Mini DC - Isolators for Photovoltaic

acc. to IEC 60364-7-712

Quality made in AUSTRIA

D1080E241

BENEDICT GMBH

www.benedict.at

Technical catalogues and news under: www.benedict.at

Contactors Motor-Starter

Mini-Contactors
Contactors
Overload Relays
Compacitor Switching Contactors
Motor-Starters
Modular Contactors

Catalogue **D677E..**

Circuit Breakers

M4-32T.. up to 32A
M4-32R.. up to 32A
M4-63R.. up to 63A
M4-100R.. up to 100A

Catalogue **D795E..**

Switches

On-Off-Switches
Changeover Switches
Motor Switches
Step Switches
Main Switches
Modular Switches
Key Operated Switches

Catalogue **D371E..**

Main Switches

Emergency Off
Main Switches
On-Off-Switches
Add-On-Module

Catalogue **D656E..**

Capacitor Switching Contactors

Contactors for reactive and non reactive capacitor banks

Catalogue **D385E..**

Manual Motorstarter

MU25A up to 32A

Auxiliary Contact Blocks
Trip Alarm Auxiliary Switches
Busbar Connectors
Enclosure

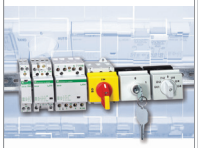
Catalogue **D509E..**

Push Buttons

Push Buttons
Emergency Stop
Key Operated Rotary Switches
Rotary Knobs
Illuminated Push Buttons
Assembled Stations

Catalogue **D580E..**

Modular-Contactors



Modular Contactors
Accessories
Emergency Off Switches
Main Switches
On-Off Switches
Control Switches

Catalogue **D681E..**

DC-Switchgear for Photovoltaic

Main Switches
On-Off-Switches
Contactors for DC-Switching

Catalogue **D911E..**

Low Voltage Control Gear

Contactors
D.O.L. Starter
Overload Relays
Manual Motor Starter
Main Switches
Cam Switches
Push Buttons
Emergency Stop

Catalogue **D651E..**

Benedict GmbH Liebigasse 7, A-1220 Vienna, Tel.: +43-1-251 51-0, Fax: +43-1-251 51-89

Content Page

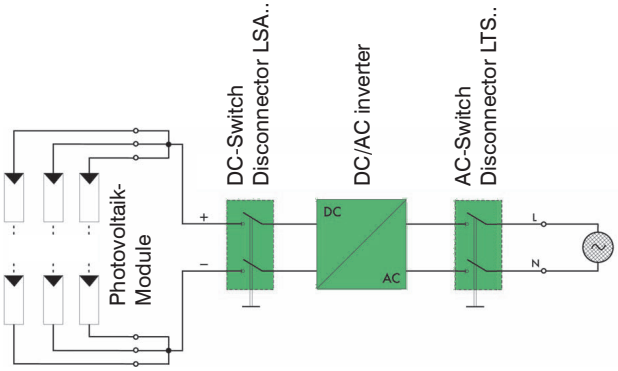
Ratings

Mini DC-Switch Disconnectors

Type	Rated Current I_{th} open A	DC21B(DC-PV1) 4 poles in series A	at U_e V	Design: Panel mounting 4 hole mounting IP66[1] cULus Type 3R	Panel mounting 2 hole mounting IP66[1] cULus Type 3R	Single hole Ø22,5mm IP66[1] cULus Type 4X	Single hole Ø16mm IP66[1] cULus Type 4X
LSA16	16	**16**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
LSA25	25	**25**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
LSA32	32	**32**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
LSA38	45	**45**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
LSMO16	16	**16**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
LSMO25	25	**25**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
LSMO32	32	**32**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
LSMO38	45	**45**	1500	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..

Mini Switch Disconnectors for Photovoltaic

Mini Switch Disconnectors „LSA“ are switch gears for interrupting the DC/AC-Inverter from solar-panels. Photovoltaic-Installations have to be equipped with DC-Isolators acc. to IEC 60364-7-712.



Mini Switch Disconnectors LSA ensure a reliable switching up to 50A at 1200V in the category DC-PV1 (= DC21B).

The construction of the contacts and the material selection guarantee that no oxidations develop (because of small switching frequency) and further it is prevented that inadmissible heating-up is effected.

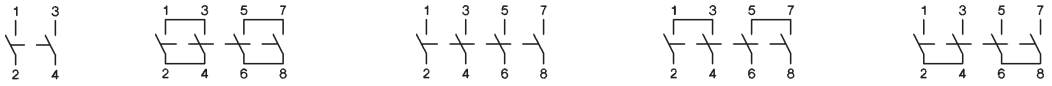
Mini Switch Disconnectors LSA are equipped with 2 or 4 switchable, singular contacts. By serial or parallel wiring of the contacts the contact rating will be increased. The switching speed by the manually driven handle does not have an effect on the switching attitude of the contacts.

Mounting positions:
No limitations, all kind of positions allowed.

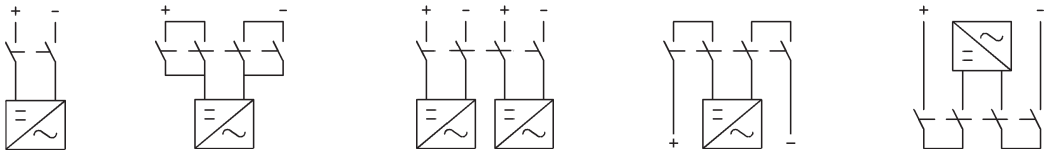
Switching progams

Type	2-pole	2+2-pole 2 poles in series + 2 Pole parallel	4-pole	4-pole 2 jumpers top Input and Output bottom	4-pole 2 jumpers bottom Input and Output top
LSA16 ... LSA38	.. A2	.. A2+2	.. A4(2 x A2)	.. A4O	.. A4U

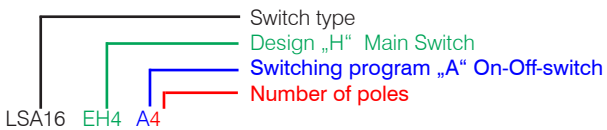
Contact Wiring diagram



Switching example

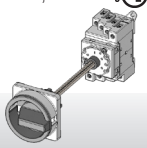
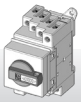
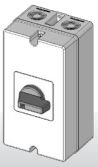


Ordering

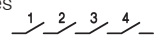
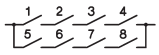


1) Protection in front and built in

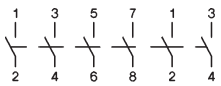
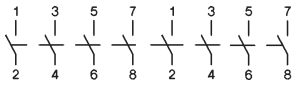
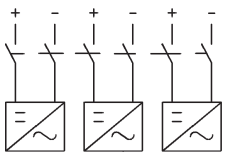
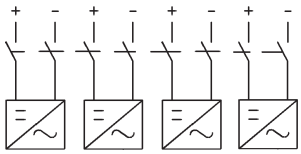
Mini DC-Switch Disconnectors

Base mounting with door coupling, single hole, Ø22,5mm, IP66[1] cULus Type 4X	Modular Switch IP40[1] cULus Open Type	Plastic enclosed PFL..IP67[1] cULus Type 4X
		
..VZV, VZVH4..	..SMA, SMAH1N..	..PFLH4..
..VZV, VZVH4..	..SMA, SMAH1N..	..PFLH4..
..VZV, VZVH4..	..SMA, SMAH1N..	..PFLH4..
..VZV, VZVH4..	..SMA, SMAH1N..	..PFLH4..

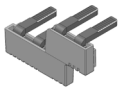
Technical data for DC, acc. to IEC 60947-3, VDE0660

Type			DC-PV1 (= DC21B) 500V	600V	700V	800V	900V	1000V	1200V	1500V	DC-PV2 500V	600V	800V	1000V
2 Poles in Series	**LSA16..**	A	16	16	16	16	16	10	7	3	16	14	12	4
	LSA25..	A	25	25	25	20	17	11,5	8,5	5	25	21	15	5
	LSA32..	A	32	32	32	23	20	13	10	6	32	27	17	6
	LSA38..	A	45	45	45	45	39	29	16	7	45	45	30	13
2 Poles in Series + 2 parallel 	**LSA16..**	A	29	29	22	17	16	10	7	3	25	20	12	4
	LSA25..	A	45	36	27	20	17	11,5	8,5	5	39	32	15	5
	LSA32..	A	50	50	32	23	20	13	10	6	50	35	17	6
	LSA38..	A	50	50	50	47	39	29	16	7	50	50	30	13
4 Poles in Series 	**LSA16..**	A	16	16	16	16	16	16	16	16	16	16	16	16
	LSA25..	A	25	25	25	25	25	25	25	25	25	25	25	25
	LSA32..	A	32	32	32	32	32	32	32	32	32	32	32	32
	LSA38..	A	45	45	45	45	45	45	45	45	45	45	45	45
4 Poles in Series + 2 parallel 	**LSMO16..**	A	29	29	29	29	29	29	29	20	29	29	21	16
	LSMO25..	A	45	45	45	45	45	45	33	26	45	45	35	25
	LSMO32..	A	50	50	50	50	50	50	50	32	50	50	45	32
	LSMO38..	A	50	50	50	50	50	50	50	32	50	50	50	50

Switching programs

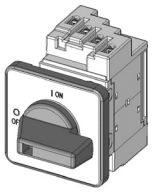
Type	6-poles	8-poles
LSMO16 ... LSMO38	...A6	...A8
Contact Wiring diagram		
Switching example		

Isolated jumpers LSAV-.. und LSM(O)V-.. for Series and Parallel switching of contacts (terminals 1-3, 5-7, 2-4, 6-8). Details see page 30.

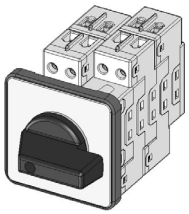
	for Switches	**Type**	pack	weight
	**LSA16 ... LSA32 (A4O, A4U, A4B)**	**LSAV-B1-1**	100	4,80 g/pce.
	LSA38 (A4O, A4U, A4B)	**LSAV-B1-2**	100	9,00 g/pce.
	LSA16 ... LSA38 (A2+2)	**LSAV-B1-1**	100	4,80 g/pce.
	**LSMO16 ... LSMO38 (A4+2)**	**LSMV-B1-1**	100	8,90 g/pce.
	LSMO16 ... LSMO38 (A4+2)	**LSMOV-B1-1**	100	17 g/pce.

