

## Load Break Change Over Switch LBS..CO

### Description

LBS CO is manual 3 pole or 4 pole changeover switch with positive break indication in range 160-3200A. It provides changeover under load for two low voltage power circuits, as well as its safety isolation by double breaking per pole. LBS CO switches have been designed, qualified and tested according to the criteria defined by standard IEC 60947-3 and IEC 60947-6-1. It can be utilised with a direct front or external operation handle.

### Advantages

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.

### 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 mm<sup>2</sup>.
- Connection accessories which facilitate connection, both flat and edgewise connections.

### Applications

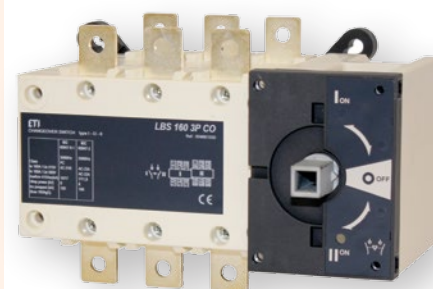
- Generator manufacturers
- Heating
- Air conditioning
- Ventilation
- Power distribution
- Telecommunications

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### LBS CO body (no handle included) 3/4 POLES

Type	Code No.	I <sub>n</sub> [A]	Number of poles	Weight [kg]	Packaging [pcs]
LBS 160 3P CO	004661550	160	3	3,19	1
LBS 250 3P CO	004661551	250	3	4,68	1
LBS 400 3P CO	004661552	400	3	4,87	1
LBS 630 3P CO	004661553	630	3	10,89	1
LBS 800 3P CO	004661554	800	3	28,20	1
LBS 1000 3P CO	004661555	1000	3	20,00	1
LBS 1250 3P CO	004661556	1250	3	34,25	1
LBS 1600 3P CO	004661557	1600	3	38,80	1
LBS 2000 3P CO	004661558	2000	3	54,30	1
LBS 2500 3P CO	004661559	2500	3	45,00	1
LBS 3200 3P CO	004661560	3200	3	69,00	1
LBS 160 4P CO	004661561	160	4	3,73	1
LBS 250 4P CO	004661562	250	4	5,60	1
LBS 400 4P CO	004661563	400	4	5,87	1
LBS 630 4P CO	004661564	630	4	13,12	1
LBS 800 4P CO	004661565	800	4	36,60	1
LBS 1250 4P CO	004661566	1250	4	38,15	1
LBS 1600 4P CO	004661567	1600	4	43,85	1
LBS 2500 4P CO	004661568	2500	4	66,00	1
LBS 3200 4P CO	004661569	3200	4	82,00	1

In front direct or external front operation



LBS 160 3P CO



LBS 160 4P CO

## Accessories



LBS-DH630/B CO LBS-DH1600/B CO LBS-EH3200/B (CO)



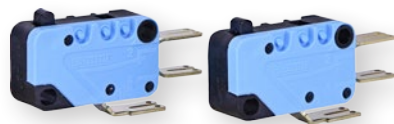
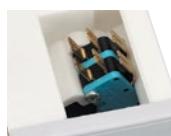
LBS-EH630/G CO LBS-EH1600/G CO LBS-DH3200/BL



LBS-S320/1600 (CO)



LBS-GC (CLBS-EH80, 125)



LBS-PS11 CO

## Direct handle for direct operation

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-DH630/B (CO)	Direct handle, black	004661580	LBS 160-630A CO	153	1/25
LBS-DH1600/B (CO)	Direct handle, black	004661581	LBS 800-1600A CO	238	1/15
LBS-DH3200/B (CO)	Direct handle, black	004661482	LBS 2000-3200A CO	295	1/20

Type definition: Handle type / color initials

## Door interlocked handle IP65 (shaft not included)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-EH630/G CO	Door interlocked handle, grey front	004661582	LBS 160-630A CO	250	1/20
LBS-EH1600/G CO	Door interlocked handle, grey front	004661583	LBS 800-1600A CO	340	1/10
LBS-EH3200/BL CO	Door interlocked handle, blue front	004661584	LBS 2000-3200A CO	1.500	1

Type definition: Handle type / color initials

## Shaft for door interlocked handle

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-S200/630 (CO).../400 FLBS	Shaft, 200mm, 10x10mm	004661490	LBS-EH630/G CO	160	1/25
LBS-S200/1600 (CO)	Shaft, 200mm, 15x12mm	004661491	LBS-EH1600/G CO	360	1/25
LBS-S200/3200 (CO)	Shaft, 200mm, 15x15mm	004661492	LBS-EH3200/BL CO	350	1/10
LBS-S320/630 (CO).../400 FLBS	Shaft, 320mm, 10x10mm	004661493	LBS-EH630/G CO	250	1/50
LBS-S320/1600 (CO)	Shaft, 320mm, 15x12mm	004661494	LBS-EH1600/G CO	490	1/25
LBS-S320/3200 (CO)	Shaft, 320mm, 15x15mm	004661495	LBS-EH3200/BL CO	376	1/15
LBS-S500/630 (CO).../400 FLBS	Shaft, 500mm, 10x10mm	004661496	LBS-EH630/G CO	390	1/20
LBS-S400/1600(CO)	Shaft, 400mm, 15x12mm	004661497	LBS-EH1600/G CO	580	1/20
LBS-S450/3200(CO)	Shaft, 450mm, 15x15mm	004661498	LBS-EH3200/BL CO	971	1/20

15x12mm: one side with 12x12mm, second side with 15x15mm

## Guiding cone

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-GC (CLBS-EH125/01)	Guiding cone	004661489	LBS-EH630-3200	29	1/25

To guide the shaft extension into the external handle. This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm. Required for shaft lengths over 320 mm.

