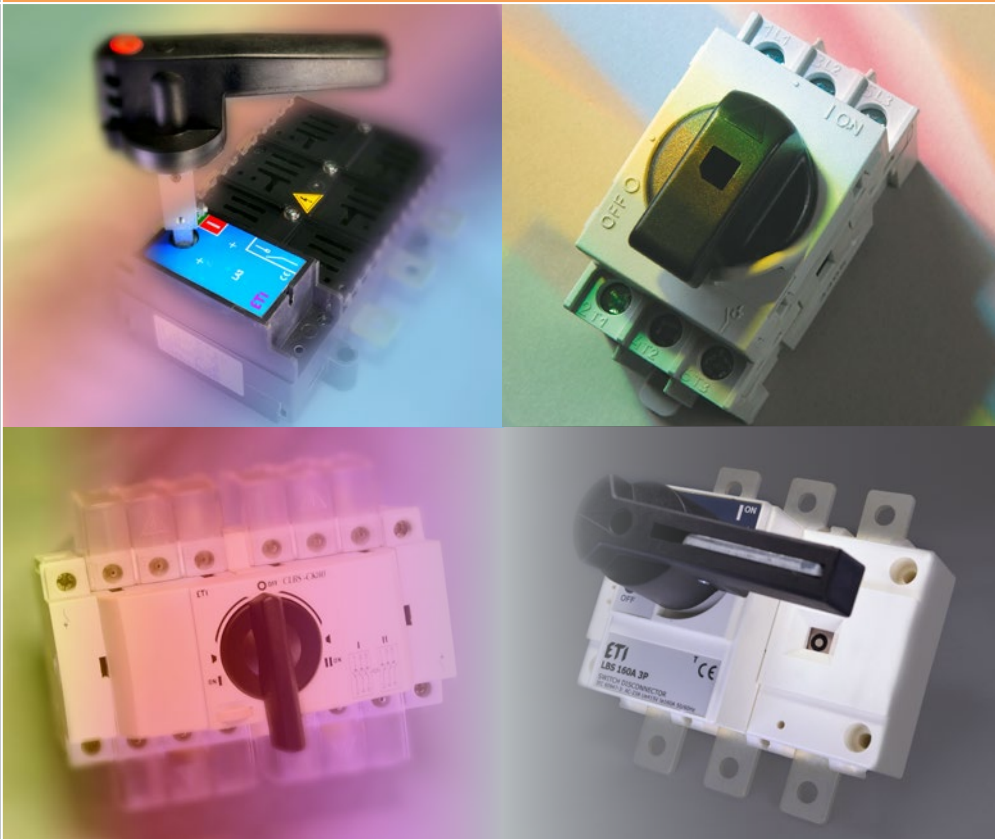


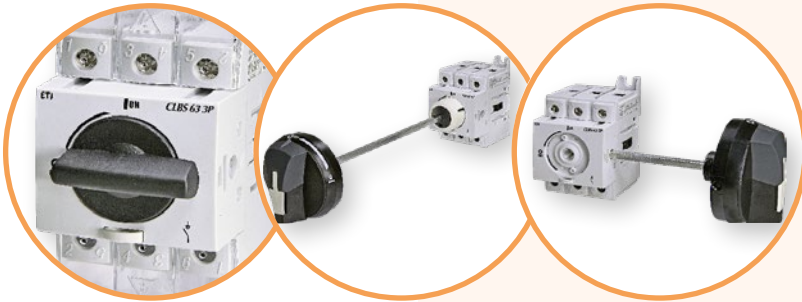
ETISWITCH

Compact Load Break Switch CLBS	466
Compact Load Break Switch with Visible break - CLBSV	471
Compact Load Break Switch with Visible break CO - CLBSV..CO	474
Load Break Switch LBS	477
Load Break Change Over Switch LBS..CO	481
Motorised Change Over Load Break Switch MLBS..CO (1-0-2)	484
Fuse Load Break Switch FLBS	488
Rotary Cam Switches	490
Rotary Cam Switches in Insulated Enclosures	496
Modular Rotary Cam Switches	500
Technical data	497

SWITCH DISCONNECTORS



Compact Load Break Switch CLBS



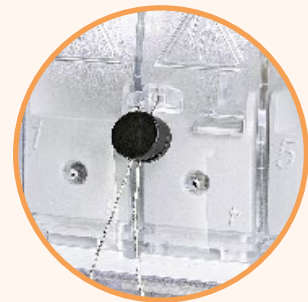
Possibility of direct, remote front and side control



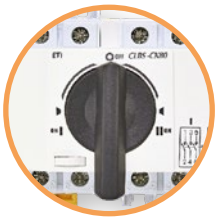
Special type of mounting on the TH 35 busbar (no tools required)



Terminal covers provide protection against accidental contact and phase separation of the switch, while perforation allows temperature monitoring of the contacts without removing the covers



Compact load break switch CLBS 100-125A have sealing option terminal covers



Handle position in load-break switches indicates the status of the contact group



Load disconnectors/switches have the option of installing optional accessories, such as

Additional pole, 4th pole



Auxiliary contact



Neutral pole N



Protective earth module PE



→ Padlocking the handle



Possibility of self-assembly of 1-0-2 load disconnectors using two CLBS load disconnectors and CLBS-CK conversion kit.

Compact Load Break Switch CLBS

Description

CLBS are manually operated and modular multipolar load break switches in range 16A-125A. They make and break under load conditions and provide safety isolation for any low voltage circuit, particularly for machine control circuits. Through the use of accessories, CLBS can be transformed into multipolar load break or 3/4 pole changeover switches. CLBS change over switches provide on load changeover switching between two sources or two low voltage power circuits, as well as their safety isolation. CLBS switches have been designed, qualified and tested according to the criteria defined by standard IEC 60947-3.

CLBS body (no handle included) 3 POLES 16 - 125 A

Type	Code No.	I _n [A]	Number of poles	Weight [g]	Packaging [pcs]
CLBS 16 3P	004661400	16	3	230	1/24
CLBS 25 3P	004661401	25	3	228	1/24
CLBS 40 3P	004661402	40	3	228	1/24
CLBS 63 3P	004661403	63	3	320	1/24
CLBS 80 3P	004661404	80	3	322	1/24
CLBS 100 3P	004661405	100	3	600	1/12
CLBS 125 3P	004661406	125	3	624	1/12

Front (direct and external) and right side operation

CLBSCD series (CLBS switch with reduced short circuit current capability)

Type	Code No.	I _n [A]	Number of poles	Weight [g]	Packaging [pcs]
CLBSCD 63 3P	004661910	63	3	210	1/24
CLBSCD 100 3P	004661911	100	3	310	1/24

With CLBSCD 63 3P can be applied with the same accessories as with CLBS 40 3P (CLBS40 body)

With CLBSCD 100 3P can be applied with the same accessories as with CLBS 80 3P (CLBS 80 body)

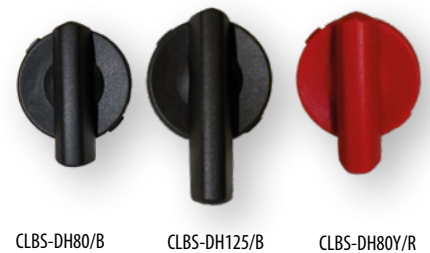


Accessories

Direct handle for direct operation

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-DH80/B	Direct handle, black	004661410	CLBS 16-80A 3P	10	1/200
CLBS-DH125/B	Direct handle, black	004661411	CLBS 100-125A 3P	8	1/200
CLBS-DH80/YR	Direct handle, red	004661412	CLBS 16-80A 3P	10	1/200

Type definition: Handle type / color initials



CLBS-DH80/B

CLBS-DH125/B

CLBS-DH80Y/R

Door interlocked front and right side handle IP65 (shaft not included)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-EH80/G	Door interlocked handle, grey front	004661415	CLBS 16-80A 3P	101	1/45
CLBS-EH125/G	Door interlocked handle, grey front	004661416	CLBS 100-125A 3P	103	1/45
CLBS-EH125/01G	Door interlocked handle, grey front	004661417	CLBS 16-125A 3P	190	1/25

Type definition: Handle type / color initials



CLBS-EH80/G

CLBS-EH125/G

CLBS-EH125/01G

The products' colour or shape may be different as on picture



CLBS-EH80/YR CLBS-EH125/YR CLBS-EH125/01YR

Door interlocked front and right side handle IP65 (shaft not included).

