

Mini DC - Isolators for Photovoltaic

acc. to IEC 60364-7-712



Quality made in 

D1024E171



**Contactors
Motor-Starters**

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

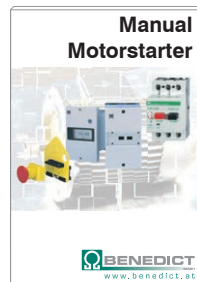
Catalogue **D656E..**



**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

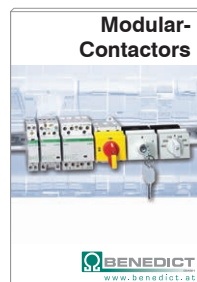
Catalogue **D509E..**



Push Buttons

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

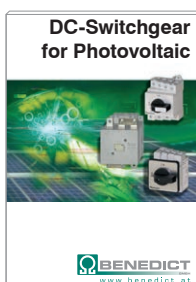
Catalogue **D580E..**



**Modular-
Contactors**

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

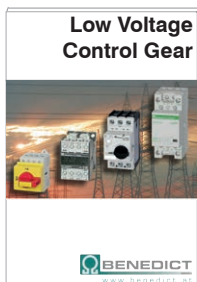
Catalogue **D681E..**



**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..**



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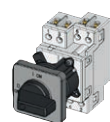
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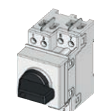
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Ratings

Rated Current

Type	I_{th} open	DC21B(DC-PV1)	at U_e
	A	A	V
		4 poles in series	

LSM16	16	16	1000
LSM25	25	25	1000

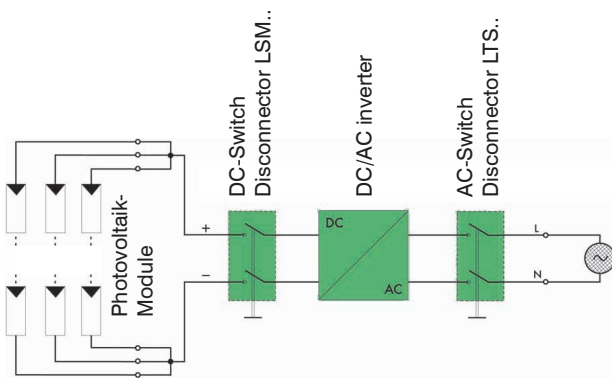
Mini DC-Switch Disconnectors

Design	Panel mounting 4 hole mounting IP66 ¹⁾ Type 3R	Panel mounting 2 hole mounting IP66 ¹⁾ Type 3R	Single hole Ø22,5mm IP66 ¹⁾ Type 4X	Single hole Ø16mm IP66 ¹⁾ Type 4X

	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..
	..E, EH4..	..E2, E2H1..	..Z(O), ZH1..	..Z16, Z16H448..

Mini Switch Disconnectors for Photovoltaic

Mini Switch Disconnectors „LSM“ 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 LSM ensure a reliable switching up to 25A at 1500V in the category DC21B (DC-PV1).

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.

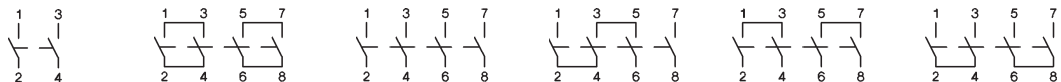
Mini Switch Disconnectors LSM are equipped with 2 or 4 switchable, singular contacts. By serial or parallel wiring of the contacts the contact rating will be increased.

The switching speed by the manually driven handle does not have an effect on the switching attitude of the contacts.

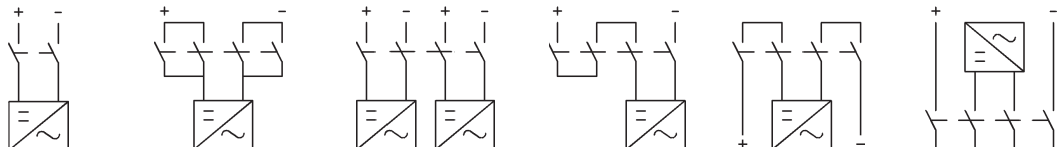
Switching programs

Type	2-pole	2+2-pole 2 poles in series + 2 Pole parallel	4-pole	4-pole with jumpers Input on top Output bottom	4-pole 2 jumpers top Input and Output bottom	4-pole 2 jumpers bottom Input and Output top
LSM16	.. A2	.. A2+2	.. A4(2 x A2)	.. A4B	.. A4O	.. A4U
LSM25	.. A2	.. A2+2	.. A4(2 x A2)	.. A4B	.. A4O	.. A4U

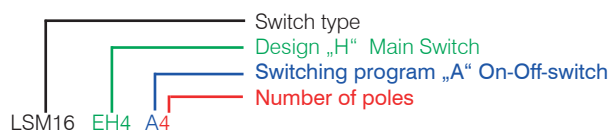
Contact
Wiring diagram



Switching example



Ordering



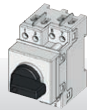
1) Protection in front and built in

Mini DC-Switch Disconnectors

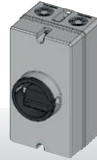
Base mounting with door coupling, single hole, Ø22,5mm, IP66¹⁾ Type 4X



Modular Switch IP40¹⁾ Open Type



Plastic enclosed PFL..IP67¹⁾ Type 4X



..VZV, VZVH4..
..VZV, VZVH4..

..SMA, SMAH1N..
..SMA, SMAH1N..

..PFLH4..
..PFLH4..

Technical data for DC, according to IEC 60947-3, VDE0660

Typ	Diagram	Type	DC21B (DC-PV1)							DC22B				
			500V	600V	700V	800V	900V	1000V	1200V	1500V	500V	600V	800V	1000V
2 poles in series		LSM16..	16A	16A	16A	16A	16A	10A	7A	3A	7A	5,5A	2A	1A
		LSM25..	25A	25A	25A	20A	17A	11,5A	8,5A	5A	8A	6A	2,5A	1,5A
2 poles in series + 2 poles parallel		LSM16..	29A	29A	22A	17A	16A	10A	7A	3A	-	-	-	-
		LSM25..	45A	45A	27A	20A	17A	11,5A	8,5A	5A	-	-	-	-
4 poles in series		LSM16..	16A	16A	16A	16A	16A	16A	16A	16A	16A	16A	11,5A	8A
		LSM25..	25A	25A	25A	25A	25A	25A	25A	25A	25A	25A	12A	9A

Isolated jumper LSMV.. for series and parallel switching of contacts (terminals 1-3, 5-7, 2-4, 6-8)



Type	Pack	Weight	
LSM16, LSM25	LSMV-B1	100	6,0 g/pc.

