79	89	98
D0-7	48	36	40	39	34	46	58	70	82	94	106	118
D0-8	48	36	40	39	34	46	58	70	82	94	106	118
D1-16	66	48	54	56	40	53	66	79	92	105	118	131
D1-20	66	48	54	56	40	53	66	79	92	105	118	131
D1-32	66	48	54	56	40	53	66	79	92	105	118	131
D1-40	66	48	68	64	50	71	92	113	134	155	176	197

Type	A	C	F	L1	L2	L3	L4	L5	L6	L7	L8
D00-4	30	28	30	43	51	59	67	75	83	91	99
D00-6	30	30	28	46	58	70	82	94	106	118	130
D0-13	48	43	43	56	65	75	84	94	103	113	122
D0-7	48	40	43	58	70	82	94	106	118	130	142
D0-8	48	40	39	58	70	82	94	106	118	130	142
D1-16	66	54	56	60	73	86	99	112	125	138	151
D1-20	66	54	56	60	73	86	99	112	125	138	151
D1-32	66	54	56	60	73	86	99	112	125	138	151
D1-40	66	68	64	70	91	112	133	154	175	196	217

Type	A	B	C	F	L1	L2	L3
D00-6	35	45	28	30	45	45	45
D0-8	52,5	45	40	39	45	45	45
D1-16	52,5	45	54	56	45	45	56
D1-20	52,5	45	54	56	45	45	56
D1-32	52,5	45	54	56	45	45	56

## 25 Amps maintenance switch in IP67 enclosure

-integrated M20 threads for cable glands



### 2-poles

R2/13PLM-D0/Z33sw

R2/13PLM-D0/Z33ry

### 3-poles

R3/13PLM-D0/Z33sw

R3/13PLM-D0/Z33ry

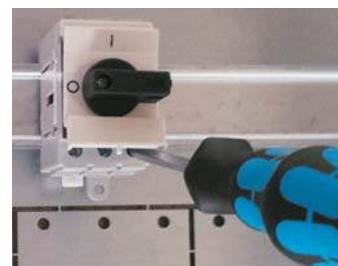
### 4-poles

R4/13PLM-D0/Z33sw

R4/13PLM-D0/Z33ry

## 45mm DIN-rail switch with flexible cover

-connection with handle and cover possible, only 2 modules are bold



### Type code (16 - 63 A)

xL016/xT/X74F

xL020/xT/X74F

xL025/xT/X74F

xL032/xT/X74F

xL040/xT/X74F

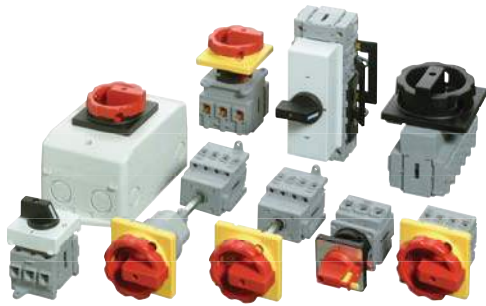
xL063/xT/X74F

VDE 0660

IEC 60947



# On Load Switches Data



Other constructional forms and sizes on request

	$I_{th}$ A	AC23 kW (3x400V)	AC3 kW	U V	Connection cross mm <sup>2</sup>
LT16	16	7,5	5,5	690	6
LT25A	25	9,5	7,5	690	6
LT32	32	11,5	9,5	690	16
LT40	40	20,0	11,0	690	16
LT63	63	22,0	18,5	690	35
LT80	80	30,0	22,0	690	35
LT100	100	37,0	30,0	690	50
LT125	125	45,0	37,0	690	50
LT180	180	90,0	75,0	690	185
LT250	250	132,0	110,0	690	185
H11	10			240	4

DC ratings, see flyer

E	Type	A	A1	C	C	C	C	F	L
		3pol		4pol	6pol	8pol			
	LT16-25A	66	48	48	48	/	/	62	50
	LT32-40	66	48	45	61	91	122	72	50
	ULT25-40	64	48	91	122	/	/	72	64
	LT63-80	66	48	60	80	121	161	83	59
	ULT63-80	64	48	121	161	/	/	83	74
	LT100-125	66	48	70	93	141	187	96	75
	ULT100-125	64	48	141	187	/	/	96	90
	LT180-250	94	68	112	150	224	300	169	93
	ULT180-250	94	68	224	300	/	/	169	110

ZM	Type	A	C	C	F	L
		3pol		4pol		
	LT16-25A	66	48	48	62	73
	LT32-40	66	45	61	72	73
	LT63-80	66	60	80	83	84

IP65

V	Type	A	A1	C	C	C	C	F	L1	L2
		3pol		4pol	6pol	8pol			Z44/45	
	LT16-25A	66	48	48	48	/	/	62	50	80
	LT32-40	66	48	45	61	91	122	72	50	80
	ULT25-40	64	48	91	122	/	/	72	64	80
	LT63-80	66	48	60	80	121	161	83	59	80
	ULT63-80	64	48	121	161	/	/	83	74	80
	LT100-125	66	48	70	93	141	187	96	75	80
	ULT100-125	64	48	141	187	/	/	96	90	80
	LT180-250	94	68	112	150	224	300	169	93	47
	ULT180-250	94	68	224	300	/	/	148	110	47

T	Type	A	A	A	A	F	C	C	C	C
		3pol	4pol	6pol	8pol		3pol	4pol	6pol	8pol
	LT16-25A	52,5	52,5	52,5	/	50	48	48	/	/
	LT32-40	52,5	65	98	98	55	45	61	91	122
	ULT25-40	98	98	/	/	55	91	122	/	/
	LT63-80	63	83	125	125	64	60	80	121	161
	ULT63-80	125	125	/	/	64	121	161	/	/
	LT100-125	70	93	140	140	83	70	93	141	187
	ULT100-125	140	140	/	/	83	141	187	/	/

Enclosures	Type	A	C	F	L	Knockouts
		PM-D1/Z33	66	100	140	81
PM-D2/Z33	66	146	176	104	4 x M32/40, 4 x M20	
PM-D3/Z33	90	302	212	137	4 x M50/63, 6 x M20	
K4/Z33	90	373	373	230	2 x M40/63, 2 x M32/50, 4 x M25/40	

