

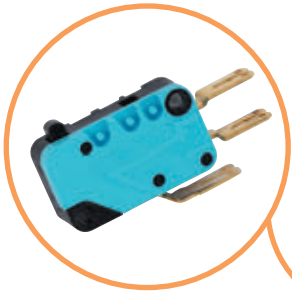
Load Break Switch LBS

Advantages of load break switches LBS

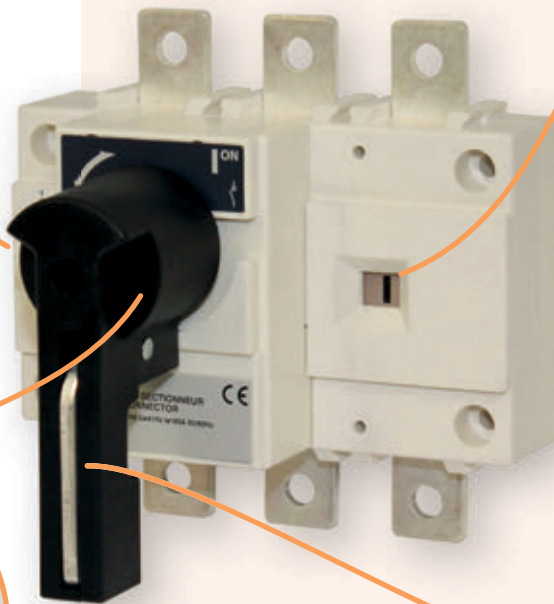
Description

LBS is manually operated 3 pole or 4 pole load break switch in range 160-3200A. It makes and breaks under load conditions and provides safety isolation. LBS is designed for 415 VAC and DC low voltage electrical circuits. LBS switches have been designed, qualified and tested according to the criteria defined by standard IEC 60947-3.

→ Ability to connect auxiliary contacts



→ Double positive break indication given through a position indication window, located directly on the product, and by the operating handle.



→ Position indicator switch power contacts



→ Padlocking external and direct handle

General characteristics

- Double positive break indication given through a position indication window, located directly on the product, and by the operating handle.
- Severe utilisation categories (AC-22 and AC-23).
- High resistance to damp heat (supplied "tropicalised").
- A good centre-to-centre terminal distance (up to 120 mm).
- Connection up to 6x185 mm².

Applications

- Main switchboard.
- Distribution panel.
- Emergency breaking.
- Network coupling.
- Local safety breaking.

Advantages

The LBS's double breaking per pole, achieved through its sliding bar contact system, is a proven design that offers very high durability and short-circuit withstand.

The position indicator is located directly on the sliding bar contact mechanism, ensuring it can be seen in all circumstances.

The use of glass fibre reinforced polyester gives the LBS high mechanical and thermal resistance.

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LBS body (no handle included) 3/4 POLES

Type	Code No.	I _n [A]	Number of poles	Weight [kg]	Packaging [pcs]
LBS 160 3P	004661450	160	3	1,11	1
LBS 250 3P	004661451	250	3	1,71	1
LBS 400 3P	004661452	400	3	4,00	1
LBS 630 3P	004661453	630	3	4,36	1
LBS 800 3P	004661454	800	3	8,63	1
LBS 1000 3P	004661455	1000	3	9,70	1
LBS 1250 3P	004661456	1250	3	9,15	1
LBS 1600 3P	004661457	1600	3	12,70	1
LBS 2000 3P	004661458	2000	3	22,08	1
LBS 2500 3P	004661459	2500	3	22,37	1
LBS 3200 3P	004661460	3200	3	27,54	1
LBS 160 4P	004661461	160	4	1,25	1
LBS 250 4P	004661462	250	4	2,07	1
LBS 400 4P	004661463	400	4	4,87	1
LBS 630 4P	004661464	630	4	5,39	1
LBS 800 4P	004661465	800	4	11,75	1
LBS 1250 4P	004661466	1250	4	12,32	1
LBS 1600 4P	004661467	1600	4	15,89	1
LBS 2500 4P	004661468	2500	4	28,85	1
LBS 3200 4P	004661469	3200	4	33,80	1