1) Protection in front and built in

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



DC21B / DC-PV1 600V DC 1000V DC		Poles in series	Number of Strings	Type	Pack pcs	Weight kg/pcs.
16A	10A	2	1	LSM16 E A2	1	0,
25A	11,5A	2	1	LSM25 E A2	1	0,
29A	10A	2	1	LSM16 E A2+2	1	0,
45A	11,5A	2	1	LSM25 E A2+2	1	0,
16A	10A	2	2	LSM16 E A4	1	0,
25A	11,5A	2	2	LSM25 E A4	1	0,
16A	16A	4	1	LSM16 E A4B	1	0,
25A	25A	4	1	LSM25 E A4B	1	0,
16A	16A	4	1	LSM16 E A4O	1	0,
25A	25A	4	1	LSM25 E A4O	1	0,
16A	16A	4	1	LSM16 E A4U	1	0,
25A	25A	4	1	LSM25 E A4U	1	0,

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



16A	10A	2	1	LSM16 EH4 A2	1	0,
25A	11,5A	2	1	LSM25 EH4 A2	1	0,
29A	10A	2	1	LSM16 EH4 A2+2	1	0,
45A	11,5A	2	1	LSM25 EH4 A2+2	1	0,
16A	10A	2	1	LSM16 EH4 A4	1	0,
25A	11,5A	2	1	LSM25 EH4 A4	1	0,
16A	16A	4	1	LSM16 EH4 A4B	1	0,
25A	25A	4	1	LSM25 EH4 A4B	1	0,
16A	16A	4	1	LSM16 EH4 A4O	1	0,
25A	25A	4	1	LSM25 EH4 A4O	1	0,
16A	16A	4	1	LSM16 EH4 A4U	1	0,
25A	25A	4	1	LSM25 EH4 A4U	1	0,

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



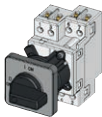
16A	10A	2	1	LSM16 E2 A2	1	0,
25A	11,5A	2	1	LSM25 E2 A2	1	0,
29A	10A	2	1	LSM16 E2 A2+2	1	0,
45A	11,5A	2	1	LSM25 E2 A2+2	1	0,
16A	10A	2	2	LSM16 E2 A4	1	0,
25A	11,5A	2	2	LSM25 E2 A4	1	0,
16A	16A	4	1	LSM16 E2 A4B	1	0,
25A	25A	4	1	LSM25 E2 A4B	1	0,
16A	16A	4	1	LSM16 E2 A4O	1	0,
25A	25A	4	1	LSM25 E2 A4O	1	0,
16A	16A	4	1	LSM16 E2 A4U	1	0,
25A	25A	4	1	LSM25 E2 A4U	1	0,

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



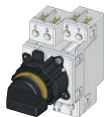
DC21B / DC-PV1 600V DC 1000V DC		Poles in series	Number of Strings	Type	Pack pcs	Weight kg/pcs.
16A	10A	2	1	LSM16 E2H1 A2	1	0,
25A	11,5A	2	1	LSM25 E2H1 A2	1	0,
29A	10A	2	1	LSM16 E2H1 A2+2	1	0,
45A	11,5A	2	1	LSM25 E2H1 A2+2	1	0,
16A	10A	2	2	LSM16 E2H1 A4	1	0,
25A	11,5A	2	2	LSM25 E2H1 A4	1	0,
16A	16A	4	1	LSM16 E2H1 A4B	1	0,
25A	25A	4	1	LSM25 E2H1 A4B	1	0,
16A	16A	4	1	LSM16 E2H1 A4O	1	0,
25A	25A	4	1	LSM25 E2H1 A4O	1	0,
16A	16A	4	1	LSM16 E2H1 A4U	1	0,
25A	25A	4	1	LSM25 E2H1 A4U	1	0,

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



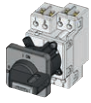
16A	10A	2	1	LSM16 Z A2	1	0,
25A	11,5A	2	1	LSM25 Z A2	1	0,
29A	10A	2	1	LSM16 Z A2+2	1	0,
45A	11,5A	2	1	LSM25 Z A2+2	1	0,
16A	10A	2	2	LSM16 Z A4	1	0,
25A	11,5A	2	2	LSM25 Z A4	1	0,
16A	16A	4	1	LSM16 Z A4B	1	0,
25A	25A	4	1	LSM25 Z A4B	1	0,
16A	16A	4	1	LSM16 Z A4O	1	0,
25A	25A	4	1	LSM25 Z A4O	1	0,
16A	16A	4	1	LSM16 Z A4U	1	0,
25A	25A	4	1	LSM25 Z A4U	1	0,

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



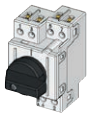
16A	10A	2	1	LSM16 ZO A2	1	0,
25A	11,5A	2	1	LSM25 ZO A2	1	0,
29A	10A	2	1	LSM16 ZO A2+2	1	0,
45A	11,5A	2	1	LSM25 ZO A2+2	1	0,
16A	10A	2	2	LSM16 ZO A4	1	0,
25A	11,5A	2	2	LSM25 ZO A4	1	0,
16A	16A	4	1	LSM16 ZO A4B	1	0,
25A	25A	4	1	LSM25 ZO A4B	1	0,
16A	16A	4	1	LSM16 ZO A4O	1	0,
25A	25A	4	1	LSM25 ZO A4O	1	0,
16A	16A	4	1	LSM16 ZO A4U	1	0,
25A	25A	4	1	LSM25 ZO A4U	1	0,

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



DC21B / DC-PV1 600V DC 1000V DC		Poles in series	Number of Strings	Type	Pack pcs	Weight kg/pcs.
16A	10A	2	1	LSM16 ZH1 A2	1	0,
25A	11,5A	2	1	LSM25 ZH1 A2	1	0,
29A	10A	2	1	LSM16 ZH1 A2+2	1	0,
45A	11,5A	2	1	LSM25 ZH1 A2+2	1	0,
16A	10A	2	2	LSM16 ZH1 A4	1	0,
25A	11,5A	2	2	LSM25 ZH1 A4	1	0,
16A	16A	4	1	LSM16 ZH1 A4B	1	0,
25A	25A	4	1	LSM25 ZH1 A4B	1	0,
16A	16A	4	1	LSM16 ZH1 A4O	1	0,
25A	25A	4	1	LSM25 ZH1 A4O	1	0,
16A	16A	4	1	LSM16 ZH1 A4U	1	0,
25A	25A	4	1	LSM25 ZH1 A4U	1	0,

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



16A	10A	2	1	LSM16 Z16 A2	1	0,
25A	11,5A	2	1	LSM25 Z16 A2	1	0,
29A	10A	2	1	LSM16 Z16 A2+2	1	0,
45A	11,5A	2	1	LSM25 Z16 A2+2	1	0,
16A	10A	2	2	LSM16 Z16 A4	1	0,
25A	11,5A	2	2	LSM25 Z16 A4	1	0,
16A	16A	4	1	LSM16 Z16 A4B	1	0,
25A	25A	4	1	LSM25 Z16 A4B	1	0,
16A	16A	4	1	LSM16 Z16 A4O	1	0,
25A	25A	4	1	LSM25 Z16 A4O	1	0,
16A	16A	4	1	LSM16 Z16 A4U	1	0,
25A	25A	4	1	LSM25 Z16 A4U	1	0,

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



16A	10A	2	1	LSM16 Z16H448 A2	1	0,
25A	11,5A	2	1	LSM25 Z16H448 A2	1	0,
29A	10A	2	1	LSM16 Z16H448 A2+2	1	0,
45A	11,5A	2	1	LSM25 Z16H448 A2+2	1	0,
16A	10A	2	2	LSM16 Z16H448 A4	1	0,
25A	11,5A	2	2	LSM25 Z16H448 A4	1	0,
16A	16A	4	1	LSM16 Z16H448 A4B	1	0,
25A	25A	4	1	LSM25 Z16H448 A4B	1	0,
16A	16A	4	1	LSM16 Z16H448 A4O	1	0,
25A	25A	4	1	LSM25 Z16H448 A4O	1	0,
16A	16A	4	1	LSM16 Z16H448 A4U	1	0,
25A	25A	4	1	LSM25 Z16H448 A4U	1	0,