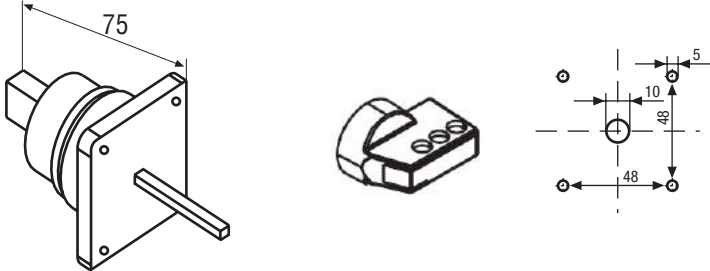
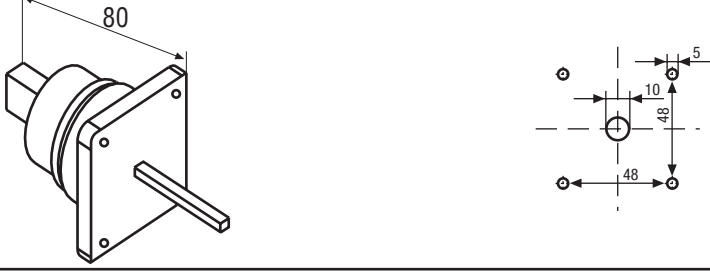

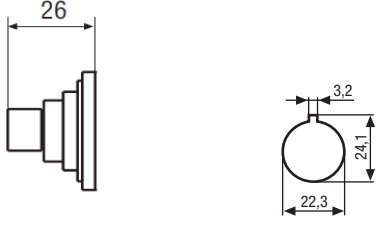
IP65

Sheet metal enclosures and EMC accessories on request



## Door couplings for base-mounted cam and onload switches

Available for group, design

<p><b>Defeasible door coupling Z39</b></p> <p>The coupling interlocks the door in the ON position, but it is easy to unlock by pushing a small bar. The padlockable handle is included.</p> 	<p>D0 V</p> <p>LT16 -25A V</p>	<p>D1 V</p> <p>LT25 -LT40 V</p>	<p>LT63 -LT80 V</p>	<p>LT100 -LT125 V</p>
<p><b>Door coupling with compensation and without interlock</b></p> <p>This door coupling has a compensation. No interlock in any position.</p> 	<p>D0 V</p> <p>LT16 -25A V</p>	<p>D1 V</p> <p>LT25 -LT40 V</p>	<p>D2 V</p> <p>LT63 -LT80 V</p>	<p>LT100 -LT125 V</p>
<p><b>Door coupling with compensation and with interlock</b></p> <p>This door coupling has a compensation. Interlock in every position except the OFF-position.</p> 	<p>D0 V</p> <p>LT16 -25A V</p>	<p>D1 V</p> <p>LT25 -LT40 V</p>	<p>D2 V</p> <p>LT63 -LT80 V</p>	<p>LT100 -LT125 V</p>
<p><b>Short Door coupling with interlock</b></p> <p>This short door coupling fits best for very small depths in terms of space available. IP65</p>  <p>Inside panel</p>	<p>D0 V</p> <p>LT16 -25A V</p>	<p>D1 V</p> <p>LT25 -LT40 V</p>	<p>LT63 -LT80 V</p>	<p>LT100 -LT125 V</p>

Possibilities for locking switches

Available for group, design.

**Padlockable handle (Z20)**

D00 has a thickness of 5mm and is suitable for one padlock. D0 has a thickness of 6mm and is suitable for two padlocks. D1/D2/D3 has a thickness of 6mm and is suitable for three padlocks.

<b>D00</b>	<b>D0</b>	<b>D1</b>	<b>D2</b>	<b>D3</b>
E	E	E	E	E
ZM	ZM	ZM	V	V
	V	V		
	T	T		
<b>enclosures</b>				
<b>LT16</b>	<b>LT25</b>	<b>LT63</b>	<b>LT100</b>	<b>LT180</b>
<b>-25A</b>	<b>-LT40</b>	<b>-LT80</b>	<b>-LT125</b>	<b>-LT250</b>
E	E	E	E	E
ZM	ZM	ZM	V	V
V	V	V	V	V
T	T	T	T	

**Round Padlockable handle (Z33)**

Can lock with a maximum of three padlocks and has a thickness of 6mm in D1 and of 8mm in D2.

<b>D0</b>	<b>D1</b>	<b>D2</b>		
E	E	E		
ZM	ZM	ZM		
V	V	V		
<b>enclosures</b>				
<b>LT16</b>	<b>LT25</b>	<b>LT63</b>	<b>LT100</b>	
<b>-25A</b>	<b>-LT40</b>	<b>-LT80</b>	<b>-LT125</b>	
E	E	E	E	
ZM	ZM	ZM	V	
V	V	V	V	

**Protection IP65 seal systems (Z1)**

Adding a (Z1) makes the device IP65 protected. IP65 protection is for constructional forms ZM, PLM and PM standard.

**IP65**

Higher protection classes and other constructional formations upon request.

<b>D00</b>	<b>D0</b>	<b>D1</b>	<b>D2</b>	<b>D3</b>
E	E	E	E	E
ZM	ZM	ZM	V	V
	V	V		
<b>enclosures</b>				
<b>LT16</b>	<b>LT25</b>	<b>LT63</b>	<b>LT100</b>	<b>LT180</b>
<b>-25A</b>	<b>-LT40</b>	<b>-LT80</b>	<b>-LT125</b>	<b>-LT250</b>
E	E	E	E	E
ZM	ZM	ZM	V	V
V	V	V	V	V

**Key-operated switch**

A key operates this switch. You can choose where the key is removable.

<b>D00</b>	<b>D0</b>	<b>D1</b>		
ZM	ZM	ZM		

**Cylindrical lock (Z31)**

A cylinder lock allows locking in specific positions or all positions.

D2 & D3 on request

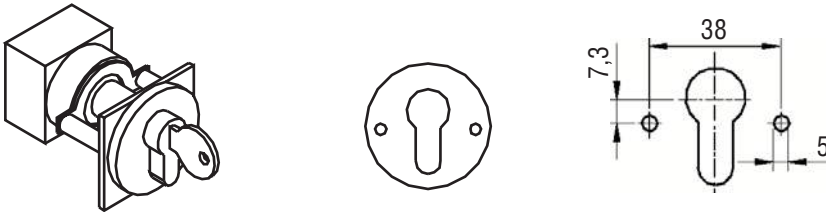
<b>D0</b>	<b>D1</b>	<b>D2</b>	<b>D3</b>
E	E	E	E

Various Accessories

Available for group, design.