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-EH80/YR	Door interlocked handle, red front	004661418	CLBS 16-80A 3P	102	1/45
CLBS-EH125/YR	Door interlocked handle, red front	004661419	CLBS 100-125A 3P	104	1/45
CLBS-EH125/01YR	Door interlocked handle, red front	004661420	CLBS 16-125A 3P	200	1/25

Type definition: Handle type / color initials

Shaft for door interlocked front and right side handle

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-S200	Shaft, 200 mm	004661422	CLBS-EH80 CLBS-EH125	60	1/110
CLBS-S320	Shaft, 320 mm	004661423	CLBS-EH80 CLBS-EH125	80	1/90
CLBS-S400/01	Shaft, 400 mm	004661424	CLBS-EH125/01	125	1/25

 For 3/4 pole switches, shaft extensions are for external front and side operation.
 Not for use with Change over kit and handles


CLBS-S



CLBS-GC EH125/01

Guiding cone

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-GC EH80, 125	Guiding cone	004661421	CLBS-EH80 CLBS-EH125	130	1/240
LBS-GC (CLBS-EH125/01)	Guiding cone	004661489	CLB-EH125/01	29	1/25

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



CLBS-DMK80

CLBS-DMK125

Door mounting kit (handle not included)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-DMK80	Compact version	004661413	CLBS 16-80A 3P	60	1/50
CLBS-DMK125	Steel support	004661414	CLBS 100-125A 3P	120	1/20

This kit enables the direct mounting of the switch on the panel door, or on the left or right side of the panel. The connection clamps of the switch are always accessible. The external handle is quick and easy to install with the supplied locking nut mounted on the inside of the enclosure.

Not compatible with CLBS-EH125/01 handles

Compact Load Break Switch CLBS

Additional pole, 4th pole CLBS-4P

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-4P/16	Additional pole	004661432	CLBS 16A 3P	72	1/36
CLBS-4P/25	Additional pole	004661433	CLBS 25A3P	72	1/36
CLBS-4P/40	Additional pole	004661434	CLBS 40A 3P	72	1/36
CLBS-4P/63	Additional pole	004661435	CLBS 63A 3P	100	1/36
CLBS-4P/80	Additional pole	004661436	CLBS 80A 3P	102	1/36
CLBS-4P/100	Additional pole	004661437	CLBS 100 A 3P	200	1/16
CLBS-4P/125	Additional pole	004661438	CLBS 125 A 3P	205	1/16

Installation of 4th pole converts 3 pole CLBS to 4 pole load break switch or 3 pole CLBS changeover switch into a 4 pole changeover switch.

Solid neutral pole CLBS-N

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-N/40	Solid neutral pole	004661443	CLBS 16-40A 3P	200	1/36
CLBS-N/80	Solid neutral pole	004661444	CLBS 63-80A 3P	200	1/36
CLBS-N/125	Solid neutral pole	004661445	CLBS 100-125A 3P	200	1/16

Neutral pole is fixed and can not be switched.

Protective earth pole CLBS-PE

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-PE/40	Protective earth pole	004661446	CLBS 16-40A 3P	200	1/36
CLBS-PE/80	Protective earth pole	004661447	CLBS 63-80A 3P	200	1/36
CLBS-PE/125	Protective earth pole	004661448	CLBS 100-125A 3P	200	1/16

Protective earth pole is fixed and can not be switched.

Auxiliary contact

Type	I [A]	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-PS11	10	Auxiliary contact NO+NC	004661425	CLBS 16-125A	44	1/52

Pre-break and signalisation of positions 0 and 1 by NO+NC. Auxiliary switch allows to anticipate switching of the main poles. It can be mounted on the left or on the right side of the device.

Change over kit (direct handle included) I-0-II

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-CK80	Change over kit, black handle 1-0-2	004661439	2xCLBS 16-80A 3P	74	1/42
CLBS-CK125	Change over kit, black handle 1-0-2	004661440	2xCLBS 100-125A 3P	240	1/10

Two CLBS bodies must be ordered separately for one Change over kit



CLBS-4P
16..80



CLBS-4P
100-125



CLBS-N
100-125



CLBS-N
16..80



CLBS-PE
16..80



CLBS-PE
100-125



CLBS-PS11

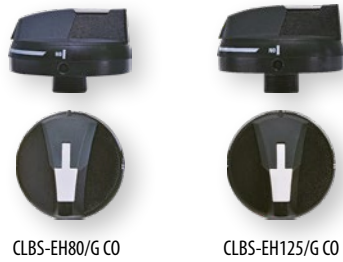


CLBS-CK80



CLBS-CK125

The products' colour or shape may be different as on picture



CLBS-EH80/G CO

CLBS-EH125/G CO



CLBSV-S200

Change over kit (direct handle included) I-I+II-II

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-CKI+II80	Change over kit, black handle 1-1+2-2	004661522	2xCLBS 16-80A 3P	90	1/42
CLBS-CKI+II125	Change over kit, black handle 1-1+2-2	004661523	2xCLBS 100-125A 3P	240	1/10

Two CLBS bodies must be ordered separately for one Change over kit

Door interlocked front handle IP65 (shaft not included) for change over switch - External front operation

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-EH80/G CO	Door interlocked front handle, grey front 1-0-2	004661441	CLBS-CK80	101	1/45
CLBS-EH125/G CO	Door interlocked front handle, grey front 1-0-2	004661442	CLBS-CK125	101	1/45

Type definition: Handle type / color initials

Shafts for door interlocked front handle on change over switches

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBSV-S200	Shaft, 200mm	004661886	CLBS-EH125/G CO	0,05	1/100
CLBS-S200		004661422	CLBS-EH80/G CO		
CLBSV-S320	Shaft, 320mm	004661887	CLBS-EH125/G CO	0,09	1/240
CLBS-S320		004661423	CLBS-EH80/G CO		

For front operation only.

Applications

Top and bottom protection against direct contact with the terminals or connection parts. An opening on each terminal cover makes it possible to insert a temperature measurement probe.

Terminal shrouds (covers)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
CLBS-TS40 3P	Terminal shroud 3P 16-40A	004661426	CLBS 16-40A	20	1/110
CLBS-TS80 3P	Terminal shroud 3P 63-80A	004661427	CLBS 63-80A	20	1/125
CLBS-TS125 3P	Terminal shroud 3P 100-125A	004661428	CLBS 100-125A	63	1/22
CLBS-TS40 1P	Terminal shroud 1P 16-40A	004661429	CLBS 16-40A	8	1/200
CLBS-TS80 1P	Terminal shroud 1P 63-80A	004661430	CLBS 63-80A	6	1/200
CLBS-TS125 1P	Terminal shroud 1P 100-125A	004661431	CLBS 100-125A	22	1/120

One reference code includes 2 pcs 1 for top and 1 for bottom contacts.



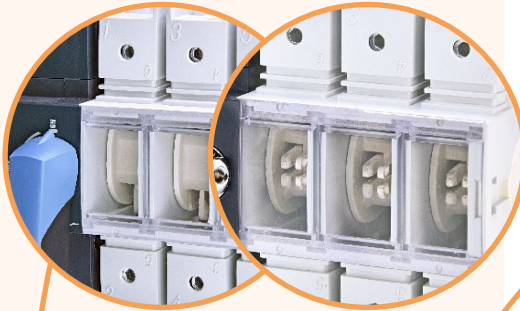
CLBS-TS80 3P

CLBS-TS80 1P

Compact Load Break Switch with Visible break - CLBSV



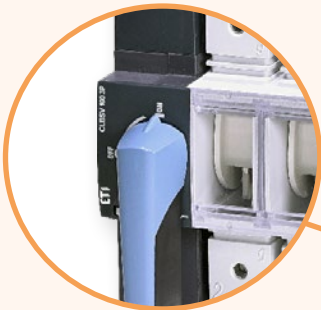
Possibility to connect additional contacts with pre-break function



Double-visible chain break ensures safe maintenance



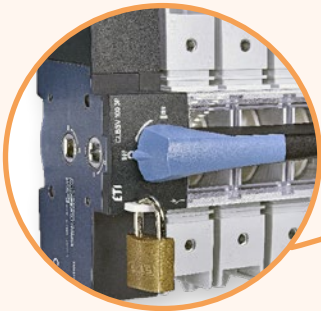
Special type of mounting on the TH 35 rail (does not require special tools)