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



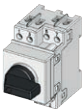
DC21B / DC-PV1 600V DC 1000V DC		Poles in series	Number of Strings	Type	Pack pcs	Weight kg/pcs.
16A	10A	2	1	LSM16 VZV A2	1	0,
25A	11,5A	2	1	LSM25 VZV A2	1	0,
29A	10A	2	1	LSM16 VZV A2+2	1	0,
45A	11,5A	2	1	LSM25 VZV A2+2	1	0,
16A	10A	2	2	LSM16 VZV A4	1	0,
25A	11,5A	2	2	LSM25 VZV A4	1	0,
16A	16A	4	1	LSM16 VZV A4B	1	0,
25A	25A	4	1	LSM25 VZV A4B	1	0,
16A	16A	4	1	LSM16 VZV A4O	1	0,
25A	25A	4	1	LSM25 VZV A4O	1	0,
16A	16A	4	1	LSM16 VZV A4U	1	0,
25A	25A	4	1	LSM25 VZV A4U	1	0,

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



16A	10A	2	1	LSM16 VZVH4 A2	1	0,
25A	11,5A	2	1	LSM25 VZVH4 A2	1	0,
29A	10A	2	1	LSM16 VZVH4 A2+2	1	0,
45A	11,5A	2	1	LSM25 VZVH4 A2+2	1	0,
16A	10A	2	2	LSM16 VZVH4 A4	1	0,
25A	11,5A	2	2	LSM25 VZVH4 A4	1	0,
16A	16A	4	1	LSM16 VZVH4 A4B	1	0,
25A	25A	4	1	LSM25 VZVH4 A4B	1	0,
16A	16A	4	1	LSM16 VZVH4 A4O	1	0,
25A	25A	4	1	LSM25 VZVH4 A4O	1	0,
16A	16A	4	1	LSM16 VZVH4 A4U	1	0,
25A	25A	4	1	LSM25 VZVH4 A4U	1	0,

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



16A	10A	2	1	LSM16 SMA A2	1	0,
25A	11,5A	2	1	LSM25 SMA A2	1	0,
29A	10A	2	1	LSM16 SMA A2+2	1	0,
45A	11,5A	2	1	LSM25 SMA A2+2	1	0,
16A	10A	2	2	LSM16 SMA A4	1	0,
25A	11,5A	2	2	LSM25 SMA A4	1	0,
16A	16A	4	1	LSM16 SMA A4B	1	0,
25A	25A	4	1	LSM25 SMA A4B	1	0,
16A	16A	4	1	LSM16 SMA A4O	1	0,
25A	25A	4	1	LSM25 SMA A4O	1	0,
16A	16A	4	1	LSM16 SMA A4U	1	0,
25A	25A	4	1	LSM25 SMA A4U	1	0,

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



DC21B / DC-PV1 600V DC 1000V DC		Poles in series	Number of Strings	Type	Pack pcs	Weight kg/pcs.
16A	10A	2	1	LSM16 SMAH1N A2	1	0,
25A	11,5A	2	1	LSM25 SMAH1N A2	1	0,
29A	10A	2	1	LSM16 SMAH1N A2+2	1	0,
45A	11,5A	2	1	LSM25 SMAH1N A2+2	1	0,
16A	10A	2	2	LSM16 SMAH1N A4	1	0,
25A	11,5A	2	2	LSM25 SMAH1N A4	1	0,
16A	16A	4	1	LSM16 SMAH1N A4B	1	0,
25A	25A	4	1	LSM25 SMAH1N A4B	1	0,
16A	16A	4	1	LSM16 SMAH1N A4O	1	0,
25A	25A	4	1	LSM25 SMAH1N A4O	1	0,
16A	16A	4	1	LSM16 SMAH1N A4U	1	0,
25A	25A	4	1	LSM25 SMAH1N A4U	1	0,

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




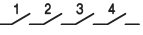


16A	10A	2	1	LSM16 PFLH4 A2	1	0,
25A	11,5A	2	1	LSM25 PFLH4 A2	1	0,
29A	10A	2	1	LSM16 PFLH4 A2+2	1	0,
45A	11,5A	2	1	LSM25 PFLH4 A2+2	1	0,
16A	10A	2	2	LSM16 PFLH4 A4	1	0,
25A	11,5A	2	2	LSM25 PFLH4 A4	1	0,
16A	16A	4	1	LSM16 PFLH4 A4B	1	0,
25A	25A	4	1	LSM25 PFLH4 A4B	1	0,
16A	16A	4	1	LSM16 PFLH4 A4O	1	0,
25A	25A	4	1	LSM25 PFLH4 A4O	1	0,
16A	16A	4	1	LSM16 PFLH4 A4U	1	0,
25A	25A	4	1	LSM25 PFLH4 A4U	1	0,

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		L/R		Make		Break		L/R				
			I/I _e	U/U _e	L/R	I _c /I _e	U _r /U _e	L/R	I/I _e	U/U _e	L/R	I _c /I _e	U _r /U _e	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 (CCC China)




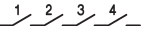
Main contacts		Type	LSM16	LSM25	
Rated thermal current I _{th}		A	16	25	
Rated insulation voltage U _i ¹⁾		V	1000	1000	
Rated insulation voltage U _i ²⁾		V	1500	1500	
Distance of contacts (per pole)		mm	8	8	
Rated operational current I_e					
DC21A	1 pole	300V A	16	23	
		400V A	12	14	
	A1 	500V A	9	11	
		600V A	6	8	
		700V A	4,5	6	
		800V A	3	4	
		900V A	2,5	3	
		1000V A	1,5	2	
	2 poles in series A2 	500V A	16	25	
		600V A	16	25	
		700V A	16	23	
		800V A	16	20	
		900V A	13	16	
		1000V A	9	11	
2 poles in series + 2 poles parallel A2 + 2 	500V A	29	45		
	600V A	29	45		
	700V A	16	23		
	800V A	16	20		
	900V A	13	16		
	1000V A	9	11		
4 poles in series A4 	500V A	16	25		
	600V A	16	25		
	700V A	16	25		
	800V A	16	25		
	900V A	16	25		
	1000V A	16	25		
	1200V A	16	25		
	1500V A	16	20		
Rated operational current I_e					
AC21B	A2, A4	U _e max. 440V	A	16	25
	A2 + 2	U _e max. 440V	A	29	45

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.