**Key operated device for DIN standard cylinder lock (Z70)**

Allows integration into locking system. Cylinder not supplied.



D0/8 E			
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**Terminal for control circuits (Z58):**

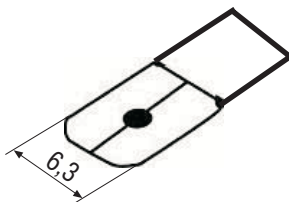
This item allows connecting a 4mm squared wire for a control circuit to a load circuit.



LT25 -LT40	LT63 -LT80	LT100 -LT125	LT180 -LT250
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**Fast On connections (Z6):**

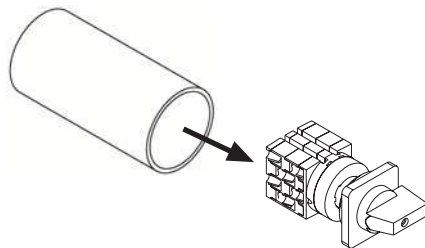
For connection leads with sockets according to DIN 467247.



D0 E ZM V T	D1 E ZM V T		
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**Full Terminal Shroud (Z10):**

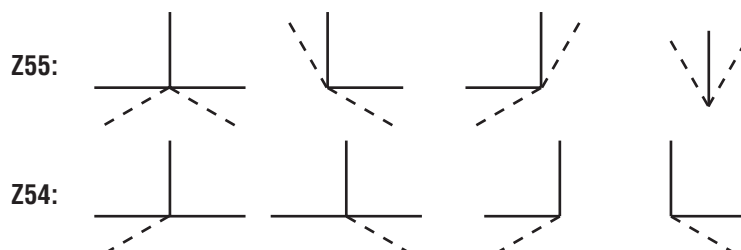
This cover acts to ensure switch protection to IP42 for the whole switch body.



D0 E ZM	D1 E	D2 E	
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**Dual sided and single sided spring return (Z55):**

The returning positions are 30 degrees angle and the fixed ones are 90 degree angles.



D0 E ZM V T	D1 E ZM V T	D2 E V	D3 E V
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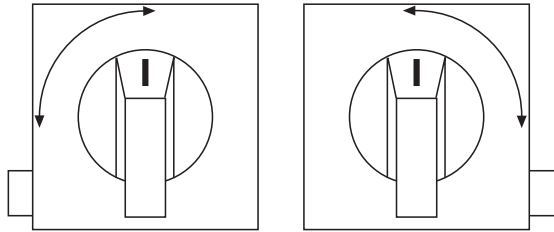
# Accessories

## Various Accessories

Available for group, design.

### Interlock Z80:

Prevents reversing by mistake.

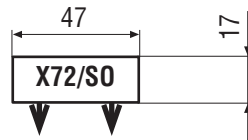
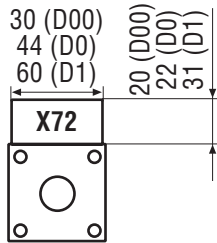


Different handles / padlockable devices fit

D1  
E

### Additional Frontplates (X72) and (X72/SO)

Additional frontplates allow for more writing.



X72	D0	D1	D2	D3
	E	E	E	E
	ZM	ZM		
	V	V		
	T	T		
X72/SO				
	D1	D2		
	Z33	Z33		

### Contact Diagram

Customer: \_\_\_\_\_  
 Order No.: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Remarks: \_\_\_\_\_

Size	6	8	11	12	16	20	32	Type Number:
	40	50	63	100	125	250		
Design	E	V	S	Z	ZS	T	P	Accessories:
Handle	PL	PLK	G	GL	ES	ZM	F	Date: _____
Colour	G	S	R	W	N	R		Reference: _____
Escutcheon	X70	X71	X72	X76	X77	X78	X79	Issued by: <i>Arvi Singh</i>
Colour	A	G	S	R	W			Initials: _____

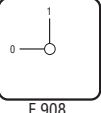
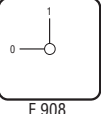
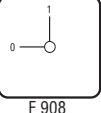
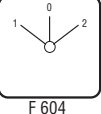
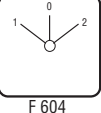
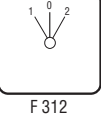
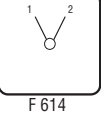


Terminal Designation

Stop

Terminal Designation																						
Switch Position																						
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OFF  
 ON