1) Protection from front and built in

Mini DC-Isolators for Panel Mounting, 4 holes, Plate 64, IP66, Type 3R

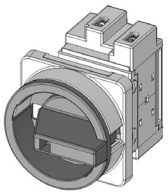


DC-PV1 (=DC21B) 600V	1000V	Poles in Series	Number of Strings	**Type**	Pack pcs.	Weight kg/pce.
16A	10A	2	1	**LSA16 E A2**	1	0,18
25A	11,5A	2	1	**LSA25 E A2**	1	0,18
32A	13A	2	1	**LSA32 E A2**	1	0,18
45A	29A	2	1	**LSA38 E A2**	1	0,18
29A	10A	2	1	**LSA16 E A2+2**	1	0,24
36A	11,5A	2	1	**LSA25 E A2+2**	1	0,24
50A	13A	2	1	**LSA32 E A2+2**	1	0,24
50A	29A	2	1	**LSA38 E A2+2**	1	0,24
16A	10A	2	2	**LSA16 E A4**	1	0,23
25A	11,5A	2	2	**LSA25 E A4**	1	0,23
32A	13A	2	2	**LSA32 E A4**	1	0,23
45A	29A	2	2	**LSA38 E A4**	1	0,23
16A	16A	4	1	**LSA16 E A4O**	1	0,25
25A	25A	4	1	**LSA25 E A4O**	1	0,25
32A	32A	4	1	**LSA32 E A4O**	1	0,25
45A	45A	4	1	**LSA38 E A4O**	1	0,25
16A	16A	4	1	**LSA16 E A4U**	1	0,25
25A	25A	4	1	**LSA25 E A4U**	1	0,25
32A	32A	4	1	**LSA32 E A4U**	1	0,25
45A	45A	4	1	**LSA38 E A4U**	1	0,25

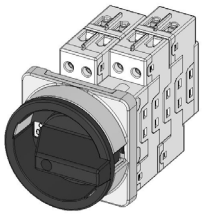


16A	10A	2	3	**LSMO16 E A6**	1	0,50
25A	11,5A	2	3	**LSMO25 E A6**	1	0,50
32A	13A	2	3	**LSMO32 E A6**	1	0,50
45A	20A	2	3	**LSMO38 E A6**	1	0,50
16A	10A	2	4	**LSMO16 E A8**	1	0,52
25A	11,5A	2	4	**LSMO25 E A8**	1	0,52
32A	13A	2	4	**LSMO32 E A8**	1	0,52
45A	20A	2	4	**LSMO38 E A8**	1	0,52

Lockable Mini DC-Isolators for Panel Mounting, 4 holes, Plate 64, IP66, Type 3R

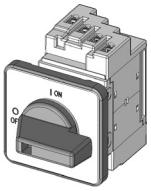


16A	10A	2	1	**LSA16 EH4 A2**	1	0,19
25A	11,5A	2	1	**LSA25 EH4 A2**	1	0,19
32A	13A	2	1	**LSA32 EH4 A2**	1	0,19
45A	29A	2	1	**LSA38 EH4 A2**	1	0,19
29A	10A	2	1	**LSA16 EH4 A2+2**	1	0,25
36A	11,5A	2	1	**LSA25 EH4 A2+2**	1	0,25
50A	13A	2	1	**LSA32 EH4 A2+2**	1	0,25
50A	29A	2	1	**LSA38 EH4 A2+2**	1	0,25
16A	10A	2	2	**LSA16 EH4 A4**	1	0,24
25A	11,5A	2	2	**LSA25 EH4 A4**	1	0,24
32A	13A	2	2	**LSA32 EH4 A4**	1	0,24
45A	29A	2	2	**LSA38 EH4 A4**	1	0,24
16A	16A	4	1	**LSA16 EH4 A4O**	1	0,26
25A	25A	4	1	**LSA25 EH4 A4O**	1	0,26
32A	32A	4	1	**LSA32 EH4 A4O**	1	0,26
45A	45A	4	1	**LSA38 EH4 A4O**	1	0,26
16A	16A	4	1	**LSA16 EH4 A4U**	1	0,26
25A	25A	4	1	**LSA25 EH4 A4U**	1	0,26
32A	32A	4	1	**LSA32 EH4 A4U**	1	0,26
45A	45A	4	1	**LSA38 EH4 A4U**	1	0,26

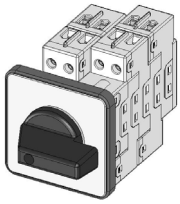


16A	10A	2	3	**LSMO16 EH4 A6**	1	0,51
25A	11,5A	2	3	**LSMO25 EH4 A6**	1	0,51
32A	13A	2	3	**LSMO32 EH4 A6**	1	0,51
45A	20A	2	3	**LSMO38 EH4 A6**	1	0,51
16A	10A	2	4	**LSMO16 EH4 A8**	1	0,53
25A	11,5A	2	4	**LSMO25 EH4 A8**	1	0,53
32A	13A	2	4	**LSMO32 EH4 A8**	1	0,53
45A	20A	2	4	**LSMO38 EH4 A8**	1	0,53

Mini DC-Isolators for Single Hole Mounting, 2 holes, Plate 64, IP66, Type 3R

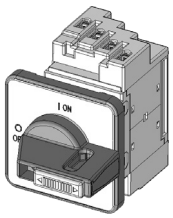


DC-PV1 (=DC21B) 600V	1000V	Poles in Series	Number of Strings	Type	Pack pcs.	Weight kg/pce.
16A	10A	2	1	**LSA16 E2 A2**	1	0,18
25A	11,5A	2	1	**LSA25 E2 A2**	1	0,18
32A	13A	2	1	**LSA32 E2 A2**	1	0,18
45A	29A	2	1	**LSA38 E2 A2**	1	0,18
29A	10A	2	1	**LSA16 E2 A2+2**	1	0,24
36A	11,5A	2	1	**LSA25 E2 A2+2**	1	0,24
50A	13A	2	1	**LSA32 E2 A2+2**	1	0,24
50A	29A	2	1	**LSA38 E2 A2+2**	1	0,24
16A	10A	2	2	**LSA16 E2 A4**	1	0,23
25A	11,5A	2	2	**LSA25 E2 A4**	1	0,23
32A	13A	2	2	**LSA32 E2 A4**	1	0,23
45A	29A	2	2	**LSA38 E2 A4**	1	0,23
16A	16A	4	1	**LSA16 E2 A4O**	1	0,25
25A	25A	4	1	**LSA25 E2 A4O**	1	0,25
32A	32A	4	1	**LSA32 E2 A4O**	1	0,25
45A	45A	4	1	**LSA38 E2 A4O**	1	0,25
16A	16A	4	1	**LSA16 E2 A4U**	1	0,25
25A	25A	4	1	**LSA25 E2 A4U**	1	0,25
32A	32A	4	1	**LSA32 E2 A4U**	1	0,25
45A	45A	4	1	**LSA38 E2 A4U**	1	0,25

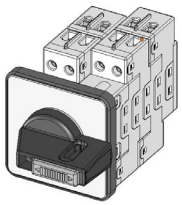


16A	10A	2	3	**LSMO16 E2 A6**	1	0,50
25A	11,5A	2	3	**LSMO25 E2 A6**	1	0,50
32A	13A	2	3	**LSMO32 E2 A6**	1	0,50
45A	20A	2	3	**LSMO38 E2 A6**	1	0,50
16A	10A	2	4	**LSMO16 E2 A8**	1	0,52
25A	11,5A	2	4	**LSMO25 E2 A8**	1	0,52
32A	13A	2	4	**LSMO32 E2 A8**	1	0,52
45A	20A	2	4	**LSMO38 E2 A8**	1	0,52

Mini DC-Isolators for Panel Mounting, 2 holes, Plate 64, IP66, Type 3R

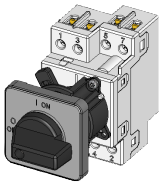


16A	10A	2	1	**LSA16 E2H1 A2**	1	0,19
25A	11,5A	2	1	**LSA25 E2H1 A2**	1	0,19
32A	13A	2	1	**LSA32 E2H1 A2**	1	0,19
45A	29A	2	1	**LSA38 E2H1 A2**	1	0,19
29A	10A	2	1	**LSA16 E2H1 A2+2**	1	0,25
36A	11,5A	2	1	**LSA25 E2H1 A2+2**	1	0,25
50A	13A	2	1	**LSA32 E2H1 A2+2**	1	0,25
50A	29A	2	1	**LSA38 E2H1 A2+2**	1	0,25
16A	10A	2	2	**LSA16 E2H1 A4**	1	0,24
25A	11,5A	2	2	**LSA25 E2H1 A4**	1	0,24
32A	13A	2	2	**LSA32 E2H1 A4**	1	0,24
45A	29A	2	2	**LSA38 E2H1 A4**	1	0,24
16A	16A	4	1	**LSA16 E2H1 A4O**	1	0,26
25A	25A	4	1	**LSA25 E2H1 A4O**	1	0,26
32A	32A	4	1	**LSA32 E2H1 A4O**	1	0,26
45A	45A	4	1	**LSA38 E2H1 A4O**	1	0,26
16A	16A	4	1	**LSA16 E2H1 A4U**	1	0,26
25A	25A	4	1	**LSA25 E2H1 A4U**	1	0,26
32A	32A	4	1	**LSA32 E2H1 A4U**	1	0,26
45A	45A	4	1	**LSA38 E2H1 A4U**	1	0,26

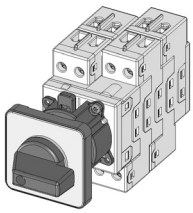


16A	10A	2	3	**LSMO16 E2H1 A6**	1	0,51
25A	11,5A	2	3	**LSMO25 E2H1 A6**	1	0,51
32A	13A	2	3	**LSMO32 E2H1 A6**	1	0,51
45A	20A	2	3	**LSMO38 E2H1 A6**	1	0,51
16A	10A	2	4	**LSMO16 E2H1 A8**	1	0,53
25A	11,5A	2	4	**LSMO25 E2H1 A8**	1	0,53
32A	13A	2	4	**LSMO32 E2H1 A8**	1	0,53
45A	20A	2	4	**LSMO38 E2H1 A8**	1	0,53

Mini DC-Isolators for Single Hole Mounting, Ø22,5mm, Plate 48, IP66, Type 4X

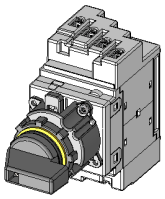


DC-PV1 (=DC21B) 600V	1000V	Poles in Series	Number of Strings	**Type**	Pack pcs.	Weight kg/pce.
16A	10A	2	1	**LSA16 Z A2**	1	0,17
25A	11,5A	2	1	**LSA25 Z A2**	1	0,17
32A	13A	2	1	**LSA32 Z A2**	1	0,17
45A	29A	2	1	**LSA38 Z A2**	1	0,17
29A	10A	2	1	**LSA16 Z A2+2**	1	0,22
36A	11,5A	2	1	**LSA25 Z A2+2**	1	0,22
50A	13A	2	1	**LSA32 Z A2+2**	1	0,22
50A	29A	2	1	**LSA38 Z A2+2**	1	0,22
16A	10A	2	2	**LSA16 Z A4**	1	0,21
25A	11,5A	2	2	**LSA25 Z A4**	1	0,21
32A	13A	2	2	**LSA32 Z A4**	1	0,21
45A	29A	2	2	**LSA38 Z A4**	1	0,21
16A	16A	4	1	**LSA16 Z A4O**	1	0,23
25A	25A	4	1	**LSA25 Z A4O**	1	0,23
32A	32A	4	1	**LSA32 Z A4O**	1	0,23
45A	45A	4	1	**LSA38 Z A4O**	1	0,23
16A	16A	4	1	**LSA16 Z A4U**	1	0,23
25A	25A	4	1	**LSA25 Z A4U**	1	0,23
32A	32A	4	1	**LSA32 Z A4U**	1	0,23
45A	45A	4	1	**LSA38 Z A4U**	1	0,23