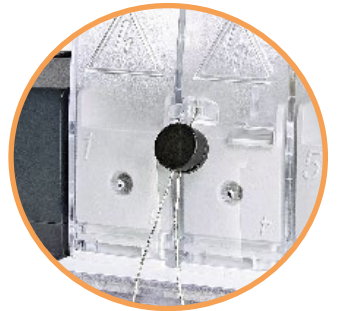
The position of the handle indicates the status of the contact group



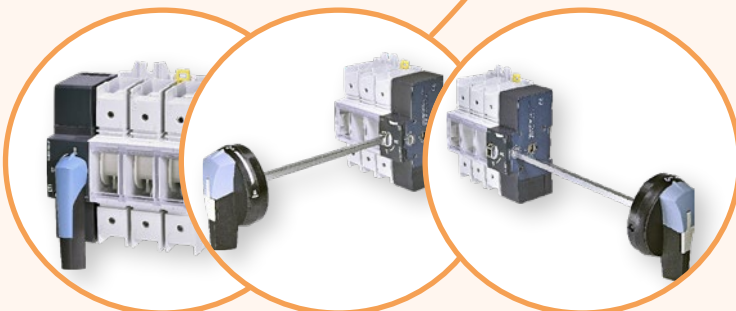
Terminal covers provide protection against accidental contact and phase separation of the switch, and Perforated holes allow for contact temperature monitoring without removing the covers



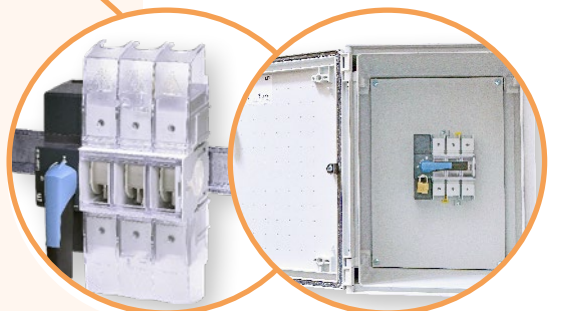
Handle can be locked with a padlock



Ability to seal terminal covers



Possibility of direct, external front and side control



Universal mounting system allows mounting on the TH-35 bus and mounting plate

Compact Load Break Switch with Visible break - CLBSV (0-1)



CLBSV 100 3P

Applications - CLBSV are manually operated multi-pole devices for switching low voltage electrical circuits with currents up to 160A. The CLBSV line of load switches has been designed and tested in full compliance with the criteria defined in IEC 60947-3.

0-1 load break switch with visible break CLBSV 100 - 160 A

Type	Code No	Description	I_n [A]	Number of poles	Weight [g]	Packaging [pcs]
CLBSV 100 3P	004661880	Load break switch 0-1	100	3	840	1/28
CLBSV 125 3P	004661881	Load break switch 0-1	125	3	820	1/28
CLBSV 160 3P	004661882	Load break switch 0-1	160	3	820	1/28

Фронтальное (прямое или выносное) и боковое (выносное) управление. Рукоятка в комплект поставки не входит.

0-1 load break switch with visible break CLBSV 100 - 160 A

Type	Code No	Description	I_n [A]	Number of poles	Weight [g]	Packaging [pcs]
CLBSV 100 4P	004661989	Load break switch 0-1	100	4	1000	1/28
CLBSV 125 4P	004661990	Load break switch 0-1	125	4	1000	1/28
CLBSV 160 4P	004661991	Load break switch 0-1	160	4	1000	1/28

Accessories



CLBSV-DH160/BL

Direct control knobs for mounting on switches CLBSV

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-DH160/BL	004661883	Handle on switch body, blue	CLBSV 100-160A 3P	20	1/25

Direct frontal control

Door interlocked front handle IP65 (shaft not included). IP65

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-EH160/B	004661884	Remote handle, black	CLBSV 100-160A 3P	90	1/45
CLBSV-EH160/YR	004661885	Remote handle, red	CLBSV 100-160A 3P	90	1/45

Remote front control. The stem is not included in the delivery.
With the possibility of opening the door when the door is on.



CLBSV-EH160/B

CLBSV-EH160/YR

External control shaft

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-S200	004661886	Shaft, 200mm	CLBSV-EH160/B, CLBSV-EH160/YR	50	1/100
CLBSV-S320	004661887	Shaft, 320mm	CLBSV-EH160/YR	90	1/240

The stem is used for external front and side control.



CLBSV-S200

Contact block

Type	Code No	Description	I _n [A]	For use with	Weight [g]	Packaging [pcs]
CLBS-PS11	004661425	Contact block, 1NO+1NC	10	CLBS 16-125A	44	1/52

Application: Pre-opening and signaling of position 0 and I by additional NO+NO contacts. Up to two additional contact blocks can be installed



CLBS-PS11

Terminal cover for CLBSV

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBS-TS125 3P	004661428	Terminal cover 3P	CLBSV 100-160A	63	1/22
CLBS-TS125 1P	004661431	Terminal cover 1P		22	1/120

Note: One set must be ordered for protection of upper and lower terminals.

Application - Protection against direct contact with upper and lower terminals.
Openings are provided on the cover for the installation of temperature sensors.



CLBS-TS125 3P

CLBS-TS125 1P

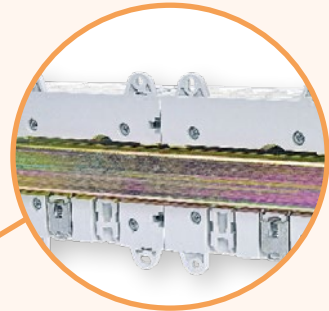
Compact Load Break Switch with Visible break CO - CLBSV..CO



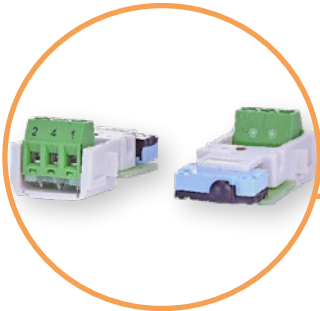
The clamping terminal screws are locked in the housing (when fully unscrewed, they remain in the terminal)



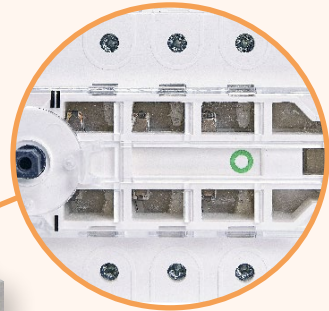
Universal mounting system allows mounting on the TH-35 busbar and mounting plate



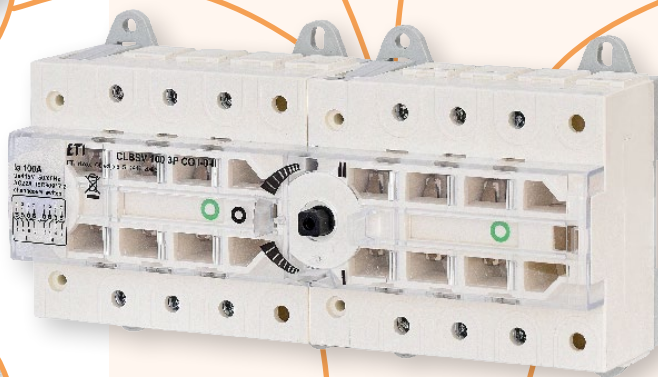
Special type of mounting on the TH 35 busbar (no special tools required)



Possibility to connect me auxiliary contacts with pre-break function



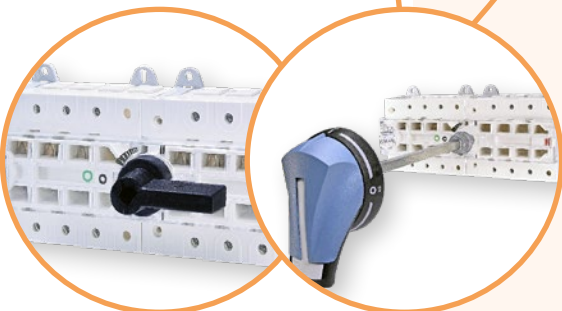
Double visible chain break ensures safe maintenance