# Rotary Cam Switches


Connection Diagram	$I_{th}$ (nA)	AC3 (nW)	4-Hole mounting		Central mounting		DIN-Railmounting	
			Type		Type	IP65	Type	
<b>90° Off/On Switch</b>  <b>1-pole</b> F 908      1Ka-A1001	10	2,2	A1/	4 E	A1/	4 ZM		
	10	2,2	A1/	6 E	A1/	6 ZM	A1/	6 T
	25	5,5	A1/	7 E	A1/	7 ZM		
	25	5,5	A1/	8 E	A1/	8 ZM	A1/	8 T
	25	7,5	A1/	16 E	A1/	16 ZM	A1/	16 T
	32	9,0	A1/	20 E	A1/	20 ZM	A1/	20 T
45	11,0	A1/	32 E	A1/	32 ZM	A1/	32 T	
<b>90° Off/On Switch</b>  <b>3-pole</b> F 908      2Ka-A1003	10	2,2	A3/	4 E	A3/	4 ZM		
	10	2,2	A3/	6 E	A3/	6 ZM	A3/	6 T
	25	5,5	A3/	7 E	A3/	7 ZM		
	25	5,5	A3/	8 E	A3/	8 ZM	A3/	8 T
	25	7,5	A3/	16 E	A3/	16 ZM	A3/	16 T
	32	9,0	A3/	20 E	A3/	20 ZM	A3/	20 T
45	11,0	A3/	32 E	A3/	32 ZM	A3/	32 T5	
<b>90° Off/On Switch</b>  <b>4-pole</b> F 908      2Ka-A1004	10	2,2	A4/	4 E	A4/	4 ZM		
	10	2,2	A4/	6 E	A4/	6 ZM	A4/	6 T
	25	5,5	A4/	7 E	A4/	7 ZM		
	25	5,5	A4/	8 E	A4/	8 ZM	A4/	8 T
	25	7,5	A4/	16 E	A4/	16 ZM	A4/	16 T
	32	9,0	A4/	20 E	A4/	20 ZM	A4/	20 T
45	11,0	A4/	32 E	A4/	32 ZM	A4/	32 T	
<b>60° Change-over Switch</b>  <b>1-pole</b> F 604      1Ka-A1009	10	2,2	U1/	4 E	U1/	4 ZM		
	10	2,2	U1/	6 E	U1/	6 ZM	U1/	6 T
	25	5,5	U1/	7 E	U1/	7 ZM		
	25	5,5	U1/	8 E	U1/	8 ZM	U1/	8 T
	25	7,5	U1/	16 E	U1/	16 ZM	U1/	16 T
	32	9,0	U1/	20 E	U1/	20 ZM	U1/	20 T
45	11,0	U1/	32 E	U1/	32 ZM	U1/	32 T	
<b>60° Change-over Switch</b>  <b>2-pole</b> F 604      2Ka-A1010	10	2,2	U2/	4 E	U2/	4 ZM		
	10	2,2	U2/	6 E	U2/	6 ZM	U2/	6 T
	25	5,5	U2/	7 E	U2/	7 ZM		
	25	5,5	U2/	8 E	U2/	8 ZM	U2/	8 T
	25	7,5	U2/	16 E	U2/	16 ZM	U2/	16 T
	32	9,0	U2/	20 E	U2/	20 ZM	U2/	20 T
45	11,0	U2/	32 E	U2/	32 ZM	U2/	32 T	
<b>Change over switch with double sided return</b>  <b>1-pole</b> F 312      2Ka-A1234	10	2,2	URR1/	4 E	URR1/	4 ZM		
	10	2,2	URR1/	6 E	URR1/	6 ZM	URR1/	6 T
	25	5,5	URR1/	7 E	URR1/	7 ZM		
	25	5,5	URR1/	8 E	URR1/	8 ZM	URR1/	8 T
	25	7,5	URR1/	16 E	URR1/	16 ZM	URR1/	16 T
	32	9,0	URR1/	20 E	URR1/	20 ZM	URR1/	20 T
45	11,0	URR1/	32 E	URR1/	32 ZM	URR1/	32 T	
<b>60° Change-over Switch</b>  <b>1-pole</b> F 614      1Ka-A1017	10	2,2	WS1/	4 E	WS1/	4 ZM		
	10	2,2	WS1/	6 E	WS1/	6 ZM	WS1/	6 T
	25	5,5	WS1/	7 E	WS1/	7 ZM		
	25	5,5	WS1/	8 E	WS1/	8 ZM	WS1/	8 T
	25	7,5	WS1/	16 E	WS1/	16 ZM	WS1/	16 T
	32	9,0	WS1/	20 E	WS1/	20 ZM	WS1/	20 T
45	11,0	WS1/	32 E	WS1/	32 ZM	WS1/	32 T	
<b>Step Switch, 3 positions</b>  <b>1-pole</b> F 302      2Ka-A1131	10	2,2	ST31/	4 E	ST31/	4 ZM		
	10	2,2	ST31/	6 E	ST31/	6 ZM	ST31/	6 T
	25	5,5	ST31/	7 E	ST31/	7 ZM		
	25	5,5	ST31/	8 E	ST31/	8 ZM	ST31/	8 T
	25	7,5	ST31/	16 E	ST31/	16 ZM	ST31/	16 T
	32	9,0	ST31/	20 E	ST31/	20 ZM	ST31/	20 T
45	11,0	ST31/	32 E	ST31/	32 ZM	ST31/	32 T	
<b>Step Switch, 3 positions + Off Position</b>  <b>1-pole</b> F 315      2Ka-A1142	10	2,2	ST031/	4 E	ST031/	4 ZM		
	10	2,2	ST031/	6 E	ST031/	6 ZM	ST031/	6 T
	25	5,5	ST031/	7 E	ST031/	7 ZM		
	25	5,5	ST031/	8 E	ST031/	8 ZM	ST031/	8 T
	25	7,5	ST031/	16 E	ST031/	16 ZM	ST031/	16 T
	32	9,0	ST031/	20 E	ST031/	20 ZM	ST031/	20 T
45	11,0	ST031/	32 E	ST031/	32 ZM	ST031/	32 T	

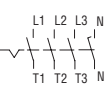


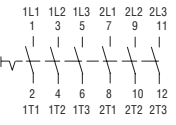


# On Load Switches

Connection Diagram	Thermal current I <sub>th</sub> (in A)	AC3	AC23	4-Hole mounting	Central mounting	DIN-Railmounting
		Rated perf. at 3400V	Rated perf. at 3400V (in kW)	Type	Type IP65	Type