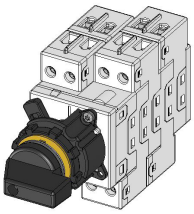


16A	10A	2	3	**LSMO16 Z A6**	1	0,50
25A	11,5A	2	3	**LSMO25 Z A6**	1	0,50
32A	13A	2	3	**LSMO32 Z A6**	1	0,50
45A	20A	2	3	**LSMO38 Z A6**	1	0,50
16A	10A	2	4	**LSMO16 Z A8**	1	0,52
25A	11,5A	2	4	**LSMO25 Z A8**	1	0,52
32A	13A	2	4	**LSMO32 Z A8**	1	0,52
45A	20A	2	4	**LSMO38 Z A8**	1	0,52

Mini DC-Isolators for Single Hole Mounting, Ø22,5mm, without Plate, IP66, Type 4X

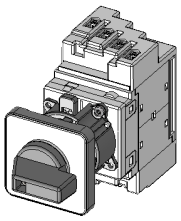


16A	10A	2	1	**LSA16 ZO A2**	1	0,15
25A	11,5A	2	1	**LSA25 ZO A2**	1	0,15
32A	13A	2	1	**LSA32 ZO A2**	1	0,15
45A	29A	2	1	**LSA38 ZO A2**	1	0,15
29A	10A	2	1	**LSA16 ZO A2+2**	1	0,19
36A	11,5A	2	1	**LSA25 ZO A2+2**	1	0,19
50A	13A	2	1	**LSA32 ZO A2+2**	1	0,19
50A	29A	2	1	**LSA38 ZO A2+2**	1	0.19
16A	10A	2	2	**LSA16 ZO A4**	1	0,18
25A	11,5A	2	2	**LSA25 ZO A4**	1	0,18
32A	13A	2	2	**LSA32 ZO A4**	1	0,18
45A	29A	2	2	**LSA38 ZO A4**	1	0.18
16A	16A	4	1	**LSA16 ZO A4O**	1	0,19
25A	25A	4	1	**LSA25 ZO A4O**	1	0,19
32A	32A	4	1	**LSA32 ZO A4O**	1	0,19
45A	45A	4	1	**LSA38 ZO A4O**	1	0,19
16A	16A	4	1	**LSA16 ZO A4U**	1	0,19
25A	25A	4	1	**LSA25 ZO A4U**	1	0,19
32A	32A	4	1	**LSA32 ZO A4U**	1	0,19
45A	45A	4	1	**LSA38 ZO A4U**	1	0,19

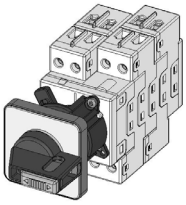


16A	10A	2	3	**LSMO16 ZO A6**	1	0,45
25A	11,5A	2	3	**LSMO25 ZO A6**	1	0,45
32A	13A	2	3	**LSMO32 ZO A6**	1	0,45
45A	20A	2	3	**LSMO38 ZO A6**	1	0,45
16A	10A	2	4	**LSMO16 ZO A8**	1	0,47
25A	11,5A	2	4	**LSMO25 ZO A8**	1	0,47
32A	13A	2	4	**LSMO32 ZO A8**	1	0,47
45A	20A	2	4	**LSMO38 ZO A8**	1	0,47

Mini DC-Isolators for Single Hole Mounting, Ø22,5mm, Plate 48, IP66, Type 4X

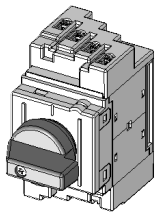


DC-PV1 (=DC21B) 600V	1000V	Poles in Series	Number of Strings	**Type**	Pack pcs.	Weight kg/pce.
16A	10A	2	1	**LSA16 ZH1 A2**	1	0,17
25A	11,5A	2	1	**LSA25 ZH1 A2**	1	0,17
32A	13A	2	1	**LSA32 ZH1 A2**	1	0,17
45A	29A	2	1	**LSA38 ZH1 A2**	1	0,17
29A	10A	2	1	**LSA16 ZH1 A2+2**	1	0,22
36A	11,5A	2	1	**LSA25 ZH1 A2+2**	1	0,22
50A	13A	2	1	**LSA32 ZH1 A2+2**	1	0,22
50A	29A	2	1	**LSA38 ZH1 A2+2**	1	0,22
16A	10A	2	2	**LSA16 ZH1 A4**	1	0,21
25A	11,5A	2	2	**LSA25 ZH1 A4**	1	0,21
32A	13A	2	2	**LSA32 ZH1 A4**	1	0,21
45A	29A	2	2	**LSA38 ZH1 A4**	1	0,21
16A	16A	4	1	**LSA16 ZH1 A4O**	1	0,23
25A	25A	4	1	**LSA25 ZH1 A4O**	1	0,23
32A	32A	4	1	**LSA32 ZH1 A4O**	1	0,23
45A	45A	4	1	**LSA38 ZH1 A4O**	1	0,23
16A	16A	4	1	**LSA16 ZH1 A4U**	1	0,23
25A	25A	4	1	**LSA25 ZH1 A4U**	1	0,23
32A	32A	4	1	**LSA32 ZH1 A4U**	1	0,23
45A	45A	4	1	**LSA38 ZH1 A4U**	1	0,23

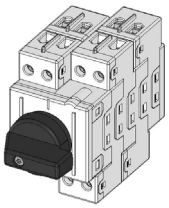


16A	10A	2	3	**LSMO16 ZH1 A6**	1	0,50
25A	11,5A	2	3	**LSMO25 ZH1 A6**	1	0,50
32A	13A	2	3	**LSMO32 ZH1 A6**	1	0,50
45A	20A	2	3	**LSMO38 ZH1 A6**	1	0,50
16A	10A	2	4	**LSMO16 ZH1 A8**	1	0,52
25A	11,5A	2	4	**LSMO25 ZH1 A8**	1	0,52
32A	13A	2	4	**LSMO32 ZH1 A8**	1	0,52
45A	20A	2	4	**LSMO38 ZH1 A8**	1	0,52

Mini DC-Isolators for Single Hole Mounting, Ø16mm, without Plate, IP66, Type 4X

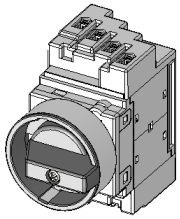


16A	10A	2	1	**LSA16 Z16 A2**	1	0,15
25A	11,5A	2	1	**LSA25 Z16 A2**	1	0,15
32A	13A	2	1	**LSA32 Z16 A2**	1	0,15
45A	29A	2	1	**LSA38 Z16 A2**	1	0,15
29A	10A	2	1	**LSA16 Z16 A2+2**	1	0,19
36A	11,5A	2	1	**LSA25 Z16 A2+2**	1	0,19
50A	13A	2	1	**LSA32 Z16 A2+2**	1	0,19
50A	29A	2	1	**LSA38 Z16 A2+2**	1	0,19
16A	10A	2	2	**LSA16 Z16 A4**	1	0,18
25A	11,5A	2	2	**LSA25 Z16 A4**	1	0,18
32A	13A	2	2	**LSA32 Z16 A4**	1	0,18
45A	29A	2	2	**LSA38 Z16 A4**	1	0,18
16A	16A	4	1	**LSA16 Z16 A4O**	1	0,19
25A	25A	4	1	**LSA25 Z16 A4O**	1	0,19
32A	32A	4	1	**LSA32 Z16 A4O**	1	0,19
45A	45A	4	1	**LSA38 Z16 A4O**	1	0,19
16A	16A	4	1	**LSA16 Z16 A4U**	1	0,19
25A	25A	4	1	**LSA25 Z16 A4U**	1	0,19
32A	32A	4	1	**LSA32 Z16 A4U**	1	0,19
45A	45A	4	1	**LSA38 Z16 A4U**	1	0,19



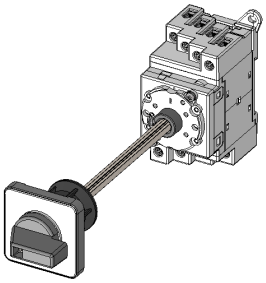
16A	10A	2	3	**LSMO16 Z16 A6**	1	0,45
25A	11,5A	2	3	**LSMO25 Z16 A6**	1	0,45
32A	13A	2	3	**LSMO32 Z16 A6**	1	0,45
45A	20A	2	3	**LSMO38 Z16 A6**	1	0,45
16A	10A	2	4	**LSMO16 Z16 A8**	1	0,47
25A	11,5A	2	4	**LSMO25 Z16 A8**	1	0,47
32A	13A	2	4	**LSMO32 Z16 A8**	1	0,47
45A	20A	2	4	**LSMO38 Z16 A8**	1	0,47

Lockable Mini DC-Isolators for Single Hole Mounting, Ø16mm, Plate 48, IP66, Type 4X



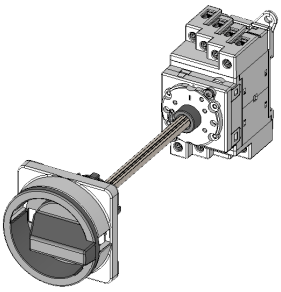
DC-PV1 (=DC21B) 600V	1000V	Poles in Series	Number of Strings	**Type**	Pack pcs.	Weight kg/pce.
16A	10A	2	1	**LSA16 Z16H448 A2**	1	0,19
25A	11,5A	2	1	**LSA25 Z16H448 A2**	1	0,19
32A	13A	2	1	**LSA32 Z16H448 A2**	1	0,19
45A	29A	2	1	**LSA38 Z16H448 A2**	1	0,19
29A	10A	2	1	**LSA16 Z16H448 A2+2**	1	0,25
36A	11,5A	2	1	**LSA25 Z16H448 A2+2**	1	0,25
50A	13A	2	1	**LSA32 Z16H448 A2+2**	1	0,25
50A	29A	2	1	**LSA38 Z16H448 A2+2**	1	0,25
16A	10A	2	2	**LSA16 Z16H448 A4**	1	0,24
25A	11,5A	2	2	**LSA25 Z16H448 A4**	1	0,24
32A	13A	2	2	**LSA32 Z16H448 A4**	1	0,24
45A	29A	2	2	**LSA38 Z16H448 A4**	1	0,24
16A	16A	4	1	**LSA16 Z16H448 A4O**	1	0,26
25A	25A	4	1	**LSA25 Z16H448 A4O**	1	0,26
32A	32A	4	1	**LSA32 Z16H448 A4O**	1	0,26
45A	45A	4	1	**LSA38 Z16H448 A4O**	1	0,26
16A	16A	4	1	**LSA16 Z16H448 A4U**	1	0,26
25A	25A	4	1	**LSA25 Z16H448 A4U**	1	0,26
32A	32A	4	1	**LSA32 Z16H448 A4U**	1	0,26
45A	45A	4	1	**LSA38 Z16H448 A4U**	1	0,26
16A	10A	2	3	**LSMO16 Z16H448 A6**	1	0,51
25A	11,5A	2	3	**LSMO25 Z16H448 A6**	1	0,51
32A	13A	2	3	**LSMO32 Z16H448 A6**	1	0,51
45A	20A	2	3	**LSMO38 Z16H448 A6**	1	0,51
16A	10A	2	4	**LSMO16 Z16H448 A8**	1	0,53
25A	11,5A	2	4	**LSMO25 Z16H448 A8**	1	0,53
32A	13A	2	4	**LSMO32 Z16H448 A8**	1	0,53
45A	20A	2	4	**LSMO38 Z16H448 A8**	1	0,53

