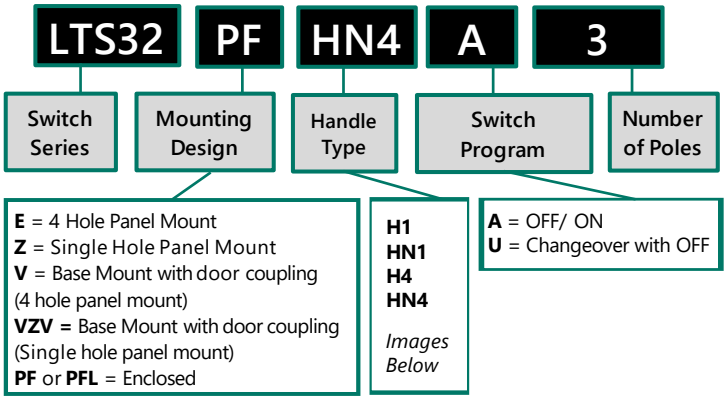
AC Main & Disconnect Switches

Series LTS20 to LT160 (20A to 200A)

Series		4-Hole Panel Mount	Single-Hole Mount (22.5mm)	Base Mount w/ Door Coupling (Handle 22.5mm Single Hole Mount)	Base Mount w/ DoorCoupling (Handle 4-Hole Mount)	Modular Switch (Base Mount)	Plastic Enclosed
		IP66	IP66	IP66	IP66	IP40	IP66
LTS20	20A	LTS20 E..	LTS20 Z..	LTS20 VZV..	LTS20 V..	LTS20 SMA..	LTS20 PF(L)[1]..
LTS25	25A	LTS25 E..	LTS25 Z..	LTS25 VZV..	LTS25 V..	LTS25 SMA..	LTS25 PF(L)[1]..
LTS32	32A	LTS32 E..	LTS32 Z..	LTS32 VZV..	LTS32 V..	LTS32 SMA..	LTS32 PF(L)[1]..
LTS40	40A	LTS40 E..	LTS40 Z..	LTS40 VZV..	LTS40 V..	LTS40 SMA..	LTS40 PF(L)[1]..
LTS63	63A	LTS63 E..	-	LTS63 VZV..	LTS63 V..	LTS63 SMA..	LTS63 PFL..
LTS80	80A	LTS80 E..	-	LTS80 VZV..	LTS80 V..	LTS80 SMA..	LTS80 PFL..
LTS85	85A	LTS85 E..	-	LTS85 VZV..	LTS85 V..	LTS85 SMA..	LTS85 PFL..
LTS100	100A	LTS100 E..	-	LTS100 VZV..	LTS100 V..	LTS100 SMA..	LTS100 PFL..
LTS125	125A	LTS125 E..	-	LTS125 VZV..	LTS125 V..	LTS125 SMA..	LTS125 PFL..
LT160	200A	LT160 E..	-		LT160 V..		LT160 PF..

1) PFL... Larger Enclosure

Ordering Code Example:



H1 = 48x48mm silver plate with black, 1-padlock handle

HN1 = 48x48mm yellow plate with red, 1-padlock handle

H4 = 64x64mm silver plate with black 3-padlock handle

HN4 =64x64mm yellow plate with red 3-padlock handle

Switching Programs:

On-Off Switch 3-pole	**A3**
On-Off Switch 4-pole	**A4**
On-Off Switch 6-pole	**A6**
On-Off Switch 8-pole	**A8**
Changeover Switches 3-pole	**U3**
Changeover Switches 4-pole	**U4**
On-Off Switch 3-pole	**T300** *(for LT160)*
On-Off Switch 4-pole	**T400** *(for LT160)*

Accessories Include:

4th Add-on Neutral Switching Pole

Auxiliary Contact Blocks

PE-Terminal

N-Terminal

Terminal Covers

Additional Escutcheon Plate Tab

Terminal

B&J-USA
BENEDICT · BENEDIKT & JÄGER

www.bnj-usa.com

Technical Data

Data according to IEC 947-3, IEC 947-5-1, VDE 0660, EN 60947-3, EN 60947-5-1

Type				LTS20	LTS25	LTS32	LTS40	LTS63	LTS80	LTS85	LTS100	LTS125	LT160
Main contacts													
Rated thermal current I_{th} open			A	20	25	32	40	63	80	85	100	125	160
Rated thermal current I_{the} enclosed			A	20	25	32	40	63	80	85	100	110	160
Rated insulation voltage U_i [1]			V	690	690	690	690	690	690	1000 [3]	1000 [3]	1000 [3]	1000 [3]
Rated operational current I_e AC21A			A	20	25	32	40	63	80	85	100	125	160
Rated operational voltage U_e max. AC21A			V	690	690	690	690	690	690	1000	1000	1000	690
Making capacity I_{eff}		3x380-440V	A	160	190	220	300	370	440	600	725	850	1050
Breaking capacity		3x220-240V	A	160	180	200	250	330	380	480	580	680	900
		3x380-440V	A	160	180	200	250	330	380	480	580	680	850
		3x660-690V	A	80	110	140	170	190	220	250	330	420	340
Disconnection property performed up to			V	690	690	690	690	690	690	1000	1000	1000	1000
Motor Switch	AC3	3x400V	A	12	16	23	30	37	37	45	60	72	85
Motor Switch	AC3	3x220-240V	kW	3	4	5,5	7,5	11	11	15	18,5	22	30
Direct switching of single motors		3x380-440V	kW	5,5	7,5	11	15	18,5	18,5	22	30	37	45
		3x660-690V	kW	5,5	7,5	11	15	18,5	18,5	18,5	22	30	37
Main Switch	AC23	3x400V	A	16	20	25	32	45	45	60	72	85	110
Motor Switch,	AC23A,	3x220-240V	kW	4	5,5	7,5	9	15	15	18,5	22	30	30
Main Switch,	AC23B	3x380-440V	kW	7,5	10	12,5	16	22	22	30	37	45	55
Safety Switch		3x660-690V	kW	5,5	7,5	11	15	18,5	18,5	22	30	37	37
Rated conditional short-circuit current		400V	kA_{eff}	10	10	10	10	10	10	10	10	5	30
Max. fuse size gL (gG)		400V	A	25	35	40	40	63	80	100	100	125	160
Rated conditional short-circuit current		690V	kA_{eff}	10	5	3	1	5	1,5	10	10	5	30
Max. fuse size gL (gG)		690V	A	20	25	32	40	63	80	85	100	125	-
Mechanical life			$x10^3$	200	200	200	200	100	100	100	100	100	100
Electrical life			$x10^3$	5	5	5	5	4	4	3	3	3	2
Rated short-time withstand current (1sec. current)			A	250	300	400	500	600	850	1000	1200	1500	3000
Power loss per pole AC21 = I_{th}	P/pole [W]		E, Z	0,322	0,503	0,824	1,288	2,739	4,416	3,851	5,330	8,328	-
			V, SMA, PF	0,364	0,569	0,933	1,458	2,739	4,416	3,851	5,330	8,328	-
	R/pole [mOhm]		E, Z	0,805	0,805	0,805	0,805	0,690	0,690	0,533	0,533	0,533	-
			V, SMA, PF	0,911	0,911	0,911	0,911	0,690	0,690	0,533	0,533	0,533	-
Maximum ambient temperature	Operation	open		-40°C to +60°C (90°C) [5]									+60°C
		enclosed		-40°C to +40°C									+40°C
	Storage			-50°C to +90°C [6]									+90°C [6]
Cable cross sections			mm^2	0,5 - 10				1 - 25 [4]		4 - 50			max.95
solid or stranded			AWG	20 - 8 (10)				16 - 3 (10)		10 - 00 (10)			max.3/0
flexible			mm^2	0,5 - 6				4 - 16 [4]		10 - 35			max.70
			AWG	20 - 10				16 - 6		8 - 2			max.2/0
flexible (+ multicore cable end)			mm^2	0,5 - 6				0,75 - 16 [4]		6 - 35			max.50
			AWG	20 - 10				16 - 6		8 - 2			max.1/0
Size of terminal screw				M3,5				M5		M6			M10
Tightening torque			Nm	1,7 - 2,3				2,8 - 4		1,7 - 4,5			14
Auxiliary contacts													
Rated insulation voltage U_i [1]			V	690				690		690			690
Rated thermal current I_{th} , I_{the}			A	10				10		10			16
Switching capacity	AC15	380-450V	A	2,5/1,5				2,5/1,5		2,5/1,5			6/4
	DC13	60-110V	A	2/0,4				2/0,4		2/0,4			-
Rated conditional short-circuit current			kA_{eff}	3				3		3			3
Max. short circuit protection		gL (gG)	A	10				10		10			16
Cable cross sections			mm^2	0,75 - 2,5				0,75 - 2,5		0,75 - 2,5			
solid or stranded			AWG	14 - 12				14 - 12		14 - 12			max.12
flexible (+ multicore cable end)			mm^2	0,75 - 2,5 (1,5)				0,75 - 2,5 (1,5)		0,75 - 2,5 (1,5)			max.2,5
			AWG	18 - 14				18 - 14		18 - 14			max.14