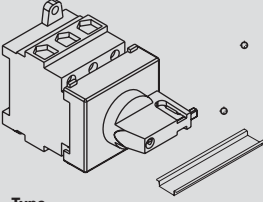
3-pole  	16	5,5	7,5	<b>E</b> NLT 16/ 3E/ Z33 HLT 16/ 3E/ Z33	<b>ZM</b> NLT 16/ 3ZM/ Z33 HLT 16/ 3ZM/ Z33	<b>V</b> NLT 16/ 3V/ Z33/ Z45 HLT 16/ 3V/ Z33/ Z45
	25	7,5	9,5	NLT 25A/ 3E/ Z33 HLT 25A/ 3E/ Z33	NLT 25A/ 3ZM/ Z33 HLT 25A/ 3ZM/ Z33	NLT 25A/ 3V/ Z33/ Z45 HLT 25A/ 3V/ Z33/ Z45
	32	9,5	11,5	NLT 32/ 3E/ Z33 HLT 32/ 3E/ Z33	NLT 32/ 3ZM/ Z33 HLT 32/ 3ZM/ Z33	NLT 32/ 3V/ Z33/ Z45 HLT 32/ 3V/ Z33/ Z45
	40	11,0	20,0	NLT 40/ 3E/ Z33 HLT 40/ 3E/ Z33	NLT 40/ 3ZM/ Z33 HLT 40/ 3ZM/ Z33	NLT 40/ 3V/ Z33/ Z45 HLT 40/ 3V/ Z33/ Z45
	63	18,5	22,5	NLT 63/ 3E/ Z33 HLT 63/ 3E/ Z33	NLT 63/ 3ZM/ Z33 HLT 63/ 3ZM/ Z33	NLT 63/ 3V/ Z33/ Z45 HLT 63/ 3V/ Z33/ Z45
	80	22,0	30,0	NLT 80/ 3E/ Z33 HLT 80/ 3E/ Z33	NLT 80/ 3ZM/ Z33 HLT 80/ 3ZM/ Z33	NLT 80/ 3V/ Z33/ Z45 HLT 80/ 3V/ Z33/ Z45
	100	30,0	37,0	NLT 100/ 3E/ Z33 HLT 100/ 3E/ Z33		NLT 100/ 3V/ Z33/ Z45 HLT 100/ 3V/ Z33/ Z45
	125	37,0	45,0	NLT 125/ 3E/ Z33 HLT 125/ 3E/ Z33		NLT 125/ 3V/ Z33/ Z45 HLT 125/ 3V/ Z33/ Z45
	180	75,0	90,5	NLT 180/ 3E/ Z20 HLT 180/ 3E/ Z20		NLT 180/ 3V/ Z20/ Z65 HLT 180/ 3V/ Z20/ Z65
	250	110,0	132,0	NLT 250/ 3E/ Z20 HLT 250/ 3E/ Z20		NLT 250/ 3V/ Z20/ Z65 HLT 250/ 3V/ Z20/ Z65

4-pole  	16	5,5	7,5	<b>E</b> NLT 16/ 4E/ Z33 HLT 16/ 4E/ Z33	<b>ZM</b> NLT 16/ 4ZM/ Z33 HLT 16/ 4ZM/ Z33	<b>V</b> NLT 16/ 4V/ Z33/ Z45 HLT 16/ 4V/ Z33/ Z45
	25	7,5	9,5	NLT 25A/ 4E/ Z33 HLT 25A/ 4E/ Z33	NLT 25A/ 4ZM/ Z33 HLT 25A/ 4ZM/ Z33	NLT 25A/ 4V/ Z33/ Z45 HLT 25A/ 4V/ Z33/ Z45
	32	9,5	11,5	NLT 32/ 4E/ Z33 HLT 32/ 4E/ Z33	NLT 32/ 4ZM/ Z33 HLT 32/ 4ZM/ Z33	NLT 32/ 4V/ Z33/ Z45 HLT 32/ 4V/ Z33/ Z45
	40	11,0	20,0	NLT 40/ 4E/ Z33 HLT 40/ 4E/ Z33	NLT 40/ 4ZM/ Z33 HLT 40/ 4ZM/ Z33	NLT 40/ 4V/ Z33/ Z45 HLT 40/ 4V/ Z33/ Z45
	63	18,5	22,5	NLT 63/ 4E/ Z33 HLT 63/ 4E/ Z33	NLT 63/ 4ZM/ Z33 HLT 63/ 4ZM/ Z33	NLT 63/ 4V/ Z33/ Z45 HLT 63/ 4V/ Z33/ Z45
	80	22,0	30,0	NLT 80/ 4E/ Z33 HLT 80/ 4E/ Z33	NLT 80/ 4ZM/ Z33 HLT 80/ 4ZM/ Z33	NLT 80/ 4V/ Z33/ Z45 HLT 80/ 4V/ Z33/ Z45
	100	30,0	37,0	NLT 100/ 4E/ Z33 HLT 100/ 4E/ Z33		NLT 100/ 4V/ Z33/ Z45 HLT 100/ 4V/ Z33/ Z45
	125	37,0	45,0	NLT 125/ 4E/ Z33 HLT 125/ 4E/ Z33		NLT 125/ 4V/ Z33/ Z45 HLT 125/ 4V/ Z33/ Z45
	180	75,0	90,5	NLT 180/ 4E/ Z20 HLT 180/ 4E/ Z20		NLT 180/ 4V/ Z20/ Z65 HLT 180/ 4V/ Z20/ Z65
	250	110,0	132,0	NLT 250/ 4E/ Z20 HLT 250/ 4E/ Z20		NLT 250/ 4V/ Z20/ Z65 HLT 250/ 4V/ Z20/ Z65

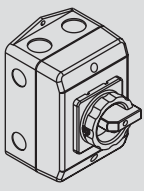
6-pole  	16	5,5	7,5	<b>E</b> NLT 20/ 6E/ Z33 HLT 20/ 6E/ Z33		<b>V</b> NLT 20/ 6V/ Z33/ Z45 HLT 20/ 6V/ Z33/ Z45
	25	7,5	9,5	NLT 25/ 6E/ Z33 HLT 25/ 6E/ Z33		NLT 25/ 6V/ Z33/ Z45 HLT 25/ 6V/ Z33/ Z45
	32	9,5	11,5	NLT 32/ 6E/ Z33 HLT 32/ 6E/ Z33		NLT 32/ 6V/ Z33/ Z45 HLT 32/ 6V/ Z33/ Z45
	40	11,0	20,0	NLT 40/ 6E/ Z33 HLT 40/ 6E/ Z33		NLT 40/ 6V/ Z33/ Z45 HLT 40/ 6V/ Z33/ Z45
	63	18,5	22,5	NLT 63/ 6E/ Z33 HLT 63/ 6E/ Z33		NLT 63/ 6V/ Z33/ Z45 HLT 63/ 6V/ Z33/ Z45
	80	22,0	30,0	NLT 80/ 6E/ Z33 HLT 80/ 6E/ Z33		NLT 80/ 6V/ Z33/ Z45 HLT 80/ 6V/ Z33/ Z45
	100	30,0	37,0	NLT 100/ 6E/ Z33 HLT 100/ 6E/ Z33		NLT 100/ 6V/ Z33/ Z45 HLT 100/ 6V/ Z33/ Z45
	125	37,0	45,0	NLT 125/ 6E/ Z33 HLT 125/ 6E/ Z33		NLT 125/ 6V/ Z33/ Z45 HLT 125/ 6V/ Z33/ Z45
	180	75,0	90,5	NLT 180/ 6E/ Z20 HLT 180/ 6E/ Z20		NLT 180/ 6V/ Z20/ Z65 HLT 180/ 6V/ Z20/ Z65
	250	110,0	132,0	NLT 250/ 6E/ Z20 HLT 250/ 6E/ Z20		NLT 250/ 6V/ Z20/ Z65 HLT 250/ 6V/ Z20/ Z65