Mini DC-Isolators for Base Mounting, w. Door Clutch, Single Hole, Plate 64, IP66, Type 4X



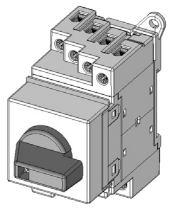
16A	10A	2	1	**LSA16 VZV A2**	1	0,20
25A	11,5A	2	1	**LSA25 VZV A2**	1	0,20
32A	13A	2	1	**LSA32 VZV A2**	1	0,20
45A	29A	2	1	**LSA38 VZV A2**	1	0,20
29A	10A	2	1	**LSA16 VZV A2+2**	1	0,26
36A	11,5A	2	1	**LSA25 VZV A2+2**	1	0,26
50A	13A	2	1	**LSA32 VZV A2+2**	1	0,26
50A	29A	2	1	**LSA38 VZV A2+2**	1	0,26
16A	10A	2	2	**LSA16 VZV A4**	1	0,24
25A	11,5A	2	2	**LSA25 VZV A4**	1	0,24
32A	13A	2	2	**LSA32 VZV A4**	1	0,24
45A	29A	2	2	**LSA38 VZV A4**	1	0,24
16A	16A	2	1	**LSA16 VZV A4O**	1	0,26
25A	25A	2	1	**LSA25 VZV A4O**	1	0,26
32A	32A	2	1	**LSA32 VZV A4O**	1	0,26
45A	45A	2	1	**LSA38 VZV A4O**	1	0,26
16A	16A	2	1	**LSA16 VZV A4U**	1	0,26
25A	25A	2	1	**LSA25 VZV A4U**	1	0,26
32A	32A	2	1	**LSA32 VZV A4U**	1	0,26
45A	45A	2	1	**LSA38 VZV A4U**	1	0,26

Lockable Mini DC-Isolators for Base Mounting, w. Door Clutch, Single Hole, Plate 64, IP66, Type 4X



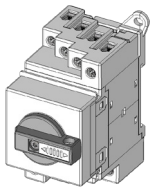
DC-PV1 (=DC21B) 600V	1000V	Poles in Series	Number of Strings	**Type**	Pack pcs.	weight kg/pce.
16A	10A	2	1	**LSA16 VZVH4 A2**	1	0,21
25A	11,5A	2	1	**LSA25 VZVH4 A2**	1	0,21
32A	13A	2	1	**LSA32 VZVH4 A2**	1	0,21
45A	29A	2	1	**LSA38 VZVH4 A2**	1	0,21
29A	10A	2	1	**LSA16 VZVH4 A2+2**	1	0,27
36A	11,5A	2	1	**LSA25 VZVH4 A2+2**	1	0,27
50A	13A	2	1	**LSA32 VZVH4 A2+2**	1	0,27
50A	29A	2	1	**LSA38 VZVH4 A2+2**	1	0,27
16A	10A	2	2	**LSA16 VZVH4 A4**	1	0,25
25A	11,5A	2	2	**LSA25 VZVH4 A4**	1	0,25
32A	13A	2	2	**LSA32 VZVH4 A4**	1	0,25
45A	29A	2	2	**LSA38 VZVH4 A4**	1	0,25
16A	16A	4	1	**LSA16 VZVH4 A4O**	1	0,27
25A	25A	4	1	**LSA25 VZVH4 A4O**	1	0,27
32A	32A	4	1	**LSA32 VZVH4 A4O**	1	0,27
45A	45A	4	1	**LSA38 VZVH4 A4O**	1	0,27
16A	16A	4	1	**LSA16 VZVH4 A4U**	1	0,27
25A	25A	4	1	**LSA25 VZVH4 A4U**	1	0,27
32A	32A	4	1	**LSA32 VZVH4 A4U**	1	0,27
45A	45A	4	1	**LSA38 VZVH4 A4U**	1	0,27

Mini DC-Isolators for Distribution Boards, IP40, Open Type



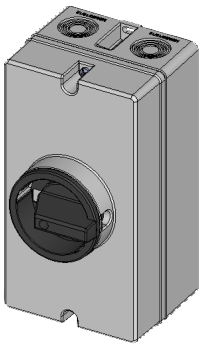
16A	10A	2	1	**LSA16 SMA A2**	1	0,18
25A	11,5A	2	1	**LSA25 SMA A2**	1	0,18
32A	13A	2	1	**LSA32 SMA A2**	1	0,18
45A	29A	2	1	**LSA38 SMA A2**	1	0,18
29A	10A	2	1	**LSA16 SMA A2+2**	1	0,22
36A	11,5A	2	1	**LSA25 SMA A2+2**	1	0,22
50A	13A	2	1	**LSA32 SMA A2+2**	1	0,22
50A	29A	2	1	**LSA38 SMA A2+2**	1	0,22
16A	10A	2	2	**LSA16 SMA A4**	1	0,20
25A	11,5A	2	2	**LSA25 SMA A4**	1	0,20
32A	13A	2	2	**LSA32 SMA A4**	1	0,20
45A	29A	2	2	**LSA38 SMA A4**	1	0,20
16A	16A	4	1	**LSA16 SMA A4O**	1	0,22
25A	25A	4	1	**LSA25 SMA A4O**	1	0,22
32A	32A	4	1	**LSA32 SMA A4O**	1	0,22
45A	45A	4	1	**LSA38 SMA A4O**	1	0,22
16A	16A	4	1	**LSA16 SMA A4U**	1	0,22
25A	25A	4	1	**LSA25 SMA A4U**	1	0,22
32A	32A	4	1	**LSA32 SMA A4U**	1	0,22
45A	45A	4	1	**LSA38 SMA A4U**	1	0,22

Lockable Mini DC-Isolators for Distribution Boards, IP40, Open Type



DC-PV1 (=DC21B) 600V	1000V	Poles in Series	Number of Strings	**Type**	Pack pcs.	Weight kg/pce.
16A	10A	2	1	**LSA16 SMAH1N A2**	1	0,18
25A	11,5A	2	1	**LSA25 SMAH1N A2**	1	0,18
32A	13A	2	1	**LSA32 SMAH1N A2**	1	0,18
45A	29A	2	1	**LSA38 SMAH1N A2**	1	0,18
29A	10A	2	1	**LSA16 SMAH1N A2+2**	1	0,22
36A	11,5A	2	1	**LSA25 SMAH1N A2+2**	1	0,22
50A	13A	2	1	**LSA32 SMAH1N A2+2**	1	0,22
50A	29A	2	1	**LSA38 SMAH1N A2+2**	1	0.22
16A	10A	2	2	**LSA16 SMAH1N A4**	1	0,20
25A	11,5A	2	2	**LSA25 SMAH1N A4**	1	0,20
32A	13A	2	2	**LSA32 SMAH1N A4**	1	0,20
45A	29A	2	2	**LSA38 SMAH1N A4**	1	0,20
16A	16A	4	1	**LSA16 SMAH1N A4O**	1	0,22
25A	25A	4	1	**LSA25 SMAH1N A4O**	1	0,22
32A	32A	4	1	**LSA32 SMAH1N A4O**	1	0,22
45A	45A	4	1	**LSA38 SMAH1N A4O**	1	0,22
16A	16A	4	1	**LSA16 SMAH1N A4U**	1	0,22
25A	25A	4	1	**LSA25 SMAH1N A4U**	1	0,22
32A	32A	4	1	**LSA32 SMAH1N A4U**	1	0,22
45A	45A	4	1	**LSA38 SMAH1N A4U**	1	0,22

Mini DC-Isolators in Plastic Enclosure, IP67, Type 4X



16A	10A	2	1	**LSA16 PFLH4 A2**	1	0,42
25A	11,5A	2	1	**LSA25 PFLH4 A2**	1	0,42
32A	13A	2	1	**LSA32 PFLH4 A2**	1	0,42
45A	29A	2	1	**LSA38 PFLH4 A2**	1	0,42
29A	10A	2	1	**LSA16 PFLH4 A2+2**	1	0,50
36A	11,5A	2	1	**LSA25 PFLH4 A2+2**	1	0,50
50A	13A	2	1	**LSA32 PFLH4 A2+2**	1	0,50
50A	29A	2	1	**LSA38 PFLH4 A2+2**	1	0,50
16A	10A	2	2	**LSA16 PFLH4 A4**	1	0,49
25A	11,5A	2	2	**LSA25 PFLH4 A4**	1	0,49
32A	13A	2	2	**LSA32 PFLH4 A4**	1	0,49
45A	29A	2	2	**LSA38 PFLH4 A4**	1	0,49
16A	16A	4	1	**LSA16 PFLH4 A4O**	1	0,51
25A	25A	4	1	**LSA25 PFLH4 A4O**	1	0,51
32A	32A	4	1	**LSA32 PFLH4 A4O**	1	0,51
45A	45A	4	1	**LSA38 PFLH4 A4O**	1	0,51
16A	16A	4	1	**LSA16 PFLH4 A4U**	1	0,51
25A	25A	4	1	**LSA25 PFLH4 A4U**	1	0,51
32A	32A	4	1	**LSA32 PFLH4 A4U**	1	0,51
45A	45A	4	1	**LSA38 PFLH4 A4U**	1	0,51

Changeover Isolators for Panel Mounting, 4 holes, Plate 64, IP66, Type 3R

DC-PV1 (=DC21B) 600V	DC-PV1 (=DC21B) 1000V	AC21B 440V	Poles in Series	Type	Pack pcs.	Weight kg/pce.
16A	16A	16A	4	**LSA16 E U4** [1]	1	0,40
25A	25A	25A	4	**LSA25 E U4** [1]	1	0,40
32A	32A	32A	4	**LSA32 E U4** [1]	1	0,40
45A	38A	45A	4	**LSA38 E U4** [1]	1	0,40
16A	16A	16A	4	**LSA16 E U4ACDC** [2]	1	0,40
25A	25A	25A	4	**LSA25 E U4ACDC** [2]	1	0,40
32A	32A	32A	4	**LSA32 E U4ACDC** [2]	1	0,40
45A	38A	45A	4	**LSA38 E U4ACDC** [2]	1	0,40
16A	16A	-	4	**LSA16 E U4DC** [3]	1	0,48
25A	25A	-	4	**LSA25 E U4DC** [3]	1	0,48
32A	32A	-	4	**LSA32 E U4DC** [3]	1	0,48
45A	38A	-	4	**LSA38 E U4DC** [3]	1	0,48

Changeover Isolators for Panel Mounting, 4 holes, lockable, Plate 64, IP66, Type 3R

16A	16A	16A	4	**LSA16 EH4 U4** [1]	1	0,43
25A	25A	25A	4	**LSA25 EH4 U4** [1]	1	0,43
32A	32A	32A	4	**LSA32 EH4 U4** [1]	1	0,43
45A	38A	45A	4	**LSA38 EH4 U4** [1]	1	0,43
16A	16A	16A	4	**LSA16 EH4 U4ACDC** [2]	1	0,43
25A	25A	25A	4	**LSA25 EH4 U4ACDC** [2]	1	0,43
32A	32A	32A	4	**LSA32 EH4 U4ACDC** [2]	1	0,43
45A	38A	45A	4	**LSA38 EH4 U4ACDC** [2]	1	0,43
16A	16A	-	4	**LSA16 EH4 U4DC** [3]	1	0,51
25A	25A	-	4	**LSA25 EH4 U4DC** [3]	1	0,51
32A	32A	-	4	**LSA32 EH4 U4DC** [3]	1	0,51
45A	38A	-	4	**LSA38 EH4 U4DC** [3]	1	0,51