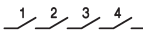
Technical Data

Data according to IEC 60947-3, VDE 0660

Main contacts		Type	LSM16	LSM25	
Rated operational current I_e DC-PV1	300V	A	16	23	
	400V	A	14	22	
A1 	500V	A	10	17	
	600V	A	7	12	
	700V	A	5	6	
	800V	A	3	4	
	900V	A	3	3	
	1000V	A	2	2	
	2 poles in series A2 	500V	A	16	25
600V		A	16	25	
700V		A	16	25	
800V		A	16	20	
900V		A	16	17	
1000V		A	10	11,5	
1100V		A	8	10	
1200V		A	7	8,5	
1300V		A	6	7	
1400V		A	5	6	
1500V		A	3	5	
2 poles in series + 2 poles parallel A2+2 		500V	A	29	45
		600V	A	29	36
	700V	A	22	27	
	800V	A	17	20	
	900V	A	16	17	
	1000V	A	10	11,5	
	1100V	A	8	10	
	1200V	A	7	8,5	
	1300V	A	6	7	
	1400V	A	5	6	
	1500V	A	3	5	
4 poles in series A4 	500V	A	16	25	
	600V	A	16	25	
	700V	A	16	25	
	800V	A	16	25	
	900V	A	16	25	
	1000V	A	16	25	
	1100V	A	16	25	
	1200V	A	16	25	
	1300V	A	16	25	
	1400V	A	16	25	
	1500V	A	16	25	



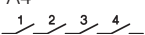
Technical Data

Data according to IEC 60947-3, VDE 0660

Main contacts		Type	LSM16	LSM25	
Rated operational current I_e DC-PV2	1 pole	300V	A	16	23
		400V	A	15	18
	A1	500V	A	10	12
		600V	A	5	6
		700V	A	1,5	2
		800V	A	1,5	2
		900V	A	1	1,5
		1000V	A	1	1,5
		<hr/>			
	2 poles in series A2	500V	A	16	25
A			14	21	
A			13	19	
		800V	A	12	15
		900V	A	8	10
		1000V	A	4	5
		1100V	A	3	4
		1200V	A	2	3
		1300V	A	1,5	2
		1400V	A	1	2
1500V	A	1	1,5		
<hr/>					
2 poles in series + 2 poles parallel A2+2	500V	A	25	39	
		A	20	32	
		A	13	19	
		800V	A	12	15
		900V	A	8	10
		1000V	A	4	5
		1100V	A	3	4
		1200V	A	2	3
		1300V	A	1,5	2
		1400V	A	1	2
1500V	A	1	1,5		
<hr/>					
4poles in series A4	500V	A	16	25	
		A	16	25	
		A	16	25	
		800V	A	16	25
		900V	A	16	25
		1000V	A	16	25
		1100V	A	16	25
		1200V	A	13,5	21
		1300V	A	12	19
		1400V	A	10,5	16
1500V	A	9	14		




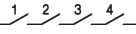
Technical Data

Data according to IEC 60947-3, VDE 0660

Main contacts		Type	LSM16	LSM25
Rated operational current I_e DC22B	1 pole	A	1	1,25
	A1	A	0,5	0,75
		A	0,3	0,4
	1000V	A	0,15	0,2
	1200V	A	-	-
	1500V	A	-	-
	2 poles in series	A	7	8
	A2	A	5,5	6
		A	2	2,5
	1000V	A	1	1,5
	1200V	A	-	-
	1500V	A	-	-
	4 poles in series	A	16	25
	A4	A	16	25
		A	11,5	12
1000V	A	8	9	
1200V	A	-	-	
1500V	A	-	-	
Rated conditional short-circuit current		kA _{eff}	5	5
Max. fuse size	gL (gG)	A	40	63
Mechanical life		x10 ³	10	10
Rated short-time withstand current (1s)	lcw	A2, A4	800	900
		A2+2	1300	1500
Short circuit making capacity	lcm	A2, A4	800	900
		A2+2	1300	1500
Maximum cable cross sections (incl. jumper LSMV-B1)				
solid or stranded		mm ²	1,5 - 10	1,5 - 10
flexible		mm ²	1,5 - 6	1,5 - 6
flexible (+ multicore cable end)		mm ²	1,5 - 6	1,5 - 6
Size of terminal screw			M3,5 Pz1	M3,5 Pz1
Tightening torque		Nm	1,4	1,4
2 cables per clamp without jumper LSMV-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.			A	A
A2	(A)/ W	(16)/	1	(25)/ 2,3
A4	(A)/ W	(16)/	2	(25)/ 4,6
A2+2	(A)/ W	(29)/	1,5	(45)/ 3,7
Contact resistance per pole		mΩ	1,75	1,75






Technical Data

Data according to UL508I  File E359344, Category no.: NMSJ, and UL508  File E332938, Category no.: NRNT2, NRNT8

Main Contacts		Type	LSM16	LSM25	
Ampere-Rating "General use"  1 pole	DC				
	350V	A	4	5	
	500V	A	4	5	
	600V	A	4	5	
	700V	A	-	-	
	800V	A	-	-	
	900V	A	-	-	
	1000V	A	-	-	
	 2 pole in series A2	350V	A	16	25
		500V	A	16	25
600V		A	16	25	
700V		A	-	-	
800V		A	-	-	
900V		A	-	-	
 2 pole in series + 2 pole parallel A2+2	350V	A	29	45	
	400V	A	-	-	
	500V	A	29	38	
	600V	A	21	27	
	700V	A	-	-	
	800V	A	-	-	
	900V	A	-	-	
	1000V	A	-	-	
	 4 pole in series A4	350V	A	16	25
		500V	A	16	25
600V		A	16	25	
700V		A	-	-	
800V		A	-	-	
900V		A	-	-	
Fuse size (RK5) Industrial Control Switch	5kA / 600V	A	40	60	
	Maximum cable cross sections (incl. jumper LSMV-B1)				
solid or stranded	AWG		16 - 10	16 - 10	
flexible	AWG		20 - 6	20 - 6	
flexible (+ multicore cable end)	AWG		20 - 6	20 - 6	
Size of terminal screw			M3,5 Pz1	M3,5 Pz1	
Tightening torque	lb.inch		12,4	12,4	
Protection class of terminals ¹⁾			IP20	IP20	

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

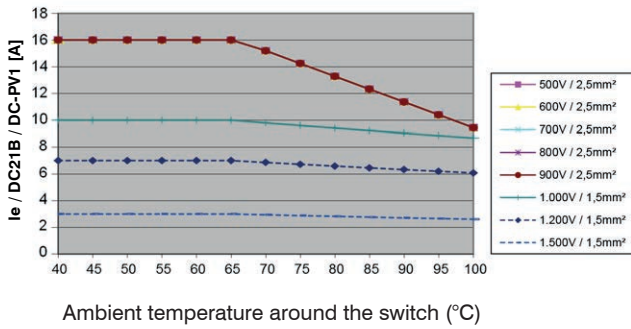
Approvals

Country	USA, UL508I 	US, Canada UL508 	Europe 	China CCC 	CB- certificates	EAC 
Type						
LSM16	o	o	/	x	x	o
LSM25	o	o	/	x	x	o
o In standard version approved / No testing required CE x pending - not provided for testing till now						