In front direct or external front operation



LBS 160 3P



LBS 2000A-3200A 3P

ETISWITCH

Accessories

Direct handle for direct operation

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-DH160/B	Direct handle, black	004661480	LBS 160A	91	1/25
LBS-DH630/B	Direct handle, black	004661481	LBS 250-630A	100	1/25
LBS-DH3200/B (CO)	Direct handle, black	004661482	LBS 800-3200A	295	1/20

Type definition: Handle type / color initials



LBS-DH160/B

LBS-DH630/B

LBS-DH3200/B (CO)

Door interlocked handle IP65 (shaft not included).

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-EH630/G...400/G FLBS	Door interlocked handle, grey front	004661483	LBS 160-630A	250	1/20
LBS-EH1600/G	Door interlocked handle, grey front	004661484	LBS 800-1600A	340	1/10
LBS-EH3200/BL	Door interlocked handle, blue front	004661485	LBS 2000-3200A	1.500	1

Type definition: Handle type / color initials



LBS-EH630/G...400/G FLBS

LBS-EH1600/G

LBS-EH3200/BL

Door interlocked handle IP65 (shaft not included).

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-EH630/YR	Door interlocked handle, red front	004661486	LBS 160-630A	250	1/20
LBS-EH1600/YR	Door interlocked handle, red front	004661487	LBS 800-1600A	340	1/10
LBS-EH3200/YR	Door interlocked handle, red front	004661488	LBS 2000-3200A	1.500	1