Data according to UL and cUL

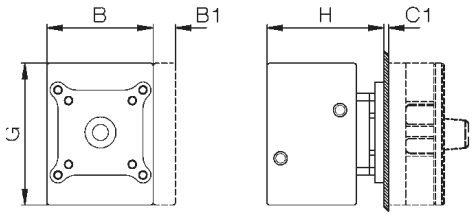
Type				LTS20	LTS25	LTS32	LTS40	LTS63	LTS80	LTS85	LTS100	LTS125	LT160
Rated voltage			V	600	600	600	600	600	600	600	600	600	600
Ampere-Rating "General use"			A	20	25	32	40	63	80	85	100	125	200
DOL-Rating 3-phase		110-120V	HP	1	1,5	2	2	3	5	7,5	10	15	20
		220-240V	HP	3	5	5	5	10	10	20	25	30	40
		440-480V	HP	7,5	10	10	10	20	20	40	50	60	60
		550-600V	HP	10	10	15	15	25	25	50	60	60	60
DOL-Rating 1-phase		110-120V	HP	1	1	1	1	2	2	3	5	7,5	-
		200-208V	HP	1	2	2	2	3	3	7,5	10	10	-
		220-240V	HP	2	2	3	3	5	5	10	15	15	-
Fuse size (RK5)	Manual Motor Controller		A	40	50	50	70	90	110	125	125	125	400 [2]
5kA / 600V	Motor Disconnect		A	40	50	50	50	70	70	125	125	125	400 [2]
Tightening torque			Nm	1,7-2,3	1,7-2,3	1,7-2,3	1,7-2,3	2,8-4	2,8-4	1,7-4,5	1,7-4,5	1,7-4,5	14
			lb.inch	15-20	15-20	15-20	15-20	24-35	24-35	15-40	15-40	15-40	124

1) suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): U_{imp} = 6kV.
2) Fuse RK1 / 10kA / 600V
3) U_{imp} = 8kV
4) LTS63..U. stranded 16mm², flexible 10mm²
5) Derating acc. to cable cross sectio
6) for switches with transparent plates 48 ❐ max. +65°C

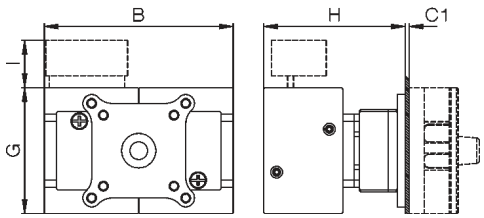
Dimensions (mm)

Main Switches, Switch Disconnectors LT(S)..

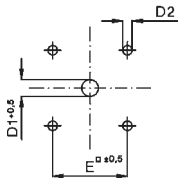
Panel mounting LT(S).. E(HN)..
ON-OFF Switches 3-pole, 4-pole



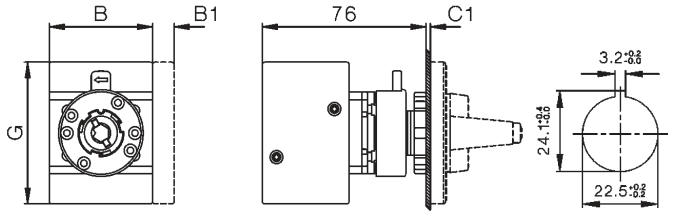
ON-OFF Switches 6-pole, 8-pole
Changeover Switches 3-pole, 4-pole