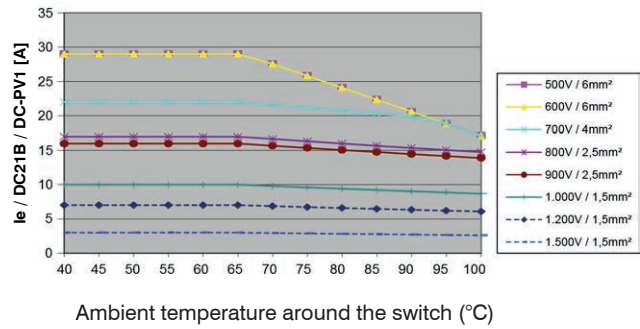
Technical Data

Maximum current according to ambient temperature and cable cross section

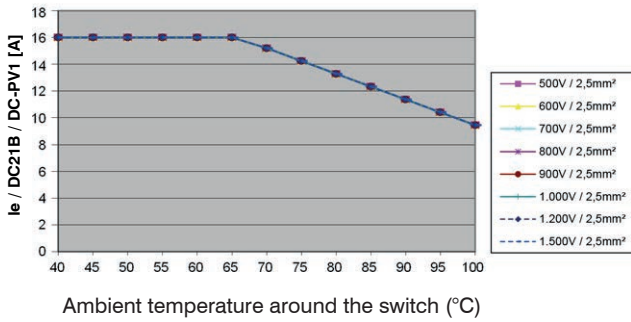
Switch open LSM16..., 2 contacts in series (A2)



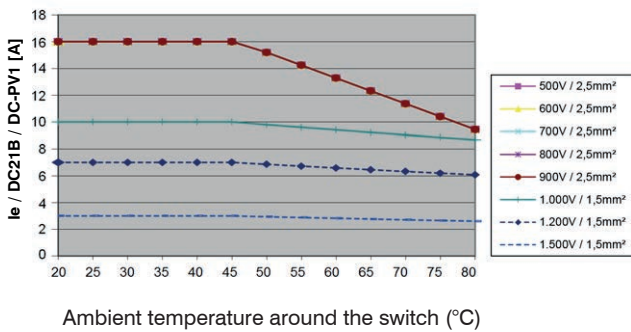
Switch open LSM16 ..., 2 contacts in series + 2 parallel (A2+2)



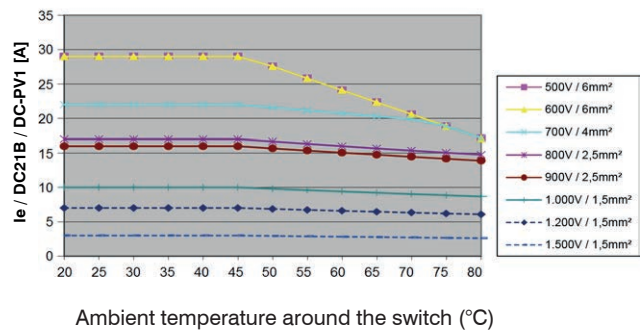
Switch open LSM16..., 4 contacts in series (A4x)



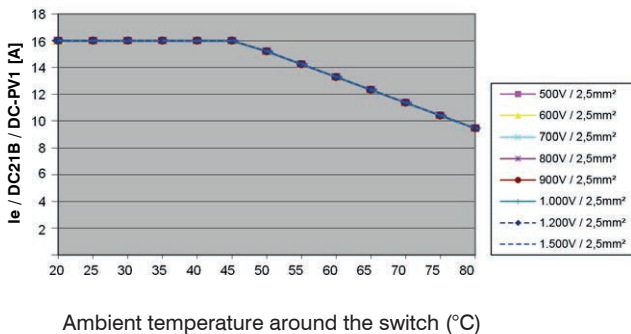
Switch enclosed LSM16 PFL..., 2 contacts in series (A2)



Switch enclosed LSM16 PFL..., 2 contacts in series + 2 parallel (A2+2)



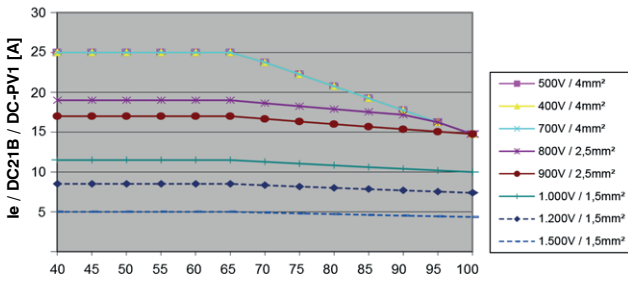
Switch enclosed LSM16 PFL..., 4 contacts in series (A4x)



Technical Data

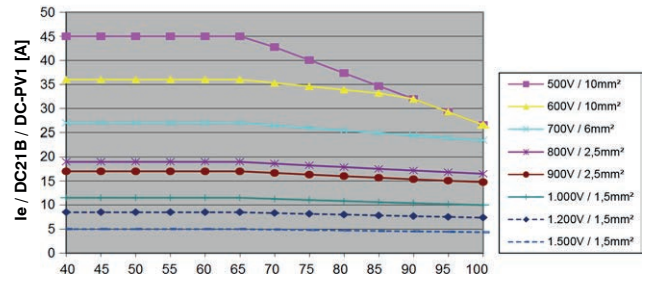
Maximum current according to ambient temperature and cable cross section

Switch open LSM25..., 2 contacts in series (A2)



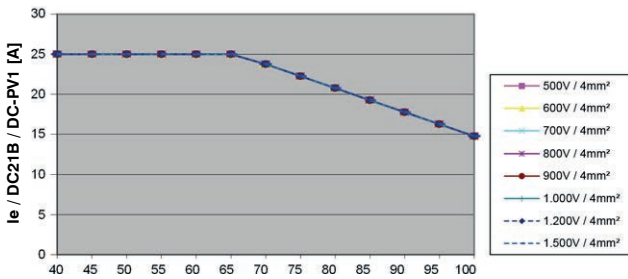
Ambient temperature around the switch (°C)

Switch open LSM25 ..., 2 contacts in series + 2 parallel (A2+2)



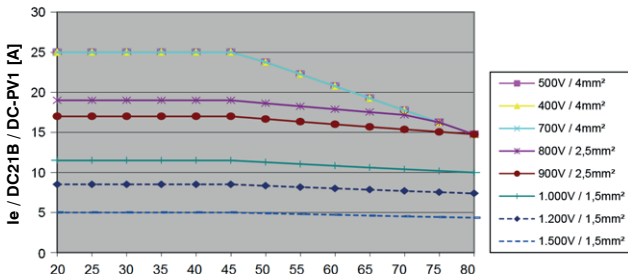
Ambient temperature around the switch (°C)

Switch open LSM25..., 4 contacts in series (A4x)



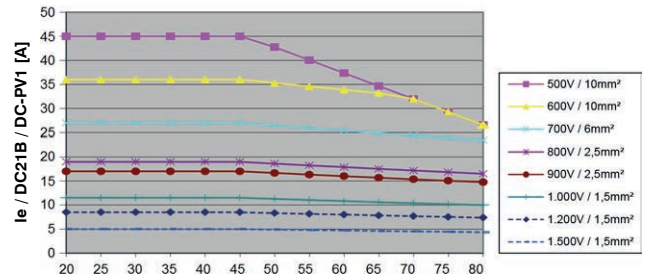
Ambient temperature around the switch (°C)

Switch enclosed LSM25 PFL..., 2 contacts in series (A2)