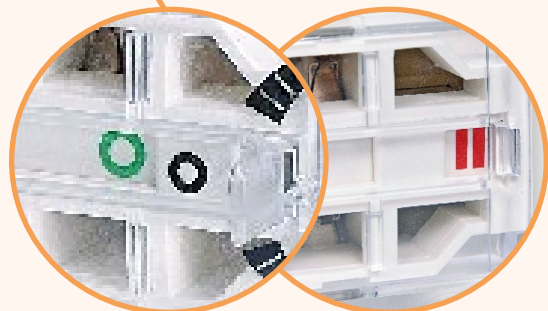
Possibility to lock the handle with a padlock



The connection bar allows the switch outputs to be interconnected



Possibility of direct and remote frontal control



Position indicator for circuit breaker power contacts

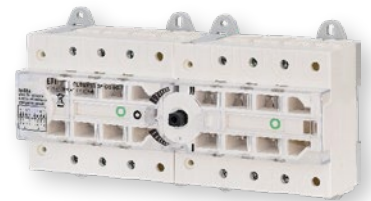
ETISWITCH

Compact Load Break Switch with Visible break CO - CLBSV..CO

Load disconnectors 1-0-2 with visible break CLBSV..CO 63 - 125 A

Type	Code No	Description	I_n [A]	Number of poles	Weight [g]	Packaging [pcs]
CLBSV 63 3P CO I-0-II	004661890	Load-break switch 1-0-2	63	3	1250	1
CLBSV 100 3P CO I-0-II	004661891	Load-break switch 1-0-2	100	3	1360	1
CLBSV 125 3P CO I-0-II	004661892	Load-break switch 1-0-2	125	3	1360	1

Front (direct or remote) control. The handle is not included



CLBSV 63 3P CO I-0-II

Load disconnectors 1-1+2-2 with visible break CLBSV..CO 63 - 125 A

Type	Code No	Description	I_n [A]	Number of poles	Weight [g]	Packaging [pcs]
CLBSV 63 3P CO I-I+II-II	004661893	Load switch 1-1+2-2	63	3	1360	1
CLBSV 100 3P CO I-I+II-II	004661894	Load switch 1-1+2-2	100	3	1360	1
CLBSV 125 3P CO I-I+II-II	004661895	Load switch 1-1+2-2	125	3	1360	1

Front (direct or remote) control. The handle is not included



CLBSV 125 3P CO I-I+II-II

Accessories

Direct handle for direct operation CLBSV..CO

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-DH125/B I-0-II	004661896	Handle on switch housing I-0-II, black	CLBSV..CO I-0-II	30	1/50
CLBSV-DH125/B I-I+II-II	004661897	Handle on switch housing I-I+II-II, black	CLBSV..CO I-I+II-II	40	1/50

Direct frontal control



CLBSV-DH125/B I-0-II



CLBSV-EH125/B I-0-II

Door interlocked front handle IP65 (shaft not included). IP65

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-EH125/B I-0-II	004661898	Handle remote I-0-II, black	CLBSV..CO I-0-II	220	1/20
CLBSV-EH125/B I-I+II-II	004661899	Handle remote I-I+II-II, black	CLBSV..CO I-I+II-II	220	1/20

Remote front control. The stem is not included in the scope of delivery. With possibility of opening the door when switched on.



CLBSV-S200 I-0-II

External control shaft

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-S200 I-0-II	004661900	Shaft, 200mm	CLBSV..CO I-0-II	190	1/30
CLBSV-S320 I-0-II	004661901	Shaft, 320mm		250	1/25
CLBSV-S200 I-I+II-II	004661902	Shaft, 200mm	CLBSV..CO I-I+II-II	191	1/25
CLBSV-S320 I-I+II-II	004661903	Shaft, 320mm		214	1

The stem is used for external frontal control.



CLBSV-BR 3P

Connecting busbar IP20

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-BR 3P	004661904	Connection busbar IP20, 3p	CLBSV..CO	30	1/100

Application: To create a common connection between devices I and II at the top or bottom of the switch.



CLBSV-PS11

Contact block (flip-flop)

Type	Code No	Description	For use with	Weight [g]	Packaging [pcs]
CLBSV-PS11	004661905	Contact block, 1NO/NC ((change-over)	CLBSV..CO I-0-II	30	1/25

Application: Pre-opening and signalling of positions I and II, 1NO/NC additional contact per position.

Load Break Switch LBS

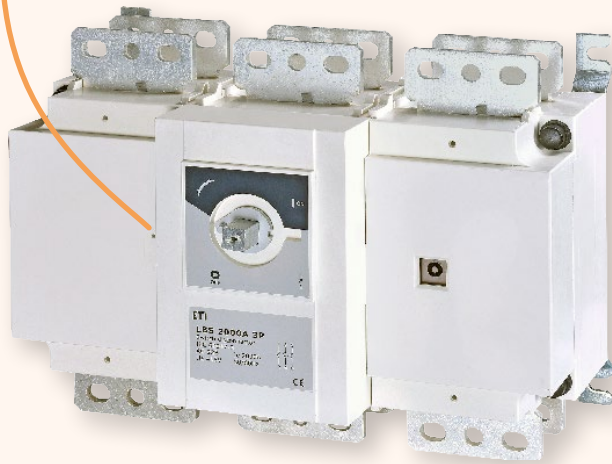
Ability to connect auxiliary contacts



Position of the handle indicates the status of the contact group



Terminal covers provide protection against accidental contact and phase separation of the switch, while perforated holes allow temperature monitoring of the contacts without removing the covers



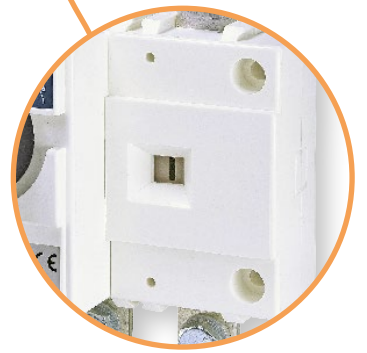
The use of glass fibre reinforced polyester provides high mechanical and temperature resistance of the LBS load disconnecter enclosure



Possibility to lock the handle with a padlock



Load disconnectors up to 630A are supplied with screws for connection



Position indicator for circuit breaker power contacts

Load Break Switch 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.



LBS 160A 3P / LBS 200A 3P



LBS 800A - 1000A 3P



LBS 2000A-3200A 3P

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

LBSCD series (LBS switch with reduced short circuit current capability) 3/4 POLES

Type	Code No.	I_n [A]	Number of poles	Weight [kg]	Packaging [pcs]
LBSCD 200 3P	004661912	200	3	0,47	1
LBSCD 315 3P	004661913	315	3	1,76	1
LBSCD 400 3P	004661914	400	3	1,85	1
LBSCD 200 4P	004661915	200	4	1,2	1
LBSCD 315 4P	004661916	315	4	2,2	1
LBSCD 400 4P	004661917	400	4	2,28	1

With LBSCD 200 can be applied the same accessories as with LBS 160 (LBS 160 body)

With LBSCD 315 can be applied the same accessories as with LBS 250 (LBS 250 body)

With LBSCD 400 can be applied the same accessories as with LBS 250 (LBS 250 body)

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

Load Break Switch LBS

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

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-EH630A	160	1/25
LBS-S200/1600 (CO)	Shaft, 200mm, 15x12mm	004661491	LBS-EH1600A	360	1/25
LBS-S200/3200 (CO)	Shaft, 200mm, 15x15mm	004661492	LBS-EH3200A	350	1/10
LBS-S320/630 (CO).../400 FLBS	Shaft, 320mm, 10x10mm	004661493	LBS-EH630A	250	1/50
LBS-S320/1600 (CO)	Shaft, 320mm, 15x12mm	004661494	LBS-EH1600A	490	1/25
LBS-S320/3200 (CO)	Shaft, 320mm, 15x15mm	004661495	LBS-EH3200A	376	1/15
LBS-S500/630 (CO).../400 FLBS	Shaft, 500mm, 10x10mm	004661496	LBS-EH630A	390	1/20
LBS-S400/1600(CO)	Shaft, 400mm, 15x12mm	004661497	LBS-EH1600A	580	1/20
LBS-S450/3200(CO)	Shaft, 450mm, 15x15mm	004661498	LBS-EH3200A	971	1/20

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



LBS-S320/1600 (CO)

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.