Mounting holes
Mounting screw:J3631N M=1,2-1,4 Nm

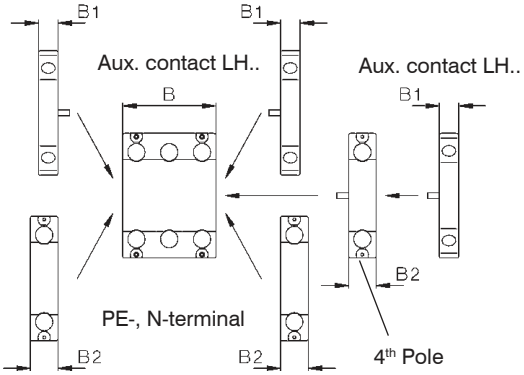


Single hole mounting LTS.. Z(HN)..
ON-OFF Switches 3-pole, 4-pole



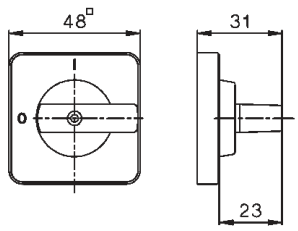
Mounting holes

Mounting of add-on modules LTS20 - LTS80
Panel mounting, Single hole mounting

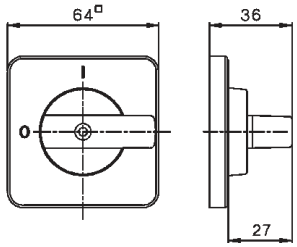


Type	Esc. plate	padlock dev	Changeover ON-OFF A	3-pole B	4-pole B	3-pole 6-pole B	4-pole 8-pole B	aux. contact B1	4. Pole PE B2	C1	D1	D2	E	F	G	H 3,4-pole	3,4-pole 6,8-pole	3,4-pole 6,8-pole I
LTS20-80..	48 □	SV1	48	48	62,5	-	-	10	14,5	1-5	9	5	36	-	64	**49**		24
LTS20-80..	64 □	SV4, SV164	64	48	62,5	97	126	10	14,5	1-5	9	5	48	-	64	49	**74**	
LTS85-125..	64 □	SV4	64	78	78	-	-	10	-	1-5	9	5	48	-	85	55	-	-
LTS85-125..	88 □	SV488	88	78	78	-	-	10	-	1-5	9	6	68	-	85	55	-	-
LT160	88 □	SV34	88	112	150	224	-	-	-	1-4	13-17	6	68	49,3	108	96	**98**	

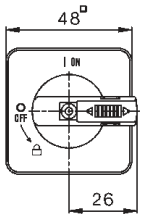
Escutcheon plate
48 □

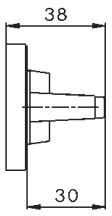


64 □

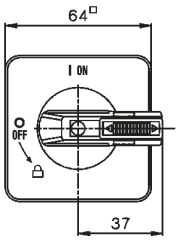


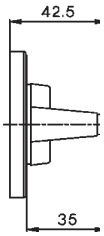
Padlock devices
SV1



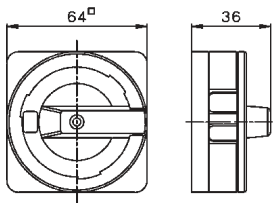


SV164

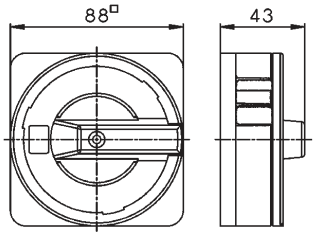




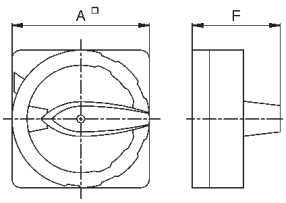
Padlock devices
SV4



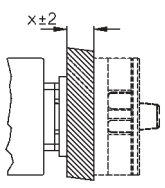
SV488



SV34



Extended Switch Shaft
+VW"x"

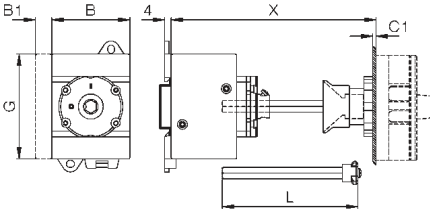


Dimensions (mm)

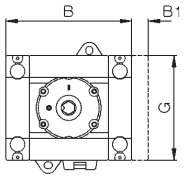
Main Switches, Switch Disconnectors LT(S)..