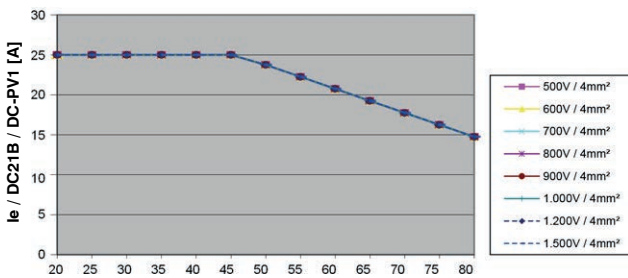
Ambient temperature around the switch (°C)

Switch enclosed LSM25 PFL..., 2 contacts in series + 2 parallel (A2+2)



Ambient temperature around the switch (°C)

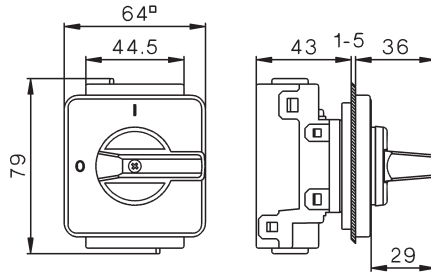
Switch enclosed LSM25 PFL..., 4 contacts in series (A4x)



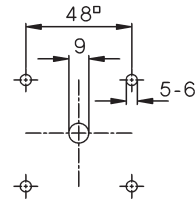
Ambient temperature around the switch (°C)

Dimensions:

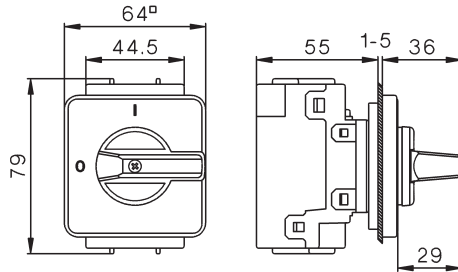
LSM16 E.., LSM25 E.., ..A2



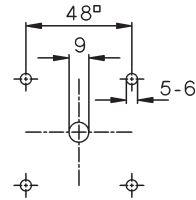
Mounting hole-



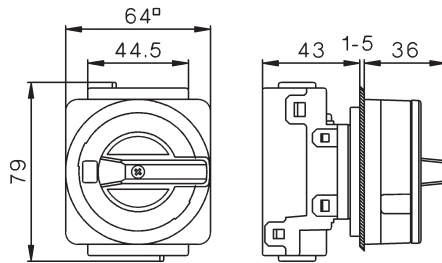
LSM16 E.., LSM25 E.., ..A2+2, ..A4



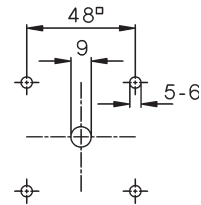
Mounting hole



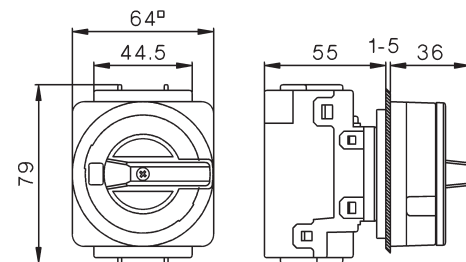
LSM16 EH4.., LSM25 EH4.., ..A2



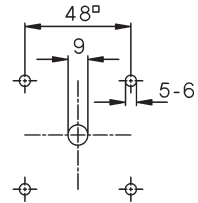
Mounting hole-



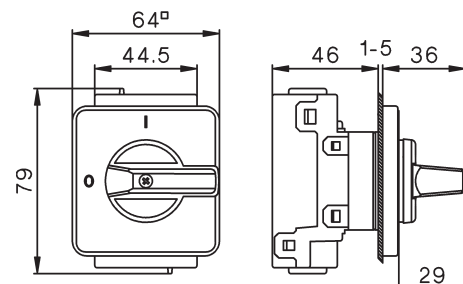
LSM16 EH4.., LSM25 EH4.., ..A2+2, ..A4



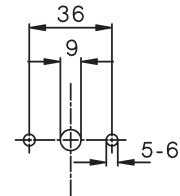
Mounting hole



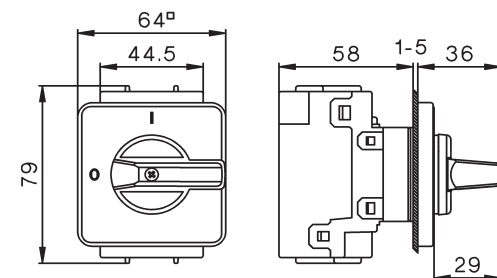
LSM16 E2.., LSM25 E2.., ..A2



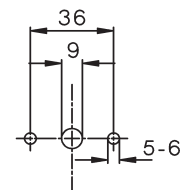
Mounting hole



LSM16 E2.., LSM25 E2.., ..A2+2, ..A4

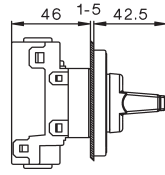
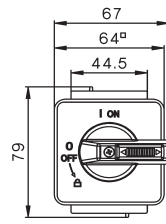


Mounting hole

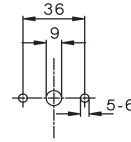


Dimensions:

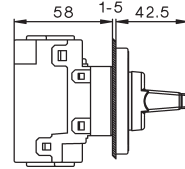
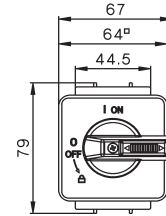
**LSM16 E2H1..., LSM25 E2H1...,
..A2**



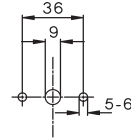
Mounting hole



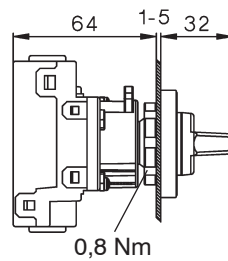
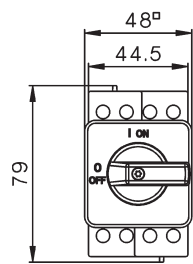
**LSM16 E2H1..., LSM25 E2H1...,
..A2+2, ..A4**



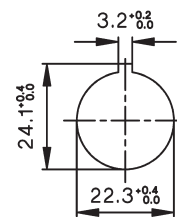
Mounting hole



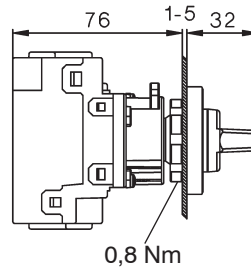
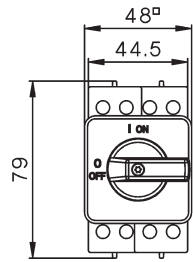
**LSM16 Z..., LSM25 Z...,
..A2**



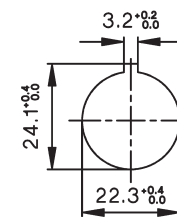
Mounting hole



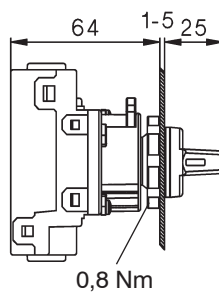
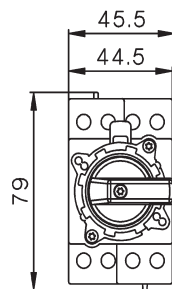
**LSM16 Z..., LSM25 Z...,
..A2+2, ..A4**