## Auxiliary contact

Type	I [A]	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-PS11 CO	16	Auxiliary contact (CO)	004661585	LBS 160-1600A CO	25	1/30

Pre-break and signalling of positions 0 and I. Connection to the control circuit 6.35 mm fast-on terminal. Electrical characteristics 30 000 operations. One reference code includes 1 set of aux. contacts (one for position 1 + one for position 2), max 2 sets can be mounted in switch body. At LBS2000...3200 CO 2 sets of auxiliary contacts are included 2 pcs for position 1 and 2 pcs for position 2.

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## Terminal shrouds (covers)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-TS160 3P (CO)	Terminal shroud	004661500	LBS 160 3P CO	79	1/20
LBS-TS250 3P (CO)	Terminal shroud	004661501	LBS 250-400A 3P CO	121	1/10
LBS-TS630 3P (CO)	Terminal shroud	004661502	LBS 630A 3P CO	242	1/5
LBS-TS4P/160 (CO)	Terminal shroud	004661506	LBS 160A 4P CO	100	1/15
LBS-TS4P/250 (CO)	Terminal shroud	004661507	LBS 250-400A 4P CO	157	1/8
LBS-TS4P/630 (CO)	Terminal shroud	004661508	LBS 630A 4P CO	311	1/4

Perforations allow remote thermographic inspection without the need to remove the shrouds.

The terminal shrouds also provide phase separation for LBS 160...630 CO. Terminal covers assure top and bottom protection against direct contact with terminals or connection parts. One reference includes 3 pcs (3pole)/ 4 pcs (4pole) for top or bottom contacts, to protect all, 2 references shall be ordered.



LBS-TS160 3P (CO)

## Terminal screens

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-TS1250 3P CO	Terminal screen	004661586	LBS 800-1250A CO	257	1
LBS-TS1600 3P CO	Terminal screen	004661587	LBS 1600A CO	520	1
LBS-TS1250 4P CO	Terminal screen	004661588	LBS 800-1250A CO	328	1
LBS-TS1600 4P CO	Terminal screen	004661589	LBS 1600A CO	632	1

At LBS2000...3200A terminal screens are included

One reference includes 1pc for top or bottom contacts, to protect all, 2 references shall be ordered.

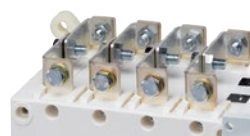


LBS-TS1250 3P CO

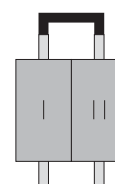
## Bridging bars

Type	I <sub>n</sub> [A]	Description	Code No.	For use with	Section [mm]	Weight [g]	Packaging [pcs]
LBS-BR160 1P CO	160A	Bridging bar	004661590	LBS 160 CO 3P/4P	20x2,5	187	1/50
LBS-BR250 1P CO	250A	Bridging bar	004661591	LBS 250 CO 3P/4P	25x25	173	1/25
LBS-BR400 1P CO	400A	Bridging bar	004661592	LBS 400 CO 3P/4P	32x5	296	1/25
LBS-BR630 1P CO	630A	Bridging bar	004661593	LBS 630 CO 3P/4P	50x5	644	1/25
LBS-BR1000 1P CO	800-1000A	Bridging bar	004661594	LBS 800-1000 CO 3P/4P	50x6	429	1
LBS-BR1250 1P CO	1250A	Bridging bar	004661595	LBS 1250 CO 3P/4P	60x8	730	1/5
LBS-BR1600 1P CO	1600A	Bridging bar	004661596	LBS 1600 CO 3P/4P	90x10	2.778	1

One reference code includes 1 pc of item, order for each pole separately



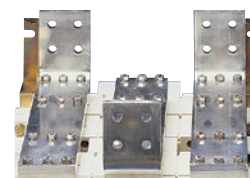
LBS-BR160 1P CO



## Bridging bars

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-BR2000-2500 CO (con. A)	Bridging bar part A	004661597	LBS 2000-2500 CO 3P/4P	863	1
LBS-BRB2000-3200 CO (bolt B)	Bolt set - part B	004661598	LBS 2000-3200 CO 3P/4P	332	1
LBS-BRC2000-3200 CO (T-pc C)	T piece - part C	004661599	LBS 2000-3200 CO 3P/4P	2.523	1
LBS-BRD2000-3200 CO (brack. D)	Right angle - part D	004661600	LBS 2000-3200 CO 3P/4P	943	1
LBS-BRE2000-2500 CO (bar E)	Bar - piece E	004661601	LBS 2000-2500A CO	3.500	1
LBS-BRE3200 CO (bar E)	Bar - piece E	004661602	LBS 3200A CO	3.500	1

One reference code includes 1 pc of item, for correct qty see technical data, page 438



LBS-BR1600 1P CO

## Use

## Enables:

- To allow connection between the two power terminals from a same pole for 2000 to 3200A ratings (Fig. 1 and Fig. 2 on page 438). ;
- Top or bottom bridging connection (Fig. 3 on page 438).

For 3200 A rating, the connection pieces (part A) are delivered bridged from factory. Bolt sets must be ordered separately.