Base mounting LTS.. VZV(HN)..
ON-OFF Switches 3-pole, 4-pole

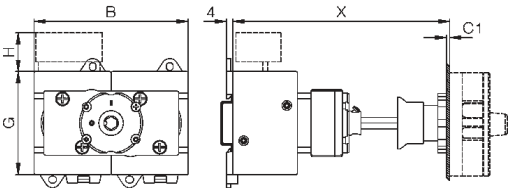
L = X - 40±3 for LTS20 - 80
L = X - 44±3 for LTS85 - 125



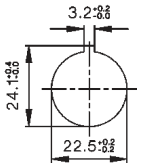
6-pole
for LTS20 - 40 only
L = X - 40±3



ON-OFF Switches 6-pole, 8-pole
Changeover Switches 3-pole, 4-pole
L = X - 60±3

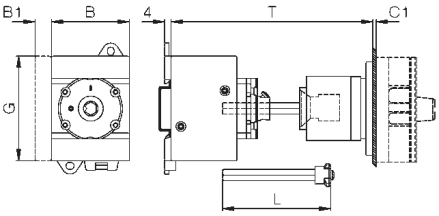


Mounting holes

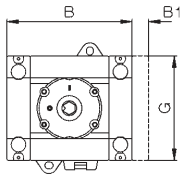


Base mounting LT(S).. V(HN)..
ON-OFF Switches 3-pole, 4-pole

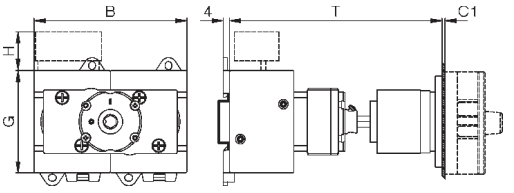
L = T - 60±3 for LTS20 - 80
L = T - 64±3 for LTS85 - 125



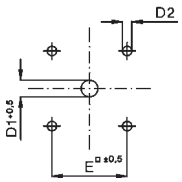
6-pole
for LTS20 - 40 only
L = T - 60±3



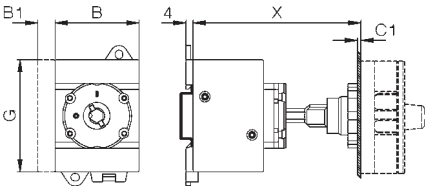
ON-OFF Switches 6-pole, 8-pole
Changeover Switches 3-pole, 4-pole
L = T - 80±3 for LTS20 - 80 only



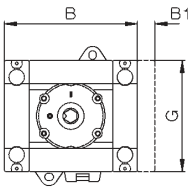
Mounting holes



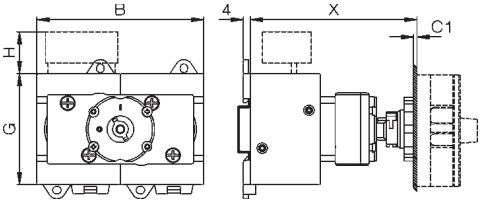
Base mounting LTS.. VZ(HN)..
ON-OFF Switches 3-pole, 4-pole
Preference values for X: 80, 85, 104, 129