# On Load Change-Over Switches

**DIN-Railmounting** **Maintenance switch, plastic enclosed**



**Type**



**Type**  
IP65

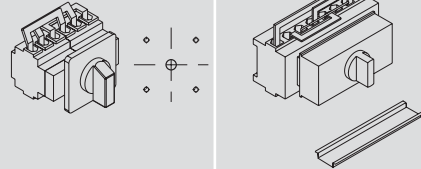
<b>T</b>	NLT 16/ 3T/ Z20 HLT 16/ 3T/ Z20 NLT 25A/ 3T/ Z20 HLT 25A/ 3T/ Z20 NLT 32/ 3T/ Z20 HLT 32/ 3T/ Z20 NLT 40/ 3T/ Z20 HLT 40/ 3T/ Z20 NLT 63/ 3T/ Z20 HLT 63/ 3T/ Z20 NLT 80/ 3T/ Z20 HLT 80/ 3T/ Z20 NLT 100/ 3T/ Z20 HLT 100/ 3T/ Z20 NLT 125/ 3T/ Z20 HLT 125/ 3T/ Z20	RLT 16/ 3PM-D1/ Z33 RLT 25A/ 3PM-D1/ Z33 RLT 32/ 3PM-D1/ Z33 RLT 40/ 3PM-D1/ Z33 RLT 63/ 3PM-D2/ Z33 RLT 80/ 3PM-D2/ Z33 RLT 100/ 3PM-D3/ Z33 RLT 125/ 3PM-D3/ Z33 RLT 180/ 3K4/ Z20 RLT 250/ 3K4/ Z20
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<b>T</b>	NLT16/ 4T/ Z20 HLT16/ 4T/ Z20 NLT25A/ 4T/ Z20 HLT25A/ 4T/ Z20 NLT32/ 4T/ Z20 HLT32/ 4T/ Z20 NLT40/ 4T/ Z20 HLT40/ 4T/ Z20 NLT63/ 4T/ Z20 HLT63/ 4T/ Z20 NLT80/ 4T/ Z20 HLT80/ 4T/ Z20 NLT100/ 4T/ Z20 HLT100/ 4T/ Z20 NLT125/ 4T/ Z20 HLT125/ 4T/ Z20	RLT 16/ 4PM-D1/ Z33 RLT 25A/ 4PM-D1/ Z33 RLT 32/ 4PM-D1/ Z33 RLT 40/ 4PM-D1/ Z33 RLT 63/ 4PM-D2/ Z33 RLT 80/ 4PM-D2/ Z33 RLT 100/ 4PM-D3/ Z33 RLT 125/ 4PM-D3/ Z33 RLT 180/ 4K4/ Z20 RLT 250/ 4K4/ Z20
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<b>T</b>	NLT20/ 6T/ Z20 HLT20/ 6T/ Z20 NLT25/ 6T/ Z20 HLT25/ 6T/ Z20 NLT32/ 6T/ Z20 HLT32/ 6T/ Z20 NLT40/ 6T/ Z20 HLT40/ 6T/ Z20 NLT63/ 6T/ Z20 HLT63/ 6T/ Z20 NLT80/ 6T/ Z20 HLT80/ 6T/ Z20 NLT100/ 6T/ Z20 HLT100/ 6T/ Z20 NLT125/ 6T/ Z20 HLT125/ 6T/ Z20	RLT 20/ 6PM-D1/ Z33 RLT 25/ 6PM-D2/ Z33 RLT 32/ 6PM-D2/ Z33 RLT 40/ 6PM-D2/ Z33 RLT 63/ 6PM-D3/ Z33 RLT 80/ 6PM-D3/ Z33 RLT 100/ 6PM-D3/ Z33 RLT 125/ 6PM-D3/ Z33 RLT 180/ 6K4/ Z20 RLT 250/ 6K4/ Z20
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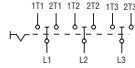
**Connection Diagram**

Thermal rated current $I_{th}$ (in A)	AC3	AC23	4-Hole mounting	DIN-Railmounting
	Rated perf. at 3400V (in kW)			
	Rated perf. at 3400V (in kW)			



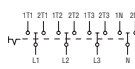
**Type**

**3-pole**



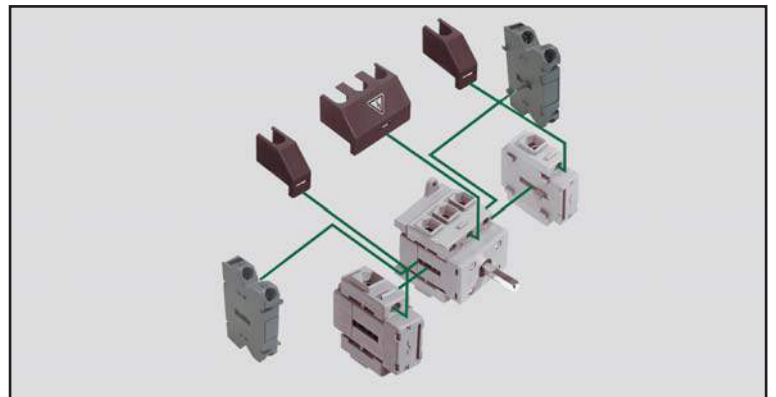
25	7,5	9,5	<b>E</b> ULT 25/ 3E	ULT 25/ 3T
32	9,5	11,5	ULT 32/ 3E	ULT 32/ 3T
40	11,0	20,0	ULT 40/ 3E	ULT 40/ 3T
63	18,5	22,5	ULT 63/ 3E	ULT 63/ 3T
80	22,0	30,0	ULT 80/ 3E	ULT 80/ 3T
100	30,0	37,0	ULT 100/ 3E	ULT 100/ 3T
125	37,0	45,0	ULT 125/ 3E	ULT 125/ 3T
180	75,0	90,5	ULT 180/ 3E	
250	110,0	132,0	ULT 250/ 3E	