LBS-GC (CLBS-EH80, 125)



LBS-PS11

Auxiliary contact

Type	I [A]	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-PS11	16	Auxiliary contact (CO)	004661499	LBS 160-3200A	26	1/30
LBS-2PS11	16	2nd auxiliary contact (CO)	004661918	LBS 160-3200A	26	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. Only one auxiliary contact can be mounted to each switch body



LBS-TS160 3P (CO)

Terminal shrouds (covers)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-TS160 3P (CO)	Terminal shrouds, 3P	004661500	LBS 160A 3P	79	1/20
LBS-TS250 3P (CO)	Terminal shrouds, 3P	004661501	LBS 250A 3P	121	1/10
LBS-TS630 3P (CO)	Terminal shrouds, 3P	004661502	LBS 400-630A 3P	242	1/5
LBS-TS4P/160 (CO)	Terminal shrouds, 4P	004661506	LBS 160A 4P	100	1/15
LBS-TS4P/250 (CO)	Terminal shrouds, 4P	004661507	LBS 250A 4P	157	1/8
LBS-TS4P/630 (CO)	Terminal shrouds, 4P	004661508	LBS 400-630A 4P	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 to 630 A.
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-TS1250 3P

Terminal screen

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-TS1250 3P	Terminal screen, 3P	004661503	LBS 800-1250A 3P	127	1/25
LBS-TS1600 3P	Terminal screen, 3P	004661504	LBS 1600A 3P	163	1/20
LBS-TS3200 3P	Terminal screen, 3P	004661505	LBS 2000-3200A 3P	266	1/1
LBS-TS4P/1250	Terminal screen, 4P	004661509	LBS 800-1250A 4P	161	1/20
LBS-TS4P/1600	Terminal screen, 4P	004661510	LBS 1600A 4P	223	1/30
LBS-TS4P/3200	Terminal screen, 4P	004661511	LBS 2000-3200A 4P	350	1/1

Top or bottom, to protect all 2 references shall be ordered

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 mm².
- Connection accessories which facilitate connection, both flat and edgewise connections.

Applications

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

Load Break Change Over Switch LBS..CO

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

Type	Code No.	I _n [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
<hr/>					
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 160A 3P CO



LBS 630A 3P CO



LBS 1600A 3P CO

Accessories



LBS-DH630/B CO



LBS-EH630/G CO LBS-EH1600/G CO LBS-EH3200/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.

Load Break Change Over Switch LBS..CO

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, MLBS 800 -1250 3P	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, MLBS 800 -1250 4P	328	1
LBS-TS1600 4P CO	Terminal screen	004661589	LBS 1660A 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.

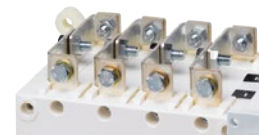


LBS-TS1250 3P CO

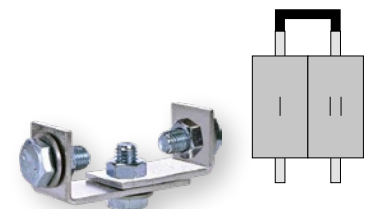
Bridging bars

Type	I _n [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, MLBS 800 3P/4P	50x6	429	1
LBS-BR1250 1P CO	1250A	Bridging bar	004661595	LBS 1250 CO 3P/4P, MLBS 800 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

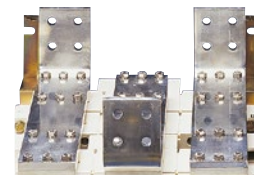


LBS-BR250 1P CO

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 518



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 518);
- Top or bottom bridging connection (Fig. 3 on page 518).

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

Motorised Change Over Load Break Switch MLBS..CO (1-0-2)

Description

MLBS CO is motorised changeover switch with positive break indication in range 63 to 125A (4 pole) and 250 to 630A (3 pole). It enables the on load transfer of two three-phase supplies via remote volt-free contacts, from either an external automatic controller, using pulse logic, or a switch. It is intended for use in low voltage power systems where interruption of the load supply is acceptable during transfer. MLBS 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

MLBS CO uses stable position technology, ensuring constant pressure on the contacts and preventing premature faults. In addition, they do not require a power supply to maintain position, thus protecting their loads from voltage fluctuations. The control and motorisation section can be replaced simply by removing 4 screws, with no work required on the installation cabling. Their design and compact size, enables integration within most 200 mm deep enclosures. Maintenance can be carried out easily under load, with manual operation still available. The MLBS CO is available in two supply versions, each with a broad range (+/-30%):

- 230 VAC single power supply
- 12 VDC power supply

Applications

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

Motorised Change Over Load Break Switch MLBS..CO (1-0-2)



4p Motorised Change Over Load Break Switch MLBS..CO 63 A - 125 A

Type	Description	Code No.	I_n [A]	Weight [g]	Packaging [pcs]
MLBS 63 4P CO 12VDC	1-0-2 (12V DC)	004661650	63	3,240	1
MLBS 100 4P CO 12VDC	1-0-2 (12V DC)	004661651	100	3,250	1
MLBS 125 4P CO 12VDC	1-0-2 (12V DC)	004661652	125	3,250	1
MLBS 63 4P CO 230VAC	1-0-2 (230V AC)	004661653	63	3,340	1
MLBS 100 4P CO 230VAC	1-0-2 (230V AC)	004661654	100	3,350	1
MLBS 125 4P CO 230VAC	1-0-2 (230V AC)	004661655	125	3,350	1
MLBS 250 4P CO 230VAC	1-0-2 (230V AC)	004661919	250	9,720	1
MLBS 400 4P CO 230VAC	1-0-2 (230V AC)	004661920	400	10,200	1
MLBS 630 4P CO 230VAC	1-0-2 (230V AC)	004661921	630	17,980	1
MLBS 800 4P CO 230VAC	1-0-2 (230 VAC)	004661982	800	47,6	1
MLBS 1250 4P CO 230VAC	1-0-2 (230 VAC)	004661983	1250	49,5	1

3p Motorised Change Over Load Break Switch MLBS..CO 250 - 630 A

Type	Description	Code No.	I_n [A]	Weight [g]	Packaging [pcs]
MLBS 250 3P CO 230VAC	1-0-2 (230 VAC)	004661870	250	8,93	1
MLBS 400 3P CO 230VAC	1-0-2 (230 VAC)	004661871	400	9,16	1
MLBS 630 3P CO 230VAC	1-0-2 (230 VAC)	004661872	630	15,56	1
MLBS 800 3P CO 230VAC	1-0-2 (230 VAC)	004661980	800	43	1
MLBS 1250 3P CO 230VAC	1-0-2 (230 VAC)	004661981	1250	44,5	1

For additional accessories (bridging bars and terminal screens) see page 483

Accessories for 4 pole MLBS..CO 63 - 630A

Bridging bars

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
MLBS-BR125 4P CO	Bridging bars	004661700	MLBS 63-125A 4P	160	1/100

For bridging power terminals on the top or bottom side of the switch, one reference code includes complete set of 4 pcs



MLBS-BR125 4P CO

Terminal shrouds for source side

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
MLBS-TSIN 4P CO	Terminal shrouds for source side	004661701	MLBS 63-125A 4P	120	1/50

IP2X protection against direct contact with terminals or connecting parts. Under one reference code 2 pcs are included for source or for load side



MLBS-TSIN 4P CO

Terminal shrouds for load side

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
MLBS-TSOUT 4P CO	Terminal shrouds for load side	004661702	MLBS 63-125A 4P	140	1/40

IP2X protection against direct contact with terminals or connecting parts. Under one reference code 2 pcs are included for source or for load side

Bridging bars

Type	I _n [A]	Description	Code No.	For use with	Section [mm]	Weight [g]	Packaging [pcs]
LBS-BR250 1P CO	250A	Bridging bar	004661591	MLBS 250 4P	25x25	173	1/25
LBS-BR400 1P CO	400A	Bridging bar	004661592	MLBS 400 4P	32x5	296	1/25
LBS-BR630 1P CO	630A	Bridging bar	004661593	MLBS 630 4P	50x5	644	1/25

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



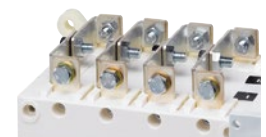
LBS-TS160 3P (CO)

Terminal shrouds (covers)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-TS4P/250 (CO)	Terminal shroud	004661507	MLBS 250-400 4P	157	1/8
LBS-TS4P/630 (CO)	Terminal shroud	004661508	MLBS 630 4P	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.