Type definition: Handle type / color initials



LBS-EH630/YR

LBS-EH1600/YR

LBS-EH3200/YR

Load Break Switch LBS

Characteristics according to IEC 60947-3

Type			LBS 160	LBS 250	LBS 400	LBS 630	LBS 800	LBS 1000	LBS 1250	LBS 1600	LBS 2000	LBS 2500	LBS 3200
Current	(I _n)		160A	250A	400A	630A	800A	1000A	1250A	1600A	2000A	2500A	3200A
Rated insulation voltage	(U _i)	(V)	800	800	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage	(U _{imp})	(kV)	8	8	12	12	12	12	12	12	12	12	12
Thermal current 40°C	(I _{th})	(A)	160	250	400	630	800	1000	1250	1600	2000	2500	3200
Rated operational currents (I _e)	AC-20 A/B ⁽¹⁾	415V AC	(A) 160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
	AC-21 A/B ⁽¹⁾	415V AC	(A) 160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
	AC-22 A/B ⁽¹⁾	415V AC	(A) 160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	2500/3200
	AC-23 A/B ⁽¹⁾	415V AC	(A) 160/160	250/250	400/400	500/500	800/800	1000/1000	1250/1250	1250/1250	1600/1600	1600/1600	1600/1600
	DC-20 A/B ⁽¹⁾	220V DC	(A) 160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
	DC-21 A/B ⁽¹⁾	220V DC	(A) 160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1250/1600	2000/2000	2000/2500	2000/2500
	DC-22 A/B ⁽¹⁾	220V DC	(A) 160/160	250/250	400/400	500/500	800/800	1000/1000	1250/1250	1250/1250	1250/1600	1250/1600	1250/1600
	DC-23 A/B ⁽¹⁾	220V DC	(A) 125/125	200/200	400/400	500/500	800/800	1000/1000	1250/1250	1250/1250	1250/1250	1250/1250	1250/1250
	DC-20 A/B ⁽¹⁾	440V DC	(A) 160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
	DC-21 A/B ⁽¹⁾	440V DC	(A) 160 ⁽³⁾ /160 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	400 ⁽³⁾ /400 ⁽³⁾	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽³⁾ /800 ⁽³⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1600 ⁽⁴⁾	2000 ⁽⁴⁾ /2000 ⁽⁴⁾	2000 ⁽⁴⁾ /2500 ⁽⁴⁾	2500 ⁽⁴⁾ /3200 ⁽⁴⁾
	DC-22 A/B ⁽¹⁾	440V DC	(A) 125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	400 ⁽³⁾ /400 ⁽³⁾	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽³⁾ /800 ⁽³⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾
	DC-23 A/B ⁽¹⁾	440V DC	(A) 125 ⁽⁴⁾ /125 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	400 ⁽⁴⁾ /400 ⁽⁴⁾	500/500	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾
	DC-20 A/B ⁽¹⁾	500V DC	(A) 160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3250/3250
	DC-21 A/B ⁽¹⁾	500V DC	(A) 125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾	400 ⁽³⁾ /400 ⁽³⁾	500 ⁽³⁾ /500 ⁽³⁾	800 ⁽³⁾ /800 ⁽³⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1600 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾
	DC-22 A/B ⁽¹⁾	500V DC	(A) 125 ⁽⁴⁾ /125 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	315 ⁽⁴⁾ /400 ⁽⁴⁾	500 ⁽⁴⁾ /500 ⁽⁴⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾
DC-23 A/B ⁽¹⁾	500V DC	(A) 125 ⁽⁴⁾ /125 ⁽⁴⁾	200 ⁽⁴⁾ /200 ⁽⁴⁾	315 ⁽⁴⁾ /400 ⁽⁴⁾	500 ⁽⁴⁾ /500 ⁽⁴⁾	800 ⁽⁴⁾ /800 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1250 ⁽⁴⁾ /1250 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	1000 ⁽⁴⁾ /1000 ⁽⁴⁾	
Operational power in AC 23 ^{(1) (5)}	415V AC	(kW)	80/80	132/132	220/220	280/280	450/450	560/560	710/710	710/710	710/710	710/710	710/710
Reactive power ⁽⁵⁾	400 V	(kVAr)	75	115	185	290	365	460	-	-	-	-	-
Short-circuit capacity I _{cw}	1 s.	(kA)	7	9	13	13	35	35	35	50	50	50	50
	0,25 s.	(kA)	11,9	15,3	26	26	73,5	73,5	73,5	75	80	80	80
Fuse protected short-circuit withstand (kA rms prospective)													
Associated fuse rating ⁽⁶⁾		(A)	160	250	400	630	800	1000	1250	2x800	2x1000	2x1250	-
Prospective short-circuit current		(kA)	100	50	100	70	50	100	100	100	100	100	-
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s													
Rated short-time withstand current I _{cw}	0,3 s.	(kA)	15	17	25	25	50	65	65	100	100	100	100
Connection													
Minimum Cu cable cross-section	mm ²		50	95	185	2x150	2x185	2x240	-	-	-	-	-
Maximum Cu cable cross-section	mm ²		95	150	240	2x300	2x300	4x185	4x185	4x185	-	-	-
Minimum Cu busbar cross-section	mm		-	-	-	2x30x5	2x40x5	2x50x5	2x60x5	2x80x5	3x100x5	4x100x5	4x100x5
Maximum Cu busbar width	mm		25	32	40	50	63	63	63	100	100	100	100
Tightening torque min/max	Nm		9/-	20/-	20/-	20/-	40/45	40/45	40/45	40/45	40/45	40/-	40/-
Operating effort	Nm		6,5	10	14,5	14,5	37	37	37	56	75	75	75
Durability (number of operating cycles)	cycles		10 000	10 000	10 000	10 000	3 000	3 000	3 000	4 000	3 000	3 000	3 000
Power dissipation	W/pole		3	5,8	10,8	30,9	39,7	42	80	122	140	205	340

⁽¹⁾ Category with index A = frequent operation - Category with index B = infrequent operation.

⁽²⁾ With terminal shrouds or phase barrier.