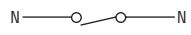
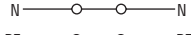

**4-pole**



25	7,5	9,5	<b>E</b> ULT 25/ 4E	<b>T</b> ULT 25/ 4T
32	9,5	11,5	ULT 32/ 4E	ULT 32/ 4T
40	11,0	20,0	ULT 40/ 4E	ULT 40/ 4T
63	18,5	22,5	ULT 63/ 4E	ULT 63/ 4T
80	22,0	30,0	ULT 80/ 4E	ULT 80/ 4T
100	30,0	37,0	ULT 100/ 4E	ULT 100/ 4T
125	37,0	45,0	ULT 125/ 4E	ULT 125/ 4T
180	75,0	90,5	ULT 180/ 4E	
250	110,0	132,0	ULT 250/ 4E	

## Additional and Auxiliary contacts



Additional contacts	Switch size	Constr. form E + ZM	Const. Form V + T
<b>Neutral Pole (early make)</b> 	.LT 16, 20A, 25A	NVG 20AE	NVG 20AV
	.LT 25-40	NVG 40E	NVG 40V
	.LT 63-80	NVG 80E	NVG 80V
	.LT 100-125	NVG 125E	NVG 125V
	.LT 180-250	NVG 250E	NVG 250V
<b>Neutral Pole (simultaneous make)</b> 	.LT 16, 20A, 25A	NGG 20AE	NGG 20AV
	.LT 25-40	NGG 40E	NGG 40V
	.LT 63-80	NGG 80E	NGG 80V
	.LT 100-125	NGG 125E	NGG 125V
	.LT 180-250	NGG 250E	NGG 250V
<b>Neutral Pole (solid neutral)</b> 	.LT 16, 20A, 25A	N / PE 20AE	N / PE 20AV
	.LT 25-40	N / PE 40E	N / PE 40V
	.LT 63-80	N / PE 80E	N / PE 80V
	.LT 100-125	N / PE 125E	N / PE 125V
	.LT 180-250	N / PE 250E	N / PE 250V
<b>Auxiliary contacts (1NO + 1NC)</b>			
	.LT 16-250	HE11	HV11

Our range of maintenance bypass key-switches aims to offer key control to improve not only the safety aspect of bypass switching but ensuring only authorised personnel are able to use the switch when required thus maintaining the integrity of a sound UPS and maintenance system.

We specialise in 1 to 4 pole, 2 to 4 position UPS bypass switches. Additionally we build rotary cam switches and reverse star delta switches, designed to customer specifications. All of our products are manufactured to the highest standard using the superior quality materials from Germany. Ranging up to 1200 Amperes, our MBS units are the first and last word in electrical safety and control.

Options Include:

Maintenance Bypass switches may be purchased as:

1. Switch only
2. Switch in enclosure (plastic or metal or rack mount)
3. Switch in enclosure, wired to terminals

Interlock:

1. Mechanical (push button) interlock with auxiliaries. This requires that the button be depressed in order to operate the switch.
2. Key interlock.
3. Electrical (solenoid) interlock with auxiliaries. This requires the switch to be in predetermined set electrical conditions before the switch can be made operational.



Figure 1 UPA3/600V/Z46



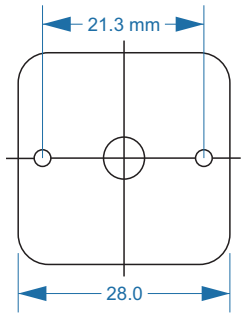
Figure 1 UPA3/100E/Z31/H11 side mounted in a 400x400x300mm metal enclosure. Note: May be front mounted.