Auxiliary contacts

Type	I _n [A]	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
MLBS-PS11	16	Auxiliary contact CO	004661873	MLBS 250...630	120	1/100

*MLBS are already supplied with 1 NO aux contact for all three positions as standard.

** Pre-break and signalling of positions I and II: each reference provides 1 NO/NC auxiliary contact for positions I and II.



MLBS-PS11

LBS-BR160 1P CO

Accessories for 3 pole MLBS..CO 250 - 630A



LBS-TS250 3P CO

Terminal shrouds

Type	Code No.	For use with	Weight [g]	Packaging [pcs]
LBS-TS250 3P (CO)	004661501	MLBS 250, 400 3P CO 230VAC	121	1/10
LBS-TS630 3P (CO)	004661502	MLBS 630 3P CO 230VAC	242	1/5

To fully shroud: front, rear, top and bottom, 4 pcs shall be ordered. To shroud front top and bottom, 2 pcs shall be ordered.



LBS-BR630 1P CO

Bridging bars

Type	I _n [A]	Description	Code No.	For use with	Section [mm]	Weight [g]	Packaging [pcs]
LBS-BR630 1P CO	630A	Bridging bar	004661593	MLBS 250...630	50x5	644	1/25

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



MLBS-PS11

Auxiliary contacts

Type	I _n [A]	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
MLBS-PS11	16	Auxiliary contact CO	004661873	MLBS 250...630	120	1/100

*MLBS are already supplied with 1 NO aux contact for all three positions as standard.

** Pre-break and signalling of positions I and II: each reference provides 1 NO/NC auxiliary contact for positions I and II.

MLBS accessories for wiring

For use with MLBS the voltage sensing tags allow voltage to be tapped directly off of power terminals to provide a supply to, for example, a control circuit or source presence indicator lamps. Voltage sensing tags are equipped with a Faston connector and can be mounted on the top or bottom side of the transfer switch. With MLBS this accessory allows easy connection to an ATSC25 controller via the ATSC25 cable harness.

With MLBS 800A and above, voltage taps are already integrated!

Voltage taps

Type	Code No.	For use with	Weight [g]	Packaging [pcs]
MLBS-VT400r	004661985	MLBS 250-400 3P/4P	40	40
MLBS-VT630r	004661986	MLBS 630 3P/4P	100	30



The ATSC25 cable harness is a fast and reliable solution for connecting an MLBS transfer switch to a ATSC25 controller in order to create an Automatic Transfer Switch. It is equipped with Faston voltage tap-offs and provides a safe connection between the controller and changeover switch for:

- monitoring availability of the incoming power sources,
- monitoring changeover switch status,
- providing an electrical interlock function,
- automatic control and transfer between power sources.

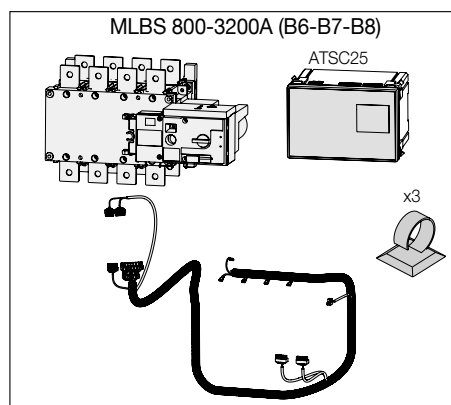
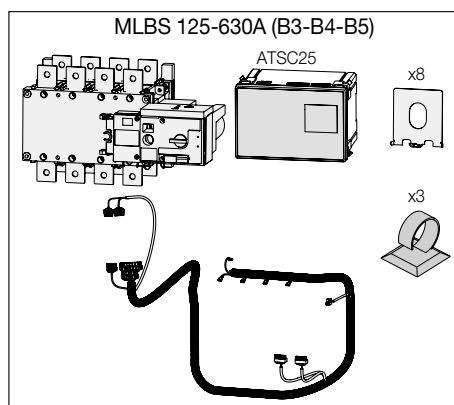
Provides a DPS auxiliary supply to the MLBS. Cable harness length is approximately 2 metres.

The cable harness is for use with 4 pole MLBS only and requires neutral conductors to be on the right side of the transfer switch.

For MLBS =< 630A it is necessary to order also Voltage taps!

Wire harness

Type	Code No.	For use with	Weight [g]	Packaging [pcs]
MLBS-WH630r	004661987	MLBS 250-630 4P	800	15
MLBS-WH3250r	004661988	MLBS 800-1250 4P	900	15



Fuse Load Break Switch FLBS

Description

FLBS is manually operated 3 pole fuse combination switch in range 125 to 630A. It makes and breaks on load and provides safety isolation and protection against overcurrent for any low voltage electrical circuit. FLBS have been designed, qualified and tested according to the criteria defined by standards: IEC(EN) 60947-3, IEC 60269-1, IEC 60269-2

Advantages

- Complete isolation of the fuse with double breaking per pole (top and bottom of fuse).
- Positive break indication.
- IP2X protection with terminal shrouds front panel.
- High breaking capacity. Protection against overloads and shortcircuits thanks to high breaking capacity fuses (100 kA rms).
- TEST position for testing control circuits without power using auxiliary contacts. In TEST position, the enclosure door can be opened.

Applications

- Motor load break.
- Protection of industrial cabinet.

Fuse Load Break Switch FLBS



FLBS 160 3P

FLBS body (no handle included) 3 POLES

Type	Code No.	I_n [A]	Number of poles	Fuse size	Weight [g]	Packaging [pcs]
FLBS 125 3P	004661800	125	3	NV/NH 00/00C	1.830	1
FLBS 160 3P	004661801	160	3	NV/NH 00/00C	1.830	1
FLBS 250 3P	004661802	250	3	NV/NH 1	3.660	1
FLBS 400 3P	004661803	400	3	NV/NH 2	6.250	1
FLBS 630 3P	004661804	630	3	NV/NH 3	16.760	1

In front direct or external front operation

Accessories



FLBS-DH400/B

FLBS-DH630-B



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

FLBS-EH630/G

Direct handle for in front direct operation

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
FLBS-DH400/B	Direct handle, black	004661824	FLBS 125-400A 3P	267	1/25
FLBS-DH630/B	Direct handle, black	004661825	FLBS 630A 3P	471	1

Type definition: Handle type / color initials

Door interlocked handle IP65 (shaft not included).

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
FLBS-EH630/G...400/G FLBS	Door interlocked handle, grey front	004661483	FLBS 125 - 400A 3P	253	1/20
FLBS-EH630/G	Door interlocked handle, grey front	004661823	FLBS 630A 3P	280	1/15

Type definition: Handle type / color initials

*With FLBS 124-400A also yellow red external handle »004661486 LBS-EH630/YR« can be used. See page 479 in catalogue.

Fuse Load Break Switch FLBS

Shaft for door interlocked handle

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
FLBS-S200/630 (CO)...400 FLBS	Shaft, 200mm, 10x10mm	004661490	FLBS 125 - 400A 3P	160	1/25
FLBS-S320/630 (CO)...400 FLBS	Shaft, 320mm, 10x10mm	004661493	FLBS 125 - 400A 3P	250	1/50
FLBS-S500/630 (CO)...400 FLBS	Shaft, 500mm, 10x10mm	004661496	FLBS 125 - 400A 3P	390	1/20
FLBS-S200/630	Shaft, 200mm, 12x12mm	004661820	FLBS 630A 3P	226	1/25
FLBS-S320/630	Shaft, 320mm, 12x12mm	004661821	FLBS 630A 3P	359	1/50
FLBS-S500/630	Shaft, 500mm, 12x12mm	004661822	FLBS 630A 3P	564	1/20



LBS-S320/630 (CO) .../400 FLBS

Guiding cone

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

Guiding cone: 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.



LBS-GC (CLBS-EH80, 125)

Shaft holder

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
FLBS-SH/400	Shaft holder	004661831	shaft > 320mm	293	1

This support maintains shaft position for extension shafts greater than 320 mm in length.