Cangeover Isolators for Panel Mounting, 2 holes, Plate 64, IP66, Type 3R

16A	16A	16A	4	**LSA16 E2 U4** [1]	1	0,40
25A	25A	25A	4	**LSA25 E2 U4** [1]	1	0,40
32A	32A	32A	4	**LSA32 E2 U4** [1]	1	0,40
45A	38A	45A	4	**LSA38 E2 U4** [1]	1	0,40
16A	16A	16A	4	**LSA16 E2 U4ACDC** [2]	1	0,40
25A	25A	25A	4	**LSA25 E2 U4ACDC** [2]	1	0,40
32A	32A	32A	4	**LSA32 E2 U4ACDC** [2]	1	0,40
45A	38A	45A	4	**LSA38 E2 U4ACDC** [2]	1	0,40
16A	16A	-	4	**LSA16 E2 U4DC** [3]	1	0,48
25A	25A	-	4	**LSA25 E2 U4DC** [3]	1	0,48
32A	32A	-	4	**LSA32 E2 U4DC** [3]	1	0,48
45A	38A	-	4	**LSA38 E2 U4DC** [3]	1	0,48

Changeover Isolators for Panel Mounting, lockable, 2 holes, Plate 64, IP66, Type 3R

16A	16A	16A	4	**LSA16 E2H1 U4** [1]	1	0,41
25A	25A	25A	4	**LSA25 E2H1 U4** [1]	1	0,41
32A	32A	32A	4	**LSA32 E2H1 U4** [1]	1	0,41
45A	38A	45A	4	**LSA38 E2H1 U4** [1]	1	0,41
16A	16A	16A	4	**LSA16 E2H1 U4ACDC** [2]	1	0,41
25A	25A	25A	4	**LSA25 E2H1 U4ACDC** [2]	1	0,41
32A	32A	32A	4	**LSA32 E2H1 U4ACDC** [2]	1	0,41
45A	38A	45A	4	**LSA38 E2H1 U4ACDC** [2]	1	0,41
16A	16A	-	4	**LSA16 E2H1 U4DC** [3]	1	0,49
25A	25A	-	4	**LSA25 E2H1 U4DC** [3]	1	0,49
32A	32A	-	4	**LSA32 E2H1 U4DC** [3]	1	0,49
45A	38A	-	4	**LSA38 E2H1 U4DC** [3]	1	0,49

1) For all applications, jumpers not included
2) Changeover Isolators AC/DC, 2 jumpers for DC side are enclosed
3) Changeover Isolators for DC, prewired

Changeover Isolators for Base Mounting, w. Door Clutch, Single Hole, Plate 64, IP66, Type 4X

DC-PV1 600V	(=DC21B) 1000V	AC21B 440V	Poles in Series	**Type**	Pack pcs.	Weight kg/pce.
16A	16A	16A	4	**LSA16 VZV U4** [1]	1	0,45
25A	25A	25A	4	**LSA25 VZV U4** [1]	1	0,45
32A	32A	32A	4	**LSA32 VZV U4** [1]	1	0,45
45A	38A	45A	4	**LSA38 VZV U4** [1]	1	0,45
16A	16A	16A	4	**LSA16 VZV U4ACDC** [2]	1	0,45
25A	25A	25A	4	**LSA25 VZV U4ACDC** [2]	1	0,45
32A	32A	32A	4	**LSA32 VZV U4ACDC** [2]	1	0,45
45A	38A	45A	4	**LSA38 VZV U4ACDC** [2]	1	0,45
16A	16A	-	4	**LSA16 VZV U4DC** [3]	1	0,50
25A	25A	-	4	**LSA25 VZV U4DC** [3]	1	0,50
32A	32A	-	4	**LSA32 VZV U4DC** [3]	1	0,50
45A	38A	-	4	**LSA38 VZV U4DC** [3]	1	0,50

Changeover Isolators for Base Mounting, lockable, w. Door Clutch, Single Hole, Plate 64, IP66, Type 4X

16A	16A	16A	4	**LSA16 VZVH4 U4** [1]	1	0,45
25A	25A	25A	4	**LSA25 VZVH4 U4** [1]	1	0,45
32A	32A	32A	4	**LSA32 VZVH4 U4** [1]	1	0,45
45A	38A	45A	4	**LSA38 VZVH4 U4** [1]	1	0,45
16A	16A	16A	4	**LSA16 VZVH4 U4ACDC** [2]	1	0,45
25A	25A	25A	4	**LSA25 VZVH4 U4ACDC** [2]	1	0,45
32A	32A	32A	4	**LSA32 VZVH4 U4ACDC** [2]	1	0,45
45A	38A	45A	4	**LSA38 VZVH4 U4ACDC** [2]	1	0,45
16A	16A	-	4	**LSA16 VZVH4 U4DC** [3]	1	0,50
25A	25A	-	4	**LSA25 VZVH4 U4DC** [3]	1	0,50
32A	32A	-	4	**LSA32 VZVH4 U4DC** [3]	1	0,50
45A	38A	-	4	**LSA38 VZVH4 U4DC** [3]	1	0,50

Changeover Isolators for Distribution Boards, lockable, lower handle, IP40, Open Type

16A	16A	16A	4	**LSA16 SMAH1N U4** [1]	1	0,40
25A	25A	25A	4	**LSA25 SMAH1N U4** [1]	1	0,40
32A	32A	32A	4	**LSA32 SMAH1N U4** [1]	1	0,40
45A	38A	45A	4	**LSA38 SMAH1N U4** [1]	1	0,40
16A	16A	16A	4	**LSA16 SMAH1N U4ACDC** [2]	1	0,40
25A	25A	25A	4	**LSA25 SMAH1N U4ACDC** [2]	1	0,40
32A	32A	32A	4	**LSA32 SMAH1N U4ACDC** [2]	1	0,40
45A	38A	45A	4	**LSA38 SMAH1N U4ACDC** [2]	1	0.40
16A	16A	-	4	**LSA16 SMAH1N U4DC** [3]	1	0,45
25A	25A	-	4	**LSA25 SMAH1N U4DC** [3]	1	0,45
32A	32A	-	4	**LSA32 SMAH1N U4DC** [3]	1	0,45
45A	38A	-	4	**LSA38 SMAH1N U4DC** [3]	1	0,45

1) For all applications, jumpers not included
2) Changeover Isolators AC/DC, 2 jumpers for DC side are enclosed
3) Changeover Isolators for DC, prewired

Technical Data

Kind of current	Category		Typical applications	Test conditions for the number of on-load operating cycles (normal service)						Test conditions for making and breaking capacities (operation in fault case)					
				Make			Break			Make			Break		
				I/Ie	U/Ue	L/R	Ic/Ie	Ur/Ue	L/R	I/Ie	U/Ue	L/R	Ic/Ie	Ur/Ue	L/R
Direct current	**DC21A** frequent operation	**DC21B** infrequent operation	Switching of resistive loads including moderate overloads	1	1	1ms	1	1	1ms	1,5	1,05	1ms	1,5	1,05	1ms
	DC22A frequent operation	**DC22B** infrequent operation	Switching of mixed resistive a.induct. loads incl. moderate overloads (shunt motors)	1	1	2ms	1	1	2ms	4	1,05	2,5ms	4	1,05	2,5ms
	DC-PV1		Switching of single PV string(s) without reverse- and overcurrents.	1	1	1ms	1	1	1ms	1,5	1,05	1ms	1,5	1,05	1ms
	DC-PV2		Switching of several PV strings with reverse- and overcurrents.	1	1	1ms	1	1	1ms	4	1,05	1ms	4	1,05	1ms

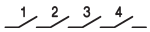
Data according to IEC 60947-3, VDE 0660, GB14048.3 (China)

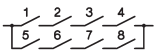
Main contacts			**Type**	**LSA16 LSM016**	**LSA25 LSMO25**	**LSA32 LSMO32**	**LSA38 LSMO38**
Rated thermal current I_{th}			A	16	25	32	45
Rated insulation voltage U_i 1)			V	1000	1000	1000	1000
Rated insulation voltage U_i 2)			V	1500	1500	1500	1500
Distance of contacts (per pole)			mm	8	8	8	8
Rated operational current I_e							
AC21B	A2, A4	U_e max. 440V	A	16	25	32	45
	A2 +2	U_e max. 440V	A	29	45	50	50

1) Suitable at overvoltage category I to III, pollution degree 3 (standard-industry): U_{imp} = 8kV.
2) Suitable at overvoltage category I to III, pollution degree 2 (min. IP55): U_{imp} = 8kV.

Technical Data

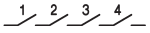
Data acc. to IEC 60947-3, VDE 0660

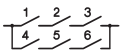
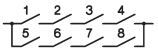
Main Contacts		**Type**	**LSA16**	**LSA25**	**LSA32**	**LSA38**
Rated operational current I_e	300V	A	16	23	27	-
DC-PV1 1 pole	400V	A	14	22	25	-
A1	500V	A	10	17	20	-
	600V	A	7	12	15	-
	700V	A	5	6	7,5	-
	800V	A	3	4	5	-
	900V	A	3	3	4	-
	1000V	A	2	2	3	-
2 poles in series	500V	A	16	25	32	45
A2	600V	A	16	25	32	45
	700V	A	16	25	32	45
	800V	A	16	20	23	45
	900V	A	16	17	20	39
	1000V	A	10	11,5	13	29
	1100V	A	8	10	-	-
	1200V	A	7	8,5	10	16
	1300V	A	6	7	-	-
	1400V	A	5	6	-	-
	1500V	A	3	5	6	7
2 poles in series	500V	A	29	45	50	50
+ 2 poles parallel	600V	A	29	36	50	50
A2+2	700V	A	22	27	32	50
	800V	A	17	20	23	47
	900V	A	16	17	20	39
	1000V	A	10	11,5	13	29
	1100V	A	8	10	-	-
	1200V	A	7	8,5	10	16
	1300V	A	6	7	-	-
	1400V	A	5	6	-	-
	1500V	A	3	5	6	7
4 poles in series	500V	A	16	25	32	45
A4	600V	A	16	25	32	45
	700V	A	16	25	32	45
	800V	A	16	25	32	45
	900V	A	16	25	32	45
	1000V	A	16	25	32	45
	1100V	A	16	25	-	-
	1200V	A	16	25	32	45
	1300V	A	16	25	-	-
	1400V	A	16	25	-	-
	1500V	A	16	25	32	45

		Type	**LSMO16**	**LSMO25**	**LSMO32**	**LSMO38**
4 poles in series	500V	A	29	45	50	50
+ 2 poles parallel	600V	A	29	45	50	50
A4+2	700V	A	29	45	50	50
	800V	A	29	45	50	50
	900V	A	29	45	50	50
	1000V	A	29	45	50	50
	1100V	A	29	-	-	-
	1200V	A	29	33	50	50
	1300V	A	29	-	-	-
	1400V	A	29	-	-	-
	1500V	A	20	26	32	32