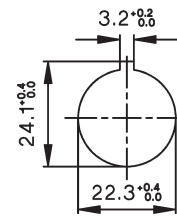
Mounting hole



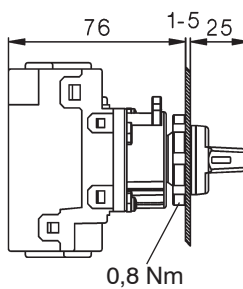
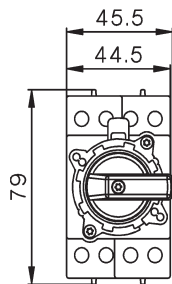
**LSM16 ZO..., LSM25 ZO...,
..A2**



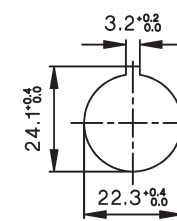
Mounting hole



**LSM16 ZO..., LSM25 ZO...,
..A2+2, ..A4**

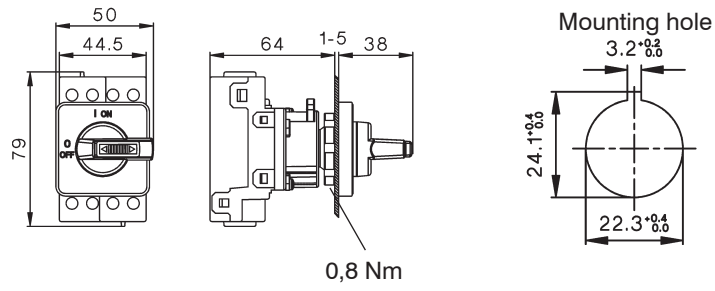


Mounting hole

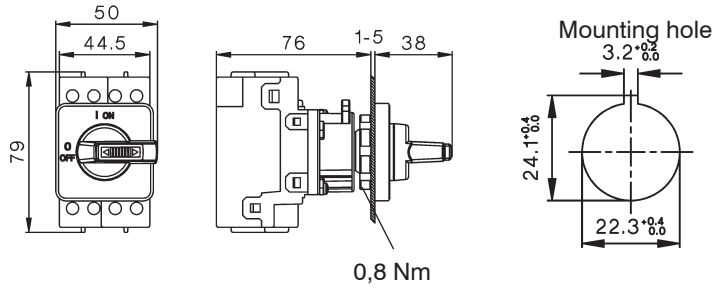


Dimensions:

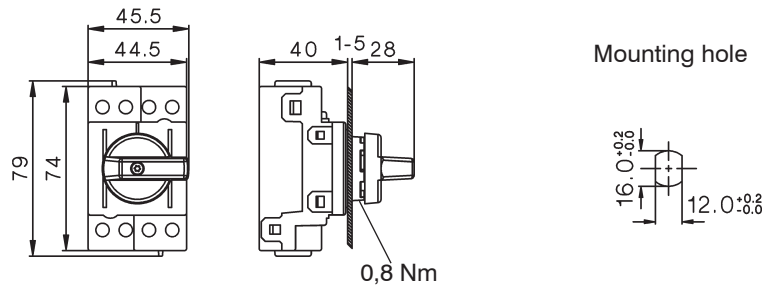
**LSM16 ZH1..., LSM25 ZH1...,
..A2**



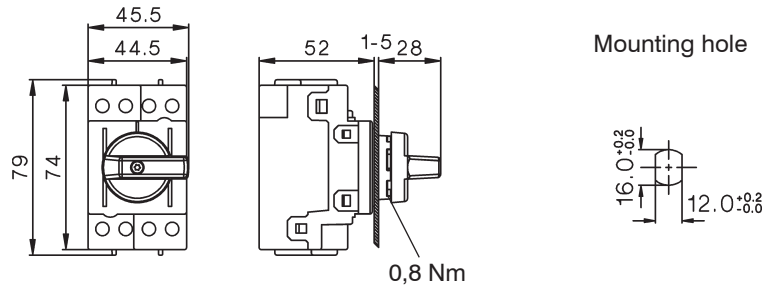
**LSM16 ZH1..., LSM25 ZH1...,
..A2+2, ..A4**



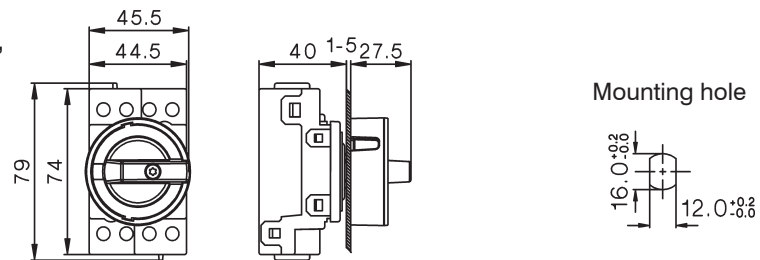
**LSM16 Z16..., LSM25 Z16...,
..A2**



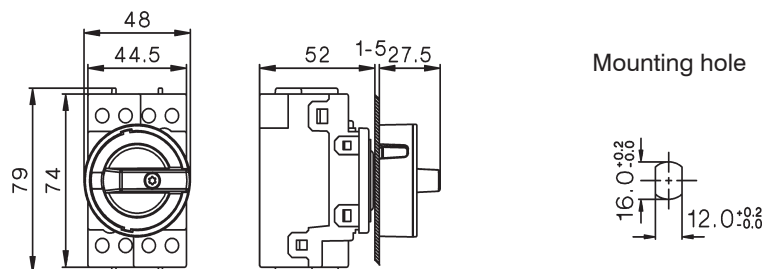
**LSM16 Z16..., LSM25 Z16...,
..A2+2, ..A4**



**LSM16 ZH448..., LSM25 Z16H448...,
..A2**

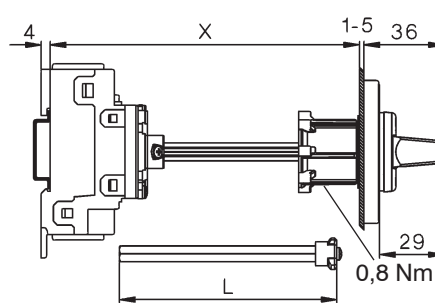
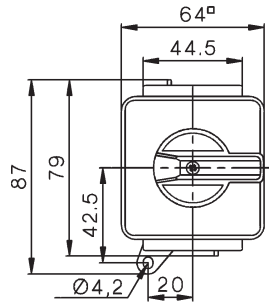


**LSM16 ZH448..., LSM25 ZH448...,
..A2+2, ..A4**

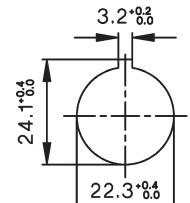


Dimensions:

LSM16 VZV..., LSM25 VZV..., ..A2

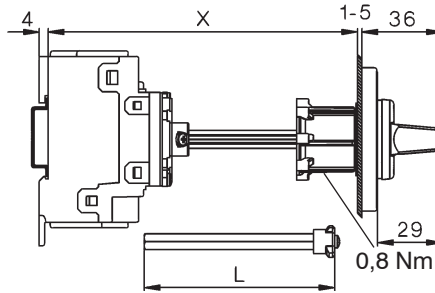
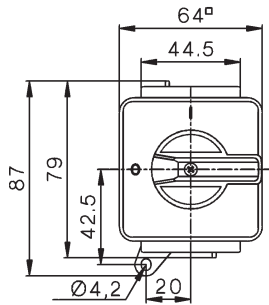