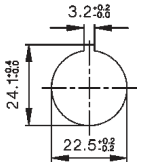
6-pole
for LTS20 - 40 only



ON-OFF Switches 6-pole, 8-pole
Changeover Switches 3-pole, 4-pole

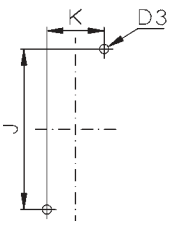


Mounting holes

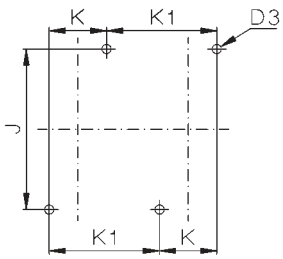


Type	Changeover ON-OFF Escutch. plate or padlock device	A	3-pole B	4-pole B	6-pole B	3,4-pole 8-pole B	aux. contact B1	4 Pole B2	H	C1	D1	D2	D3	E	G	K	K1	J
LTS20 -40	64 □, SV4, SV164	64	48	48	77	97	10	14,5		1-5	9	5	M4	48	64	25	48	70
LTS63, 80	64 □, SV4, SV164	64	48	62,5	97	126	10	14,5		1-5	9	5	M4	48	64	25	48	70
LTS85-125..	64 □, SV4	64	78	78	-	-	10	-		1-5	9	5	M4	48	85	38	-	90
LT125/160	88 □, SV34	88	112	150	224	-	-	-		1-4	13/27[2]	6	M6	68	108	36	-	120

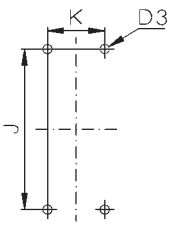
Base mounting
ON-OFF Switches **LTS20 - LTS80**
3-pole, 4-pole
6-pole LTS20 -40



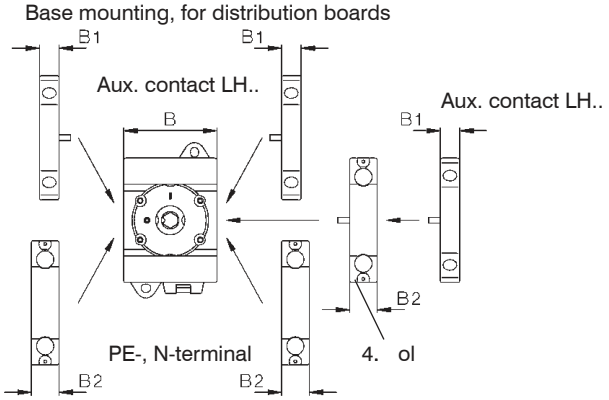
6-pole, 8-pole
Changeover Switches



LTS85-125, LT160
3-pole, 4-pole



Mounting of Accessories LTS20 - LTS80
Base mounting, for distribution boards



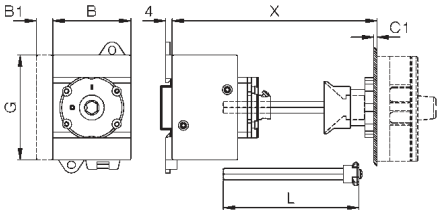
1) Ø 22-25 for T80(100) VH(N)34 .. only
2) Ø 26-30 for T125(160) VH(N)34 .. only

Dimensions (mm)

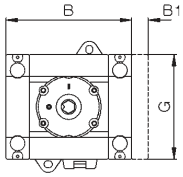
Main Switches, Switch Disconnectors LT(S)..

Base mounting LTS.. VZV(HN)..
ON-OFF Switches 3-pole, 4-pole

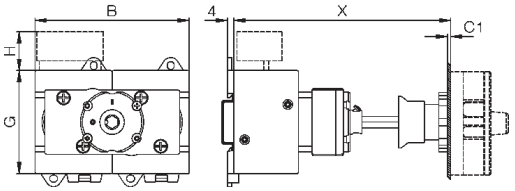
L = X - 40±3 for LTS20 - 80
L = X - 44±3 for LTS85 - 125



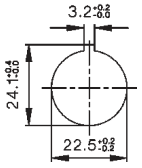
6-pole
for LTS20 - 40 only
L = X - 40±3



ON-OFF Switches 6-pole, 8-pole
Changeover Switches 3-pole, 4-pole
L = X - 60±3

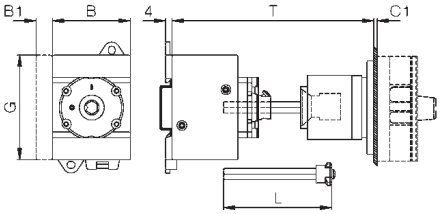


Mounting holes

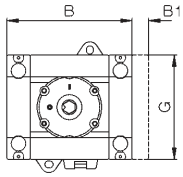


Base mounting LT(S).. V(HN)..
ON-OFF Switches 3-pole, 4-pole

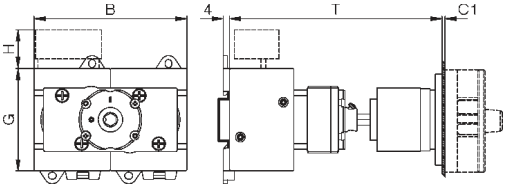
L = T - 60±3 for LTS20 - 80
L = T - 64±3 for LTS85 - 125