Technical Data

Data acc. to IEC 60947-3, VDE 0660

Main Contacts			**Type**	**LSA16**	**LSA25**	**LSA32**	**LSA38**
Rated operational current I_e		300V	A	16	23	27	45
DC-PV2	1 pole	400V	A	14	18	20	33
	A1	500V	A	10	12	14	15
		600V	A	5	6	8	9
		700V	A	1,5	2	3	6
		800V	A	1,5	2	3	5
		900V	A	1	1,5	2	4
		1000V	A	1	1,5	2	3
	2 poles in series	500V	A	16	25	32	45
	A2	600V	A	14	21	27	45
		700V	A	13	19	22	40
		800V	A	12	15	17	30
		900V	A	8	10	12	20
		1000V	A	4	5	6	13
		1100V	A	3	4	-	-
		1200V	A	2	3	4	6
		1300V	A	1,5	2	-	-
		1400V	A	1	2	-	-
		1500V	A	1	1,5	2	3
	2 poles in series	500V	A	25	39	50	50
	+ 2 poles parallel	600V	A	20	32	35	50
	A2+2	700V	A	13	19	22	40
		800V	A	12	15	17	30
		900V	A	8	10	12	20
		1000V	A	4	5	6	13
		1100V	A	3	4	-	-
		1200V	A	2	3	4	6
		1300V	A	1,5	2	-	-
		1400V	A	1	2	-	-
		1500V	A	1	1,5	2	3
	4 poles in series	500V	A	16	25	32	45
	A4	600V	A	16	25	32	45
		700V	A	16	25	32	45
		800V	A	16	25	32	45
		900V	A	16	25	32	45
		1000V	A	16	25	32	45
		1100V	A	16	25	-	-
		1200V	A	13,5	21	27	42
		1300V	A	12	19	-	-
		1400V	A	10,5	16	-	-
		1500V	A	9	14	18	28

			Type	**LSMO16**	**LSMO25**	**LSMO32**	**LSMO38**
	3 poles in series	500V	A	28	45	50	50
	+ 2 poles parallel	600V	A	22	38	44	48
	A3+2	700V	A	20	30	34	35
		800V	A	18	26	29	31
		900V	A	16	22	24	24
		1000V	A	15	18	20	20
		1100V	A	-	-	-	-
		1200V	A	11	13,5	15	15
		1300V	A	-	-	-	-
		1400V	A	-	-	-	-
		1500V	A	4	6,5	8	8
	4 poles in series	500V	A	29	45	50	50
	+ 2 poles parallel	600V	A	29	45	50	50
	A4+2	700V	A	25	40	50	50
		800V	A	21	35	45	50
		900V	A	18	30	37	50
		1000V	A	16	25	32	50
		1100V	A	-	-	-	-
		1200V	A	13,5	21	27	27
		1300V	A	-	-	-	-
		1400V	A	-	-	-	-
		1500V	A	9	14	18	18

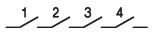
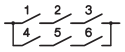
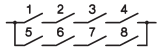
Technical Data

Data according to IEC 60947-3, VDE 0660

Main contacts			**Type**	**LSA16 LSMO16**	**LSA25 LSAMO25**	**LSA32 LSMO32**	**LSA38 LSMO38**
Rated conditional short-circuit current			kA_{eff}	5	5	5	5
Max. fuse size		gL (gG)	A	40	63	80	80
Mechanical life			$x10^3$	10	10	10	10
Rated short-time	Icw	A2, A4	A	800	900	1000	1000
withstand current (1s)		A2+2	A	1300	1500	1700	1700
Short circuit	Icm	A2, A4	A	800	900	1000	1000
making capacity		A2+2	A	1300	1500	1700	1700
Maximum cable cross sections (incl. jumper LSAV-B1)							
solid or stranded			mm^2	0,5 - 10	0,5 - 10	0,5 - 10	0,5 - 10
flexible			mm^2	0,5 - 6	0,5 - 6	0,5 - 6	0,5 - 6
flexible (+ multicore cable end)			mm^2	0,5 - 6	0,5 - 6	0,5 - 6	0,5 - 6
Size of terminal screw				M4 Pz1	M4 Pz1	M4 Pz1	M4 Pz1
Tightening torque			Nm	1,4	1,4	1,4	1,4
2 cables per clamp without jumper LSAV-B1							
solid or stranded			mm^2	10+(1,5-2,5) / 6+(1,5-6) / 4+(1,5-4)			
flexible			mm^2	(0,5-6)+(0,5-6)			
stranded			AWG	6+(20-14) / 8+(20-12) / 10+(20-10) 12+(20-12)			
solid			AWG	10+(16-10) / 12+(16-12) 14+(16-14)			
Maximum ambient temperature							
Operation		open	°C	-40 to +65			
		enclosed	°C	-40 to +45			
Storage			°C	-50 to +90			
Power loss per switch at $I_{e\ max.}$							
A2			(A)/W	(16)/1	(25)/2,3	(32)/3,7	(45)/7,1
A4			(A)/W	(16)/2	(25)/4,6	(32)/7,4	(45)/14,2
A2+2			(A)/W	(29)/1,5	(45)/3,7	(50)/4,4	(50)/4,4
Contact resistance per pole			mΩ	1,75	1,75	1,75	1,75

Technical Data

Data according to UL508I File E359344, Category no.: NMSJ, and UL60947-1 File E332938, Category no.: NRNT2,

Main contacts			**Type**	**LSA16**	**LSA25**	**LSA32**	**LSA38**
Ampere-Rating	"General use"	DC					
	1 pole	350V	A	4	5	6	20
		500V	A	4	5	6	12
		600V	A	4	5	6	9
	2 poles in series	350V	A	16	25	32	45
	A2	500V	A	16	25	32	45
		600V	A	16	25	32	40
	2 poles in series	350V	A	29	45	50	50
	+ 2 poles parallel	500V	A	29	41	43	45
	A2+2	600V	A	21	30	33	40
							
	4 poles in series	350V	A	16	25	32	45
	A4	500V	A	16	25	32	45
		600V	A	16	25	32	45
			Type	**LSMO16**	**LSMO25**	**LSMO32**	**LSMO38**
	3 poles in series	350V	A	16	25	50	50
	+ 2 poles parallel	500V	A	16	25	50	50
	A3+2	600V	A	16	25	45	45
							
	4 poles in series	350V	A	16	25	50	50
	+ 2 poles parallel	500V	A	16	25	50	50
	A4+2	600V	A	16	25	50	50
							
Fuse size (RK5)	Industrial Control Switch						
		5kA / 600V	A	40	60	80	80
Maximum cable cross sections (incl. jumper LSAV-B1)							
solid or stranded			AWG	16 - 10	16 - 10	16 - 10	16 - 10
flexible			AWG	20 - 6	20 - 6	20 - 6	20 - 6
flexible (+ multicore cable end)			AWG	20 - 6	20 - 6	20 - 6	20 - 6
Size of terminal screw				M4 Pz1	M4 Pz1	M4 Pz1	M4 Pz1
Tightening torque			lb.inch	12,4	12,4	12,4	12,4
Protection class of terminals [1]				IP20	IP20	IP20	IP20

Approvals

Country / Type	USA, UL508I	US, Canada UL508	Europe	China CCC	CB-certificates	EAC
LSA16/LSM016	o	o	/	o	x	o
LSA25/LSM025	o	o	/	o	x	o
LSA32/LSMO32	o	o	/	o	x	o
LSA38/LSMO38	o	o	/	o	x	o

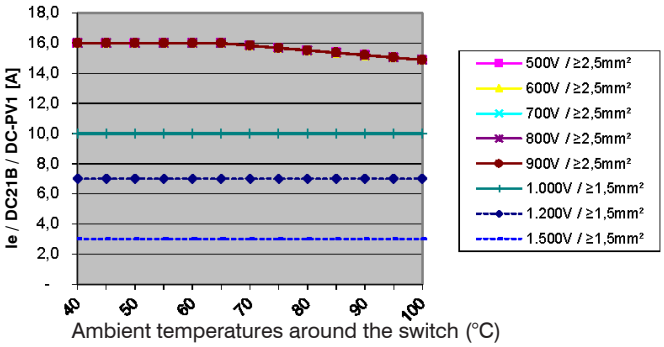
o In standard version approved / No testing required CE x pending - not provided for testing till now

1) Protection degree of the terminals with connected insulated conductor.

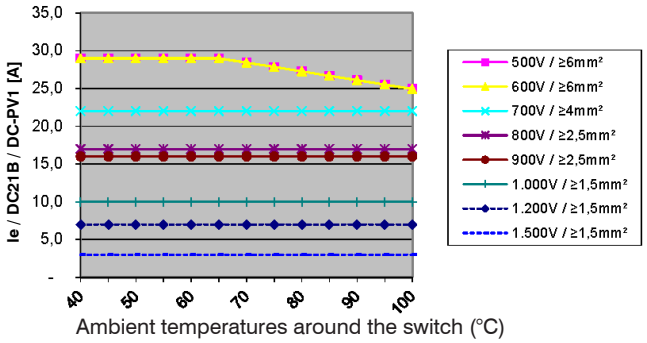
Technical Data

Example for maximum currents according to ambient temperatures and cable cross sections:

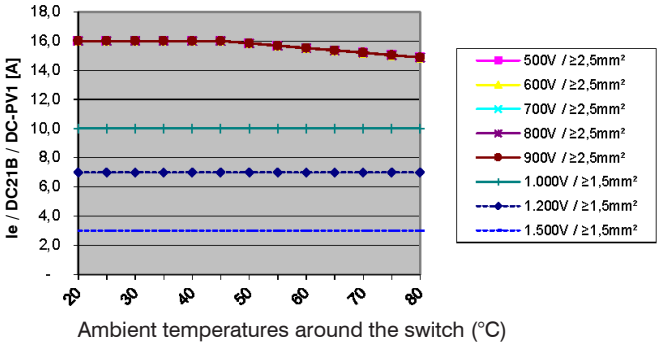
Switch open LSA(O)16.., 2 contacts in series (A2)



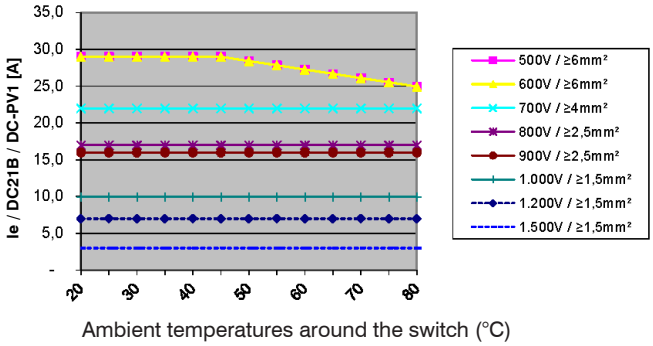
Switch open LSA(O)16 .., 2 contacts in series + 2 parallel (A2+2)



Switch enclosed LSA(O)16 PFL.., 2 contacts in series (A2)



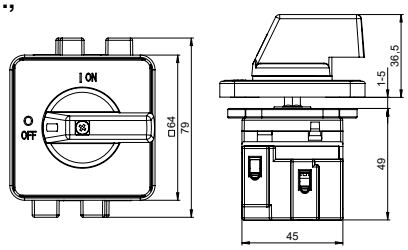
Switch enclosed LS16(M)O PFL.., 2 contacts in series + 2 parallel (A2+2)



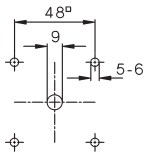
All data about maximum currents according to ambient temperatures and cable cross sections for switches LSA(O)16.. to LSA(O)38.. (open or enclosed) please find under ➡ www.benedict.at (Button "Customers").