FLBS-SH/400

Auxiliary contact

Type	I _n [A]	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
FLBS-PS10	16	Auxiliary contact, NO	004661826	FLBS 125-630A	14	1/50
FLBS-PS01	16	Auxiliary contact, NC	004661827	FLBS 125-630A	14	1/50

Compact universal type auxiliary contacts which can be configured for operation in either, or both, ON and TEST positions. FLBS (125-160A) max. 2 aux. contacts, FLBS (250-630A) max. 4 aux. contacts can be mounted. Pre-break and signalling of positions 0, I and TEST. Connection to the control circuit by terminals with max. section 2 x 2.5 mm².



FLBS-PS

Terminal shrouds (covers)

Type	Description	Code No.	For use with	Weight [g]	Packaging [pcs]
FLBS-TS160 3P	3 pole terminal shroud	004661828	FLBS 125-160A 3P	43	1
FLBS-TS250 3P	3 pole terminal shroud	004661829	FLBS 250 3P	240	1
FLBS-TS400 3P	3 pole terminal shroud	004661832	FLBS 400A 3P	240	1
FLBS-TS630 3P	3 pole terminal shroud	004661830	FLBS 630A 3P	570	1

Top or bottom IP20 protection (on the front) against direct contact with terminals or connection parts. One reference includes 3 pcs (3pole) for top or bottom contacts, to protect all, 2 references shall be ordered.



FLBS-TS

Rotary Cam Switches

Rotary cam switches series CS are intended for multiple switching operations in main as well as in auxiliary circuits:

- As motor switches they are designed for direct-online starting and stopping of single- phase and three-phase motors. They also come out as star-delta switches, reversing switches, pole-change over motor switches.
- In auxiliary circuits they are assembled in compliance with the switching programme according to preference:
 - switches for control, signalling and measuring circuits.
 - switches, selector switches and step switches e.g. for transformers and welding apparatuses.
 - Group switches e.g. for switching operations of resistors and heaters.
 - Control switch with automatic return

Advantages

- high making and breaking capacities
- electrical and mechanical endurance
- small dimensions.

Rotary cam switches comply with international and national standards such as: IEC/EN 60947-3, VDE 0660, TSEN 60947-3, BS 5419 etc.

Designation
CS XX(I_{th}[A]) YY(diagram) Z_(design)

ON-OFF switches with 60° switching angle

Thermal current
16 - 100 A



1-pole					
Type	Thermal current I _{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 90 U	16A	004773001	0-1	75	1
CS 25 90 U	25A	004773002		90	
CS 32 90 U	32A	004773003		115	
CS 40 90 U	40A	004773004		180	
CS 63 90 U	63A	004773005		290	
CS 80 90 U	80A	004773006		405	
CS 100 90 U	100A	004773007		470	

Connection diagram in technical data



2-pole					
Type	Thermal current I _{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 91 U	16A	004773009	0-1	80	1
CS 25 91 U	25A	004773010		90	
CS 32 91 U	32A	004773011		115	
CS 40 91 U	40A	004773012		180	
CS 63 91 U	63A	004773013		290	
CS 80 91 U	80A	004773014		405	
CS 100 91 U	100A	004773015		470	

Connection diagram in technical data



3-pole					
Type	Thermal current I _{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 10 U	16A	004773017	0-1	95	1
CS 25 10 U	25A	004773018		115	
CS 32 10 U	32A	004773019		160	
CS 40 10 U	40A	004773020		260	
CS 63 10 U	63A	004773021		415	
CS 80 10 U	80A	004773022		590	
CS 100 10 U	100A	004773023		685	

Connection diagram in technical data

ETISWITCH

Rotary Cam Switches

4-pole

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 92 U	16A	004773025		100	1
CS 25 92 U	25A	004773026		120	
CS 32 92 U	32A	004773027		175	
CS 40 92 U	40A	004773028		275	
CS 63 92 U	63A	004773029		435	
CS 80 92 U	80A	004773030		600	
CS 100 92 U	100A	004773031		690	

Connection diagram in technical data



Multistep Switches With 60° Switching Angle

Thermal current
16-100 A

1-pole

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 107 U	16A	004773033		80	1
CS 25 107 U	25A	004773034		90	
CS 32 107 U	32A	004773035		115	
CS 40 107 U	40A	004773036		180	
CS 63 107 U	63A	004773037		290	
CS 80 107 U	80A	004773038		405	
CS 100 107 U	100A	004773039		470	

Connection diagram in technical data



2-pole

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 123 U	16A	004773041		120	1
CS 25 123 U	25A	004773042		150	
CS 32 123 U	32A	004773043		180	
CS 40 123 U	40A	004773044		270	
CS 63 123 U	63A	004773045		430	
CS 80 123 U	80A	004773046		590	
CS 100 123 U	100A	004773047		680	

Connection diagram in technical data



3-pole

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 135 U	16A	004773049		125	1
CS 25 135 U	25A	004773050		155	
CS 32 135 U	32A	004773051		220	
CS 40 135 U	40A	004773052		375	
CS 63 135 U	63A	004773053		500	
CS 80 135 U	80A	004773054		840	
CS 100 135 U	100A	004773055		845	

Connection diagram in technical data



Voltmeter Switches

Thermal current
16 - 32 A



3 line and 3 phase

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 66 U	16A	004773089		140	1
CS 25 66 U	25A	004773090		160	
CS 32 66 U	32A	004773091		220	

Connection diagram in technical data

3 line

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 67 U	16A	004773093		120	1
CS 25 67 U	25A	004773094		150	

Connection diagram in technical data

Ammeter Switches

Thermal current
16 - 40 A



1 pole 3 current with transformer

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 98 U	16A	004773095		165	1
CS 25 98 U	25A	004773096		185	
CS 32 98 U	32A	004773097		260	
CS 40 98 U	40A	004773098		455	

Connection diagram in technical data

2 pole 3 current with transformer

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 97 U	16A	004773099		200	1
CS 25 97 U	25A	004773100		220	
CS 32 97 U	32A	004773101		295	
CS 40 97 U	40A	004773102		490	

Connection diagram in technical data

Changeover Switches with 60° Switching Angle

Thermal current
16 - 100 A



1-pole

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 51 U	16A	004773104		80	1
CS 25 51 U	25A	004773105		105	
CS 32 51 U	32A	004773106		140	
CS 40 51 U	40A	004773107		205	
CS 63 51 U	63A	004773108		315	
CS 80 51 U	80A	004773109		430	
CS 100 51 U	100A	004773110		495	

Connection diagram in technical data

Rotary Cam Switches

2-pole

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 52 U	16A	004773112		100	1
CS 25 52 U	25A	004773113		120	
CS 32 52 U	32A	004773114		180	
CS 40 52 U	40A	004773115		275	
CS 63 52 U	63A	004773116		435	
CS 80 52 U	80A	004773117		600	
CS 100 52 U	100A	004773118		690	

Connection diagram in technical data

3-pole

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 53 U	16A	004773120		140	1
CS 25 53 U	25A	004773121		160	
CS 32 53 U	32A	004773122		220	
CS 40 53 U	40A	004773123		375	
CS 63 53 U	63A	004773124		500	
CS 80 53 U	80A	004773125		840	
CS 100 53 U	100A	004773126		845	

Connection diagram in technical data



Start and Run Switches - One Phase Motor

Thermal current
16 - 63 A

0-start-1

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 15 U	16A	004773127		95	1
CS 25 15 U	25A	004773128		110	
CS 32 15 U	32A	004773129		160	
CS 40 15 U	40A	004773130		260	
CS 63 15 U	63A	004773131		415	

Connection diagram in technical data



Star - Delta Switches

Thermal current
16 - 100 A

0-star-delta

Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 12 U	16A	004773132		175	1
CS 25 12 U	25A	004773133		190	
CS 32 12 U	32A	004773134		300	
CS 40 12 U	40A	004773135		465	
CS 63 12 U	63A	004773136		650	
CS 80 12 U	80A	004773137		1140	
CS 100 12 U	100A	004773138		1180	

Connection diagram in technical data



Motor Reversing Switches

Thermal current
16 - 100 A



1-0-2					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 11 U	16A	004773139		140	1
CS 25 11 U	25A	004773140		160	
CS 32 11 U	32A	004773141		220	
CS 40 11 U	40A	004773142		375	
CS 63 11 U	63A	004773143		500	
CS 80 11 U	80A	004773144		840	
CS 100 11 U	100A	004773145		845	

Connection diagram in technical data



L-0-P					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 11 U LOP	16A	004773146		145	1
CS 25 11 U LOP	25A	004773147		165	
CS 32 11 U LOP	32A	004773148		225	
CS 40 11 U LOP	40A	004773149		380	
CS 63 11 U LOP	63A	004773150		505	
CS 80 11 U LOP	80A	004773151		845	
CS 100 11 U LOP	100A	004773152		850	

Connection diagram in technical data

General Emergency ON-OFF switches version LK with padlocking in "0"

Thermal current
25 - 100 A

- Emergency switch makes an electrical separation between electrical supply and electrical equipment
- Control handle is red according to standards, and the plate behind is yellow
- Emergency switch can be locked in open position "0" with up to three padlocks.