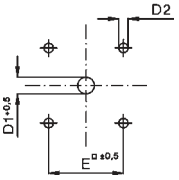
6-pole
for LTS20 - 40 only
L = T - 60±3



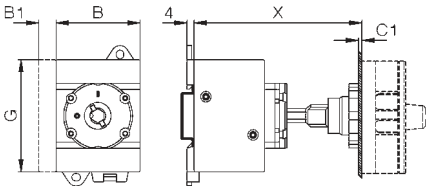
ON-OFF Switches 6-pole, 8-pole
Changeover Switches 3-pole, 4-pole
L = T - 80±3 for LTS20 - 80 only



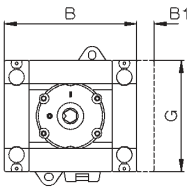
Mounting holes



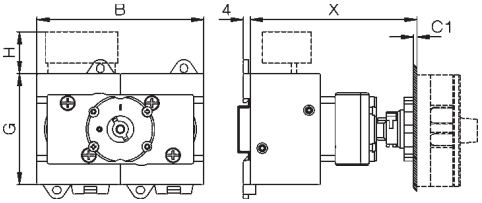
Base mounting LTS.. VZ(HN)..
ON-OFF Switches 3-pole, 4-pole
Preference values for X: 80, 85, 104, 129



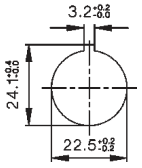
6-pole
for LTS20 - 40 only



ON-OFF Switches 6-pole, 8-pole
Changeover Switches 3-pole, 4-pole



Mounting holes



Type	Escutch. plate or padlock device	A	3-pole B	4-pole B	6-pole B	3,4-pole 8-pole B	aux. contact B1	4-Pole B2	H	C1	D1	D2	D3	E	G	K	K1	J
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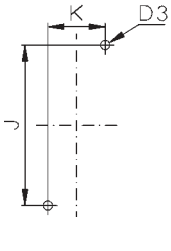
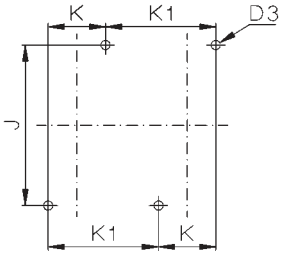
LT125/160	88 □, SV34	88	112	150	224	-	-	-		1-4	13/27[2]	6	M6	68	108	36	-	120

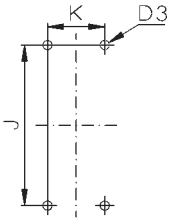
Base mounting
ON-OFF Switches **LTS20 - LTS80**
3-pole, 4-pole
6-pole LTS20 -40



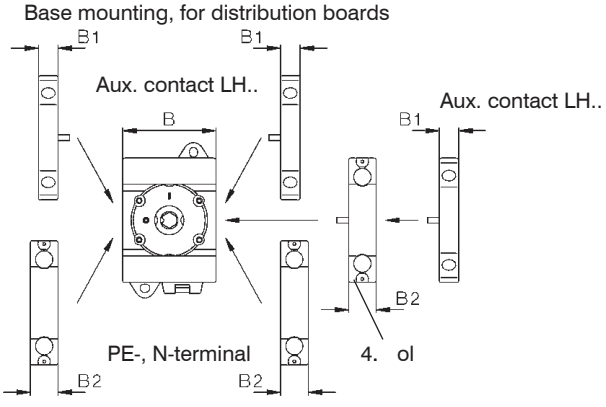
6-pole, 8-pole
Changeover Switches



LTS85-125, LT160
3-pole, 4-pole



Mounting of Accessories LTS20 - LTS80
Base mounting, for distribution boards



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