Dimensions:

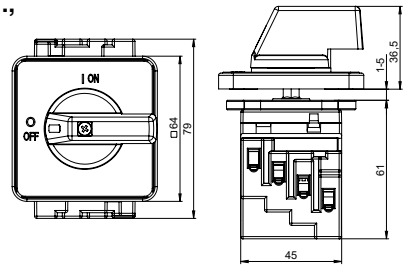
LSA16 E.. up to LSA38 E..,
..A2



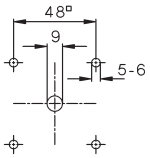
Mounting hole



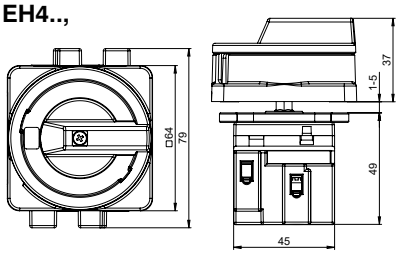
LSA16 E.. up to LSA38 E..,
..A2+2, ..A4



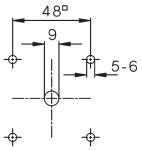
Mounting hole



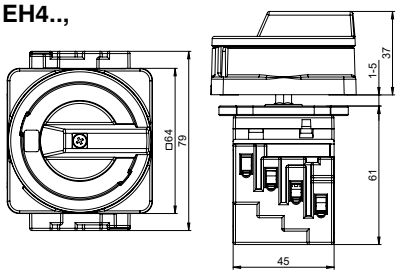
LSA16 EH4.. up to LSA38 EH4..,
..A2



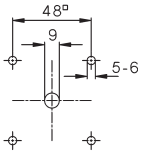
Mounting hole



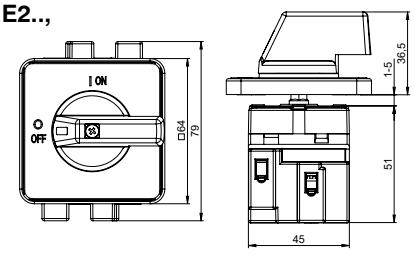
LSA16 EH4.. up to LSA38 EH4..,
..A2+2, ..A4



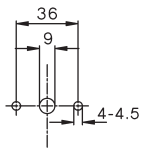
Mounting hole



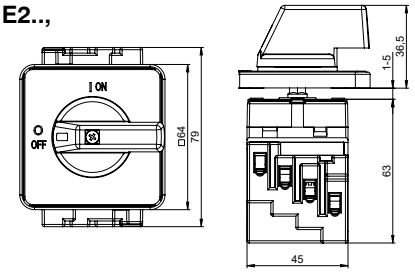
LSA16 E2.. up to LSA38 E2..,
..A2



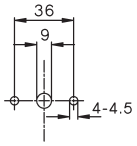
Mounting hole



LSA16 E2.. up to LSA38 E2..,
..A2+2, ..A4

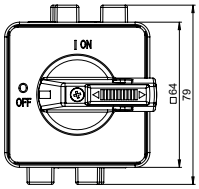


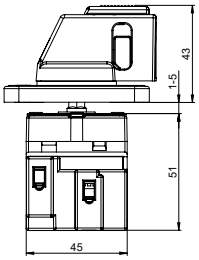
Mounting hole



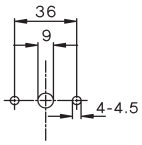
Dimensions:

LSA16 E2H1.. up to LSA38 E2H1..,
..A2

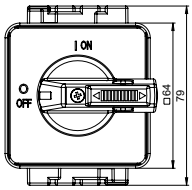


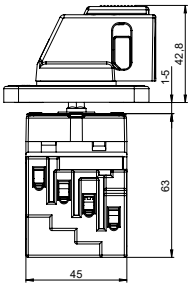


Mounting hole

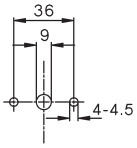


LSA16 E2H1.. up to LSA38 E2H1..,
..A2+2, ..A4

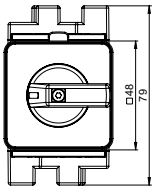


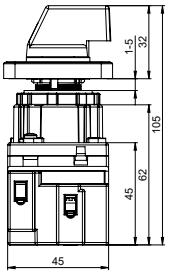


Mounting hole

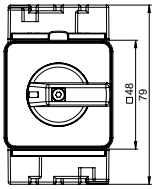


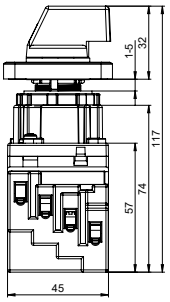
LSA16 Z.. up to LSA38 Z..,
..A2



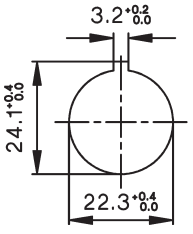


LSA16 Z.. up to LSA38 Z..,
..A2+2, ..A4

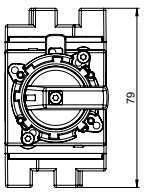


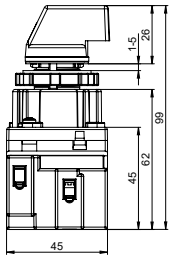


Detailed view - Mounting hole for LSA16 Z(O).. up to LSA38 Z(O)..

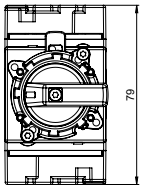


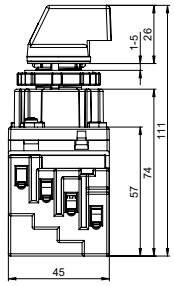
LSA16 ZO.. up to LSA38 ZO..,
..A2





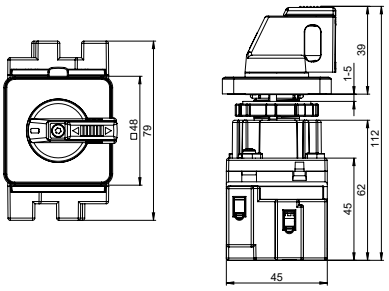
LSA16 ZO.. up to LSA38 ZO..,
..A2+2, ..A4



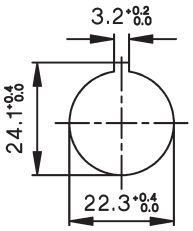


Dimensions:

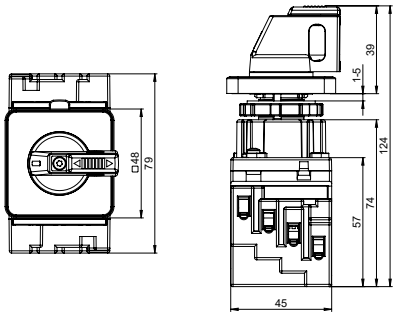
LSA16 ZH1.. up to LSA38 ZH1..,
..A2



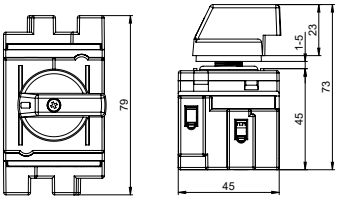
Detailed view - Mounting hole for LSA16 ZH1.. up to LSA38 ZH1..



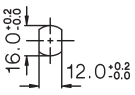
LSA16 ZH1.. up to LSA38 ZH1..,
..A2+2, ..A4



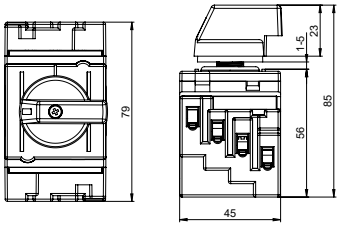
LSA16 Z16.. up to LSA38 Z16..,
..A2



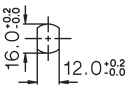
Mounting hole



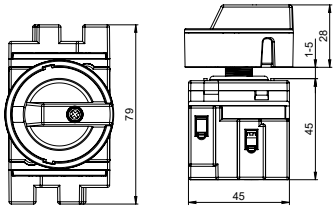
LSA16 Z16.. up to LSA38 Z16..,
..A2+2, ..A4



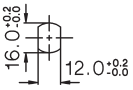
Mounting hole



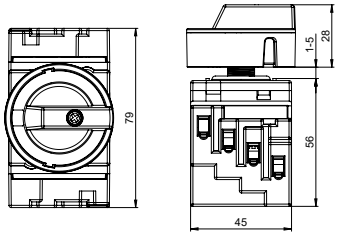
LSA16 ZH448.. up to LSA38 Z16H448..,
..A2



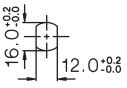
Mounting hole



LSA16 ZH448.. up to LSA38 ZH448..,
..A2+2, ..A4

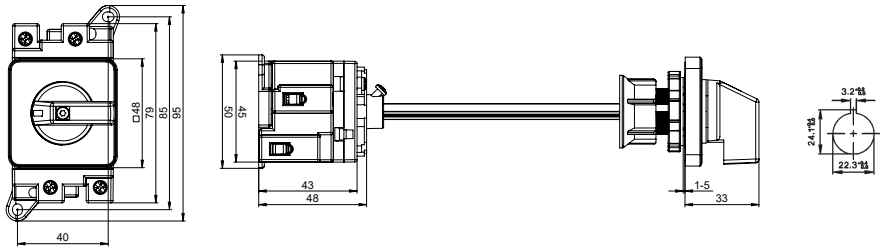


Mounting hole



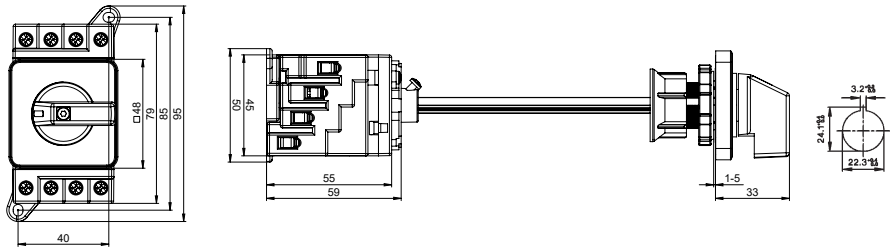
Dimensions:

LSA16 VZV.. up to LSA38 VZV..,
..A2



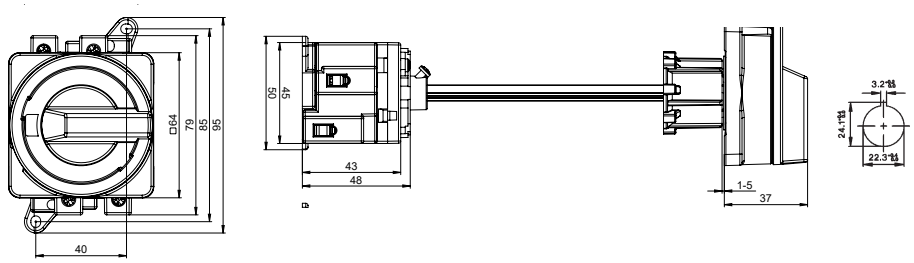
X_{max} = 182, L = 155,5
(X_{min} = 59,5)
L = X - 26,5±3