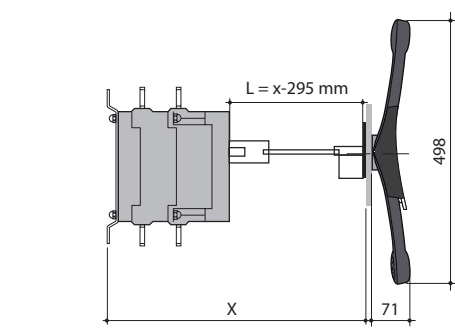
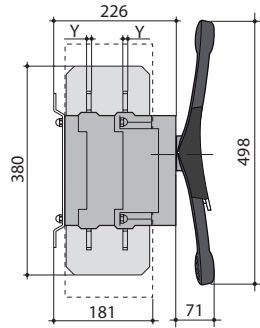
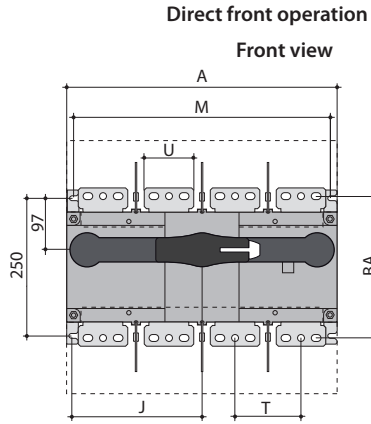
⁽³⁾ 3-pole device with 2 pole in series for the «+» and 1 pole for the «-».

⁽⁴⁾ 4-pole device with 2 poles in series per polarity.

⁽⁵⁾ The power value is given for information only, the current values vary from one manufacturer to another.

⁽⁶⁾ For a rated operational voltage U_e = 415 VAC.

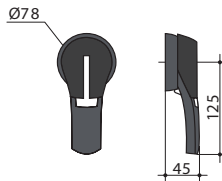
LBS 2000 - LBS 3200



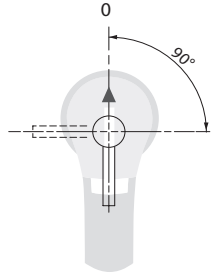
Handle type: LBS-EH3200

Rating (A)	Overall dimensions, (mm)		Switch body, (mm)		Switch mounting, (mm)		Connection, (mm)			
	A (3p)	A (4p)	J (3p)	J (4p)	M (3p)	M (4p)	T	U	Y	BA
2000-3200	372	492	173.5	233.5	347	367	120	90	8	258

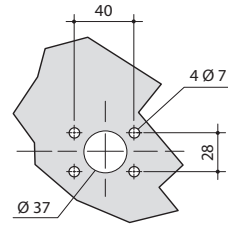
Handle type LBS-EH630



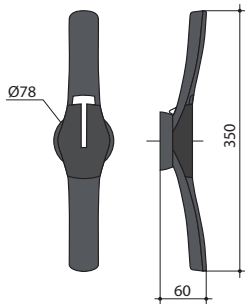
Direct front operation



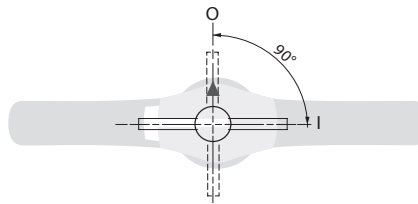
Door drilling



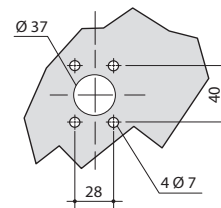
Handle type LBS-EH1600



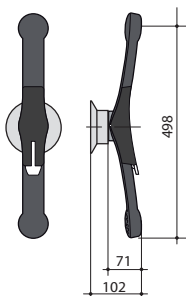
Direct front operation



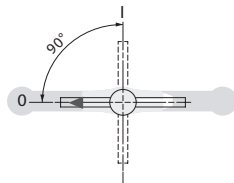
Door drilling



Handle type LBS-EH3200



Direct front operation



Door drilling