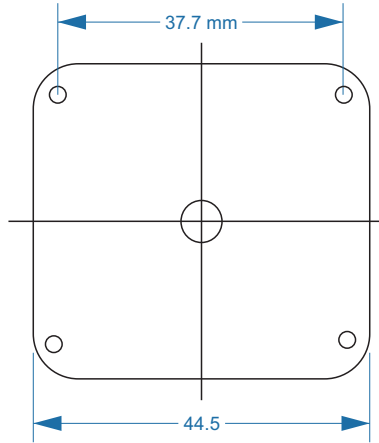
Figure 1 Side view of UPC3/100E



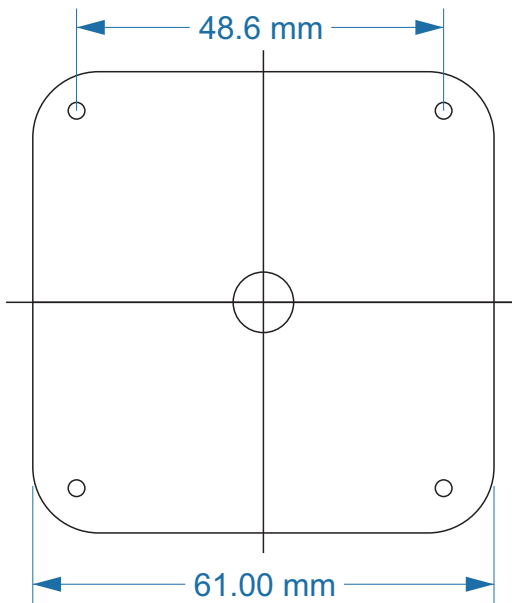
# Bypass Switchgear sizes



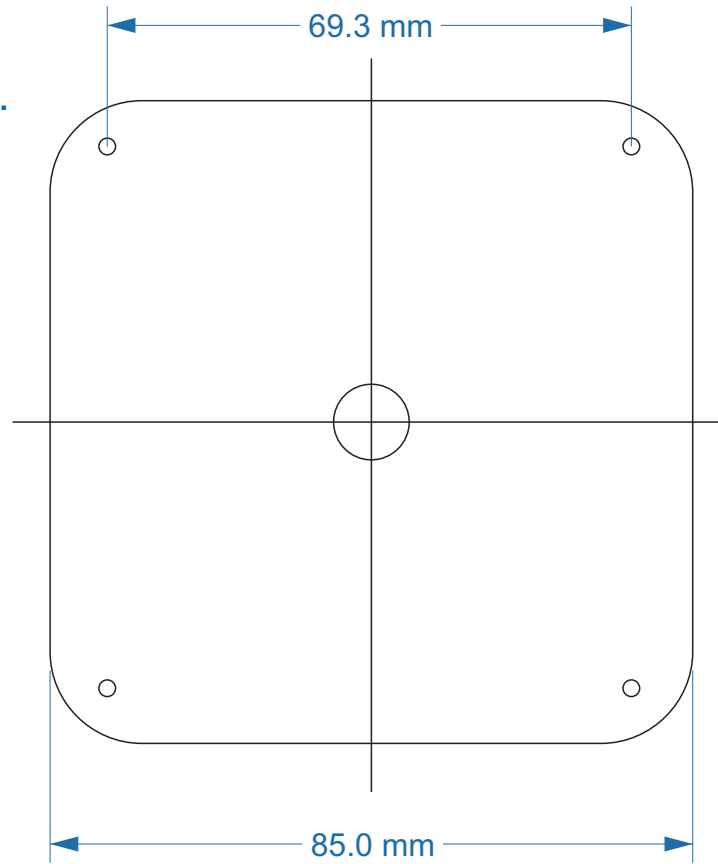
**D00- This is the smallest size and will take 0 Amps to 10 Amps.**



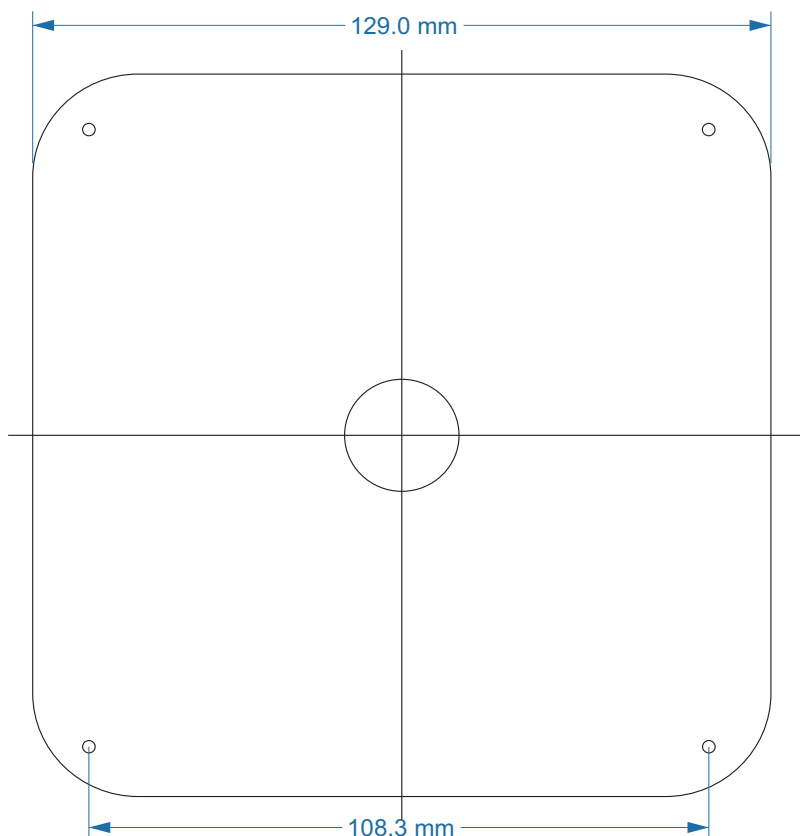
**D0- This is the second smallest size and will take up to 16 Amps.**



**D1- This size will take up to 63 Amps.**



**D2- This size will take up to 160 Amps.**



**D3- This size will take in excess of 160 Amps, catering for larger required current ratings.**

## Keyswitch contact configurations available as standard

Key Movement	Switch Function	Type Number	Description
		A 1/12TA or TP	OFF - ON Switch, turn key clockwise, 1 and 2 are CLOSED and stay CLOSED until key is returned to Normal position. *Key is captive until returned to Normal position or OFF.
		AR 1/12TA or TP	OFF - ON Switch, turn key clockwise, 1 and 2 are CLOSED and stay CLOSED until key is released. On release 1 and 2 spring return to OPEN, key spring returns to the Normal.
		AH 1/12TA or TP	OFF - ON Switch, turn key clockwise, 1 and 2 are CLOSED and HOLD CLOSED. Key spring returns to the Normal position and may be removed, 1 and 2 are still CLOSED. To switch OFF turn key Anti-Clockwise, 1 and 2 are OPEN and HOLD OPEN.
		U 1/12TA or TP	CHANGE OVER SWITCH with centre OFF position, turn key clockwise to CLOSE 3 and 2, anti_clockwise to CLOSE 1 and 2. Key is captive until returned to Normal position.
		URR 1/12TA or TP	CHANGE OVER SWITCH with centre OFF position, turn key clockwise to CLOSE 3 and 2, or anti_clockwise to CLOSE 1 and 2 until Key is released. On release the switch spring returns to the OFF condition, key spring returns to Normal position.
		UH 1/12TA or TP	CHANGE OVER SWITCH without (OFF) position, turn key clockwise to CLOSE 3 and 2 switch will HOLD 3 and 2 CLOSED while key is released and maybe removed. Turn key anti-clockwise to OPEN 3 and 2 and CLOSE 1 and 2 switch will HOLD 1 and 2 CLOSED.
		WS 1/12TA or TP	CHANGE OVER SWITCH without OFF position, turn key clockwise to CLOSE 3 and 2 key is captive until returned to the Normal position, 1 and 2 are CLOSED in the Normal position.
		WSR 1/12TA or TP	CHANGE OVER SWITCH without OFF position, turn key clockwise to CLOSE 3 and 2 while key is held over. On release the switch returns to the Normal position, 1 and 2 are CLOSED in Normal.
		CR 1/12TA or TP	NORMALLY CLOSED SWITCH, 1 and 2 are normally closed, turn the key clockwise to open 1 and 2. On release the key will return to the normal Position, 1 and 2 will close.

All Switches may supplied in multi pole versions, just replace the 1 by number of poles req. (eg. A 3/12... or URR 2/12...)  
The [A] stands for Aluminium, [P] for Plastic Mounting Hardware, use P for Voltages over 32 Volts for better Insulation.