Mounting hole

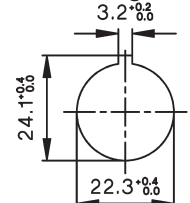


$X_{max} = 182, L = 155,5$
($X_{min} = \dots$)
 $L = X - 26,5 \pm 3$

LSM16 VZV..., LSM25 VZV..., ..A2+2, ..A4

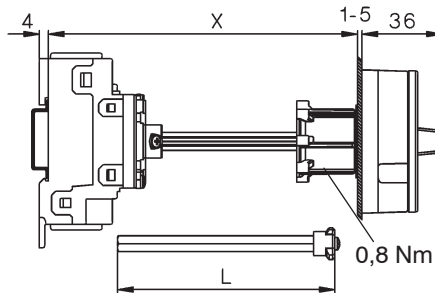
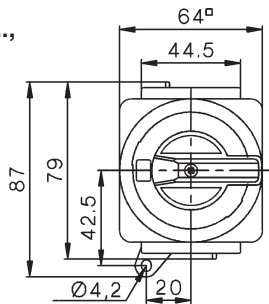


Mounting hole

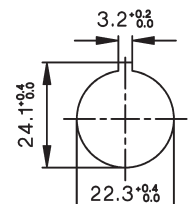


$X_{max} = 194, L = 155,5$
($X_{min} = \dots$)
 $L = X - 38,5 \pm 3$

LSM16 VZVH4..., LSM25 VZVH4..., ..A2

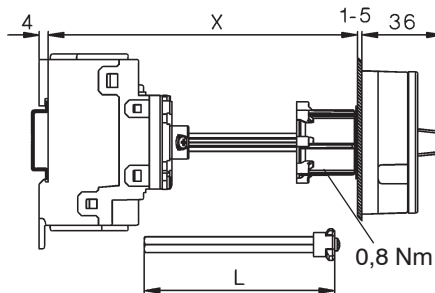
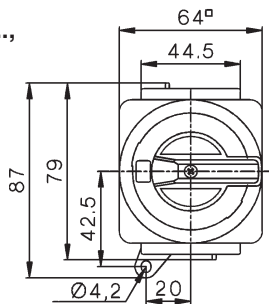


Mounting hole

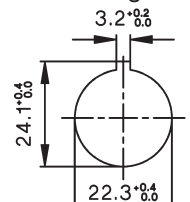


$X_{max} = 182, L = 155,5$
($X_{min} = \dots$)
 $L = X - 26,5 \pm 3$

LSM16 VZVH4..., LSM25 VZVH4..., ..A2+2, ..A4



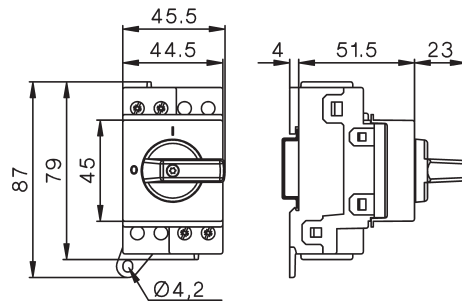
Mounting hole



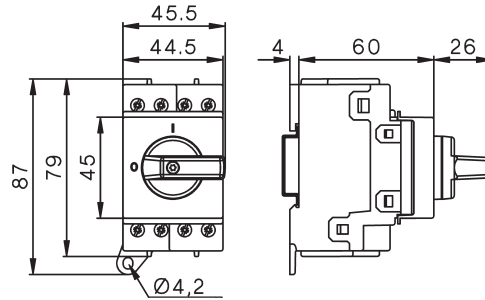
$X_{max} = 194, L = 155,5$
($X_{min} = \dots$)
 $L = X - 38,5 \pm 3$

Dimensions:

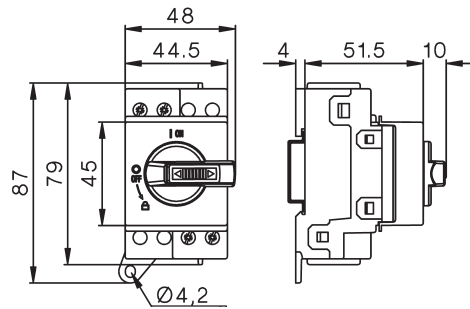
LSM16 SMA..., LSM25 SMA...,
..A2



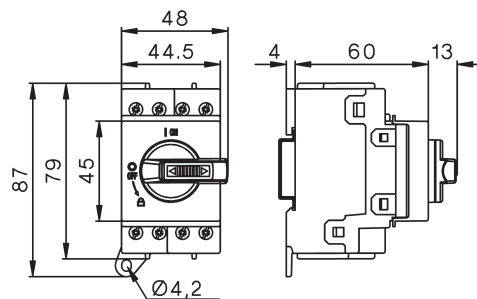
LSM16 SMA..., LSM25 SMA...,
..A2+2, ..A4



LSM16 SMAH1N..., LSM25 SMAH1N...,
..A2

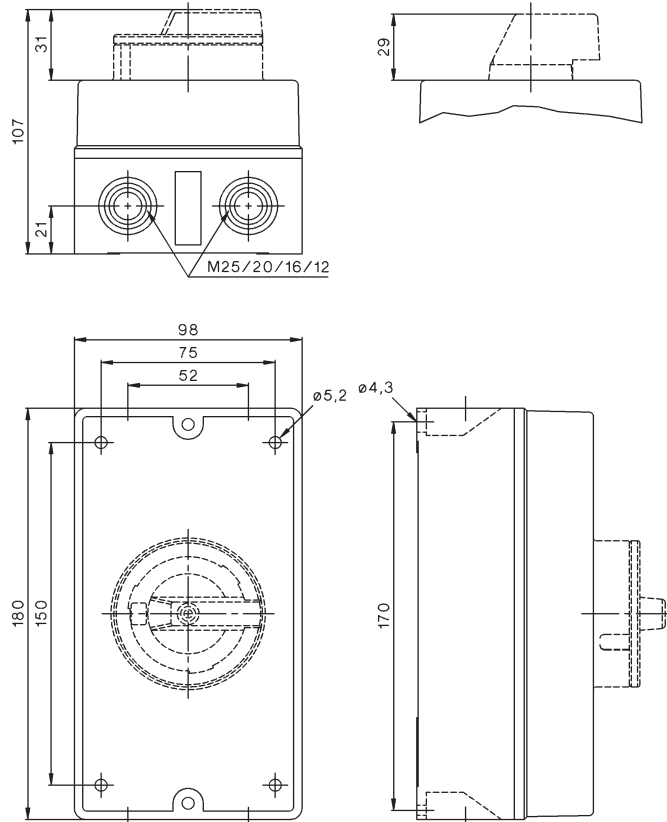


LSM16 SMAH1N..., LSM25 SMAH1N...,
..A2+2, ..A4



Dimensions:

LSM16 PFLH4..., LSM25 PFLH4...,
..A2, ..A2+2, ..A4





Quality made in 

D1024E171



Lieblgasse 7, A-1220 Wien
Telefon: +43 1 251 51- 0
Fax: +43 1 251 51-89
e-mail: sales@benedict.at
www.benedict.at