LSA16 VZV.. up to LSA38 VZV..,
..A2+2, ..A4



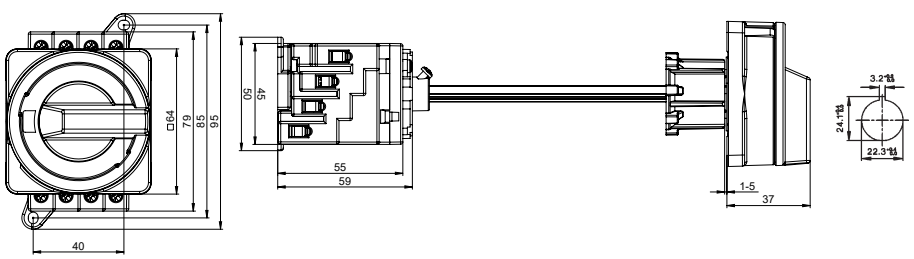
X_{max} = 194, L = 155,5
(X_{min} = 71,5)
L = X - 38,5±3

LSA16 VZVH4.. up to LSA38 VZVH4..,
..A2



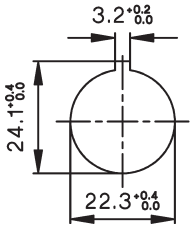
X_{max} = 182, L = 155,5
(X_{min} = 59,5)
L = X - 26,5±3

LSA16 VZVH4.. up to LSA38 VZVH4..,
..A2+2, ..A4



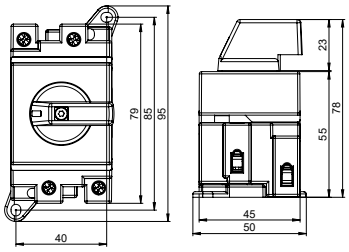
X_{max} = 194, L = 155,5
(X_{min} = 71,5)
L = X - 38,5±3

Detailed view - Mounting hole for LSA16 VZV(H).. up to LSA38 VZV(H)..

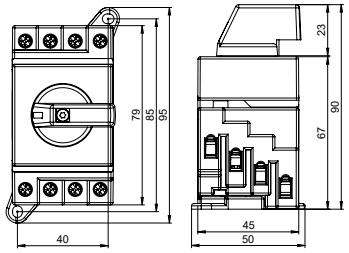


Dimensions:

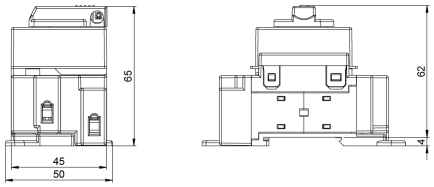
LSA16 SMA.. up to LSA38 SMA..,
..A2

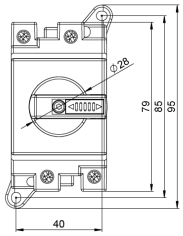


LSA16 SMA.. up to LSA38 SMA..,
..A2+2, ..A4

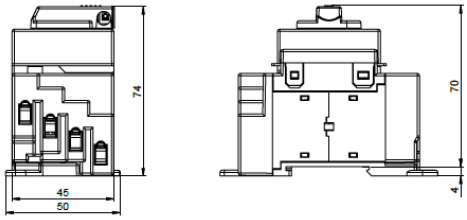


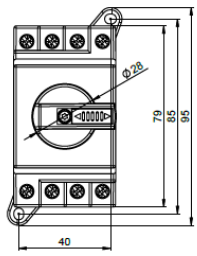
LSA16 SMAH1N.. up to LSA38 SMAH1N..,
..A2





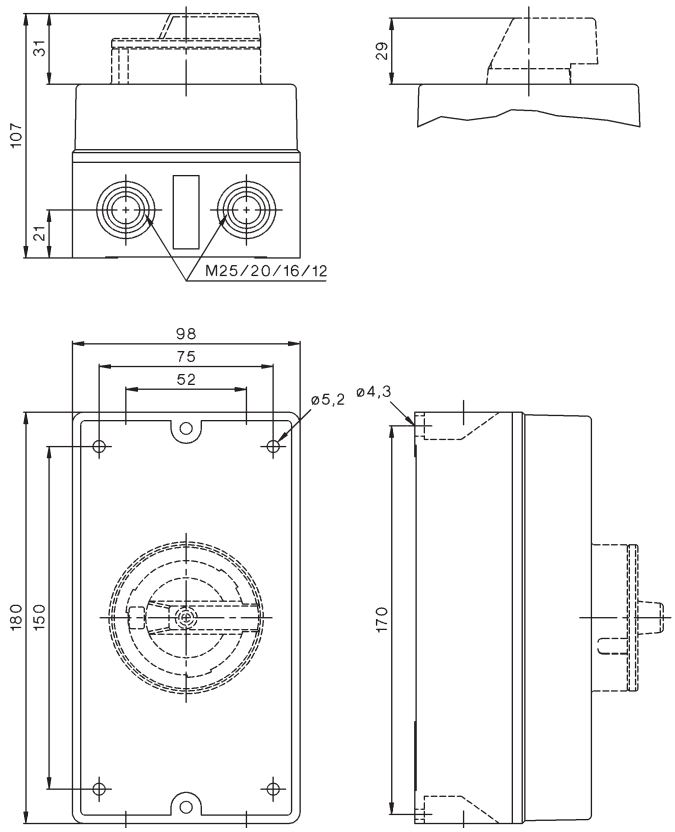
LSA16 SMAH1N.. up to LSA38 SMAH1N..,
..A2+2, ..A4



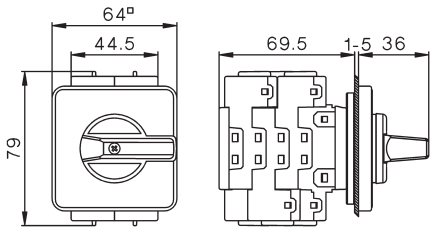


Dimensions:

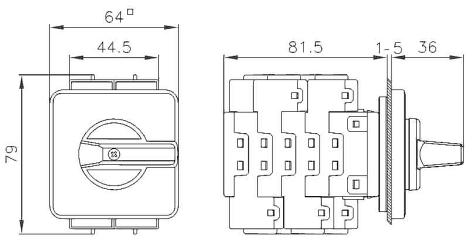
LSA16 PFLH4.. up to LSA38 PFLH4..,
..A2, ..A2+2, ..A4



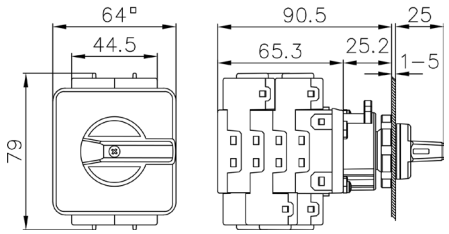
LSMO16 E.. up to LSMO38 E..,
..A6



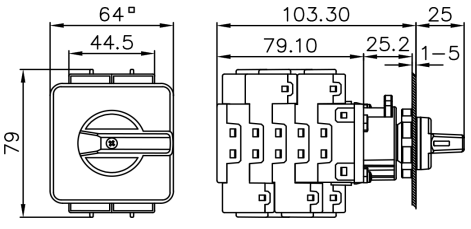
LSMO16 E.. up to LSMO38 E..,
..A8



LSMO16 Z.. up to LSMO38 Z..,
..A6



LSMO16 Z.. up to LSMO38 Z..,
..A8



Dimensions:

LSA16 E U4 up to LSA38 E U4,
LSA16 E U4ACDC up to LSA38 E U4ACDC

LSA16 E U4DC up to LSA38 E U4DC

LSA16 EH4 U4 up to LSA38 EH4 U4,
LSA16 EH4 U4ACDC up to LSA38 EH4 U4ACDC

LSA16 EH4 U4DC up to LSA38 EH4 U4DC

LSA16 E2 U4 up to LSA38 E U4,
LSA16 E2 U4ACDC up to LSA38 E U4ACDC

LSA16 E2 U4DC up to LSA38 E U4DC

LSA16 E2H4 U4 up to LSA38 EH4 U4,
LSA16 E2H4 U4ACDC up to LSA38 EH4 U4ACDC

LSA16 E2H4 U4DC up to LSA38 EH4 U4DC

Dimensions:

LSA16 VZV U4 up to LSA38 VZV U4,
LSA16 VZV U4ACDC up to LSA38 VZV U4ACDC

LSA16 VZV U4DC up to LSA38 VZV U4DC

LSA16 VZVH4 U4 up to LSA38 EH4 U4,
LSA16 VZVH4 U4ACDC up to LSA38 EH4 U4ACDC

LSA16 VZVH4 U4DC up to LSA38 VZVH4 U4DC

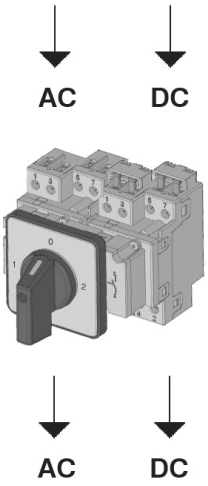
Dimensions:

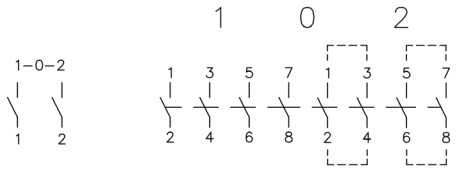
LSA16 SMAH1N U4 up to LSA38 SMAH1N U4,
LSA16 SMAH1N U4ACDC up to LSA38 SMAH1N U4ACDC

LSA16 SMAH1N U4DC up to LSA38 SMAH1N U4DC

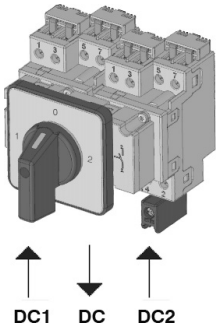
Changeover Isolators - Applications:

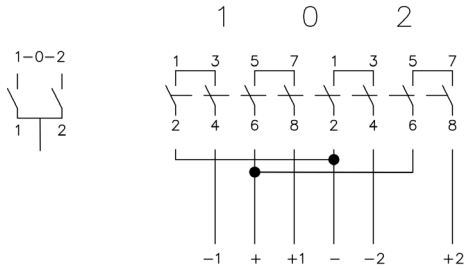
LSA.. U4ACDC (2 pcs. jumpers attached)



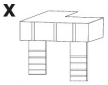


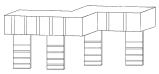
LSA.. U4DC (prewired)





Isolated jumpers LSAV-.. and LSM(O)V-.. for Series and Parallel switching of contacts:

Type	LSA 16	LSA 25	LSA 32	LSA 38
A4O A4U A4B	2 x  LSAV-B1-1			2 x  LSAV-B1-2
A2+2	4 x  LSAV-B1-1			

Type	LSMO16	LSMO25	LSMO32	LSMO38
A4+2	4 x  LSMV-B1-1 2 x  LSMOV-B1-1			

Quality made in AUSTRIA

D1080E241

BENEDICT GMBH

Lieblgasse 7, A-1220 Wien
Telefon: + 43 1 251 51 - 0
Fax: + 43 1 251 51 - 89
e-mail: sales@benedict.at
w w w . b e n e d i c t . a t