1-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 25 90 U LK	25A	004773056		130	1
CS 32 90 U LK	32A	004773057		155	
CS 40 90 U LK	40A	004773058		220	
CS 63 90 U LK	63A	004773059		340	
CS 80 90 U LK	80A	004773060		455	
CS 100 90 U LK	100A	004773061		520	

Connection diagram in technical data



2-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 25 91 U LK	25A	004773062		130	1
CS 32 91 U LK	32A	004773063		155	
CS 40 91 U LK	40A	004773064		220	
CS 63 91 U LK	63A	004773065		340	
CS 80 91 U LK	80A	004773066		455	
CS 100 91 U LK	100A	004773067		520	

Connection diagram in technical data

Rotary Cam Switches

3-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 32 10 U LK	32A	004773069		200	1
CS 40 10 U LK	40A	004773070		300	
CS 63 10 U LK	63A	004773071		465	
CS 80 10 U LK	80A	004773072		640	
CS 100 10 U LK	100A	004773073		735	

Connection diagram in technical data

4-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 25 92 U LK	25A	004773074		160	1
CS 32 92 U LK	32A	004773075		205	
CS 40 92 U LK	40A	004773076		305	
CS 63 92 U LK	63A	004773077		470	
CS 80 92 U LK	80A	004773078		650	
CS 100 92 U LK	100A	004773079		740	

Connection diagram in technical data



General Emergency On-Off Switch

Thermal current
16 - 100 A

3-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 10 U ES	16A	004773081		95	1
CS 25 10 U ES	25A	004773082		115	
CS 32 10 U ES	32A	004773083		160	
CS 40 10 U ES	40A	004773084		260	
CS 63 10 U ES	63A	004773085		415	
CS 80 10 U ES	80A	004773086		590	
CS 100 10 U ES	100A	004773087		685	

Connection diagram in technical data



Rotary cam switches for DIN rail mounting

Thermal current
16 A

Rotary cam switches for DIN rail mounting					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 51 L	16	004773250		65	1
CS 16 90 L	16	004773251			



Rotary Cam Switches in Insulated Enclosures

Rotary cam switches in insulated enclosures with:

- IP65 degree of protection (PN, PNG and PNG LK housing)
- IP55 degree of protection (PN1 and PN2 housing)
- IP54 degree of protection (PN3 and PN4 housing)

Color of enclosures is grey (RAL 7035)

ON-OFF switches in housing with 60° switching angle

Thermal current
16 - 40 A

ETISWITCH



1-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 90 PN	16A	004773154		175	1
CS 25 90 PN	25A	004773155		190	
CS 32 90 PNG	32A	004773156		305	
CS 40 90 PNG	40A	004773157		370	

Connection diagram in technical data

2-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 91 PN	16A	004773159		180	1
CS 25 91 PN	25A	004773160		190	
CS 32 91 PNG	32A	004773161		210	
CS 40 91 PNG	40A	004773162		370	

Connection diagram in technical data

3-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 10 PN	16A	004773164		195	1
CS 25 10 PN	25A	004773165		215	
CS 32 10 PNG	32A	004773166		350	
CS 40 10 PNG	40A	004773167		450	

Connection diagram in technical data

Rotary Cam Switches in Insulated Enclosures

4-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 92 PN	16A	004773169		200	1
CS 25 92 PN	25A	004773170		220	
CS 32 92 PNG	32A	004773171		355	
CS 40 92 PNG	40A	004773172		455	

Connection diagram in technical data

Changeover Switches in Housing with 60° Switching Angle

Thermal current
16 - 40 A

1-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 51 PN	16A	004773186		185	1
CS 25 51 PN	25A	004773187		235	
CS 32 51 PNG	32A	004773188		330	
CS 40 51 PNG	40A	004773189		395	

Connection diagram in technical data

2-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 52 PN	16A	004773191		200	1
CS 25 52 PN	25A	004773192		220	
CS 32 52 PNG	32A	004773193		375	
CS 40 52 PNG	40A	004773194		455	

Connection diagram in technical data

3-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 53 PN	16A	004773196		240	1
CS 25 53 PN	25A	004773197		260	
CS 32 53 PNG	32A	004773198		400	
CS 40 53 PN2	40A	004773199		875	

Connection diagram in technical data



Voltmeter Switches in Housing

Thermal current
16 - 32 A



3 line and 3 phase					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 66 PN	16A	004773201		240	1
CS 25 66 PN	25A	004773202		260	
CS 32 66 PNG	32A	004773203		400	

Connection diagram in technical data

3 line					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 67 PN	16A	004773205		220	1
CS 25 67 PN	25A	004773206		250	

Connection diagram in technical data

Motor Reversing Switches in Housing

Thermal current
16 - 100 A

L-0-P					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 11 U LOPPN	16A	004773207		245	1
CS 25 11 U LOPPN	25A	004773208		265	
CS 32 11 U LOPPNG	32A	004773209		405	
CS 40 11 U LPOPNI2	40A	004773210		560	

Connection diagram in technical data

Multistep Switches in Housing with 60° Switching Angle

Thermal current
16 - 40 A



3-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 135 PN	16A	004773212		225	1
CS 25 135 PN	25A	004773213		255	
CS 32 135 PNG	32A	004773214		400	
CS 40 135 PN2	40A	004773215		555	

Connection diagram in technical data

Star - Delta Switches in Housing

 Thermal current
16 - 40 A

0-star-delta					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 16 12 PN1	16A	004773216		275	1
CS 25 12 PN1	25A	004773217		290	
CS 32 12 PN2	32A	004773218		480	
CS 40 12 PN2	40A	004773219		645	

Connection diagram in technical data



General Emergency ON-OFF switches version LK in housing

 Thermal current
25 - 40 A

1-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 25 90 PNLK	25A	004773173		230	1
CS 32 90 PNLK	32A	004773174		345	
CS 40 90 PNLK	40A	004773175		410	

Connection diagram in technical data

2-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 25 91 PNLK	25A	004773176		230	1
CS 32 91 PNLK	32A	004773177		345	
CS 40 91 PNLK	40A	004773178		410	

Connection diagram in technical data

3-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 25 10 PNLK	25A	004773179		255	1
CS 32 10 PNLK	32A	004773180		390	
CS 40 10 PNLK	40A	004773181		490	

Connection diagram in technical data

4-pole					
Type	Thermal current I_{th}	Code No.	Type, layout and symbol	Weight [g]	Packaging [pcs]
CS 25 92 PNLK	25A	004773182		260	1
CS 32 92 PNLK	32A	004773183		395	
CS 40 92 PNLK	40A	004773184		495	

Connection diagram in technical data



Modular Rotary Cam Switches

Modular Rotary Cam Switches ModLBS

ModLBS IP40(front) switches for mounting in modular enclosures with DIN rail.
Easy manipulation - low force switching, designed for AC23 category of use.



Modular rotary cam switch 0-1

Type	Code No.	In [A]	Number of poles	Weight [g]	Packaging [pcs]
ModLBS 16 1p	004664250	16	1	130	1/30
ModLBS 16 3p	004664251	16	3	141	



Modular emergency switch 0-1 with padlocking possibility

Type	Code No.	In [A]	Number of poles	Weight [g]	Packaging [pcs]
ModLBS 40 3p ES	004664252	40	3	173	1/36