

# 69 Series Isolators



Technical Datasheet

## Key Features

- 3, 4, 6 & 8 Pole Versions
- On Load 10A - 125A
- Red/Yellow or Black Handles
- Up to 3 Padlock Positions
- IP66 - NEMA 4X (DM69 IP40)
- Enclosed, DIN Rail, Base or Panel Mount Versions
- Lightweight Extension Shafts (100 - 400mm)
- Side Mounted Auxiliary Contacts
- UL Approved



## Options & Ordering Codes

**PE69 - 30 20 - L**

### Series Name

IP66 Enclosed Door Interlock	<b>PE69</b>
Base Mount Door Interlock, IP66	<b>LB69</b>
Front Panel Mount, IP66	<b>PM69</b>
Direct Handle Base Mount, IP40	<b>DM69</b>
Single Hole Mount, IP66	<b>SH69</b>

### Number of Poles

3 Pole	<b>30</b>
4 Pole	<b>40</b>
6 Pole	<b>60</b>
8 Pole	<b>80</b>

### Rating @ 400V

<b>20</b>	20 Amps AC21 (7.5kW AC23B)
<b>25</b>	25 Amps AC21 (10kW AC23B)
<b>32</b>	32 Amps AC21 (12.5kW AC23B)
<b>40</b>	40 Amps AC21 (16kW AC23B)
<b>63</b>	63 Amps AC21 (22kW AC23B)
<b>80</b>	80 Amps AC21 (22kW AC23B)
<b>100*</b>	100 Amps AC21 (37kW AC23B)
<b>125*</b>	125 Amps AC21 (45kW AC23B)

### Handle Type

<b>RY48</b>	Direct Red/Yellow 48mm Handle
<b>RY64</b>	Direct Red/Yellow 64mm Handle
<b>B48</b>	Direct Black 48mm Handle
<b>B64</b>	Direct Black 64mm Handle
<b>GREY</b>	Grey with Black Handle
	Enclosed / Interlocked Handle
<b>L</b>	Large Enclosed / Interlocked Handle

\* 3/4 pole only

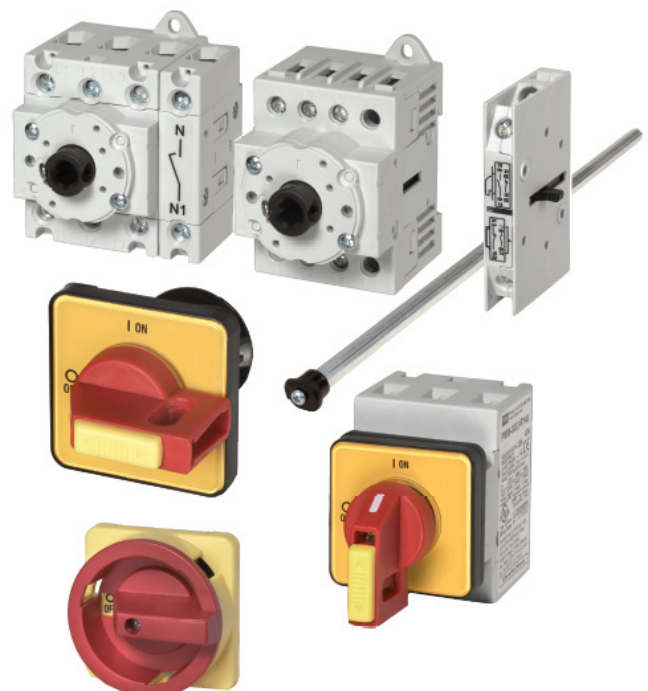
## Accessories

Part Number	Description
H69-0001	Red / Yellow Handle 64x64mm
H69-0001-B	Black Handle 64x64mm
H69-0003	Red / Yellow Handle 48x48mm
H69-0004	Black Handle 48x48mm
EP69-0001	Legend Plate "MAIN SWITCH" 64mm Red/Yellow
J7049	Door Handle Mounting Tool

E69-0001	Extension Shaft - 100mm
E69-0002	Extension Shaft - 200mm
E69-0003	Extension Shaft - 300mm
E69-0004	Extension Shaft - 400mm

A69-0001	Auxiliary Contacts 1NO + 1NC
A69-0002	Auxiliary Contacts 2NO
A69-0003	Auxiliary Contacts 1NO + 1NC Overlapping
SN69-0001	Solid Neutral Block
SP690001	Add-On Neutral Switching Pole 20-40A, for base mount only
SP690002	Add-On Neutral Switching Pole 63-80A, for base mount only
SP690001P	Add-On Neutral Switching Pole 20-40A, for panel mount only
SP690002P	Add-On Neutral Switching Pole 63-80A, for panel mount only

TS69-0001	Terminal Cover 20-40A 3/4P Base Mount Switch
TS69-0002	Terminal Cover 3P for 63-80A Base Mount Switch & 20-80A Panel Mount Switch
TS69-0003	Terminal Cover 4P for 63-80A Base Mount Switch & 20-80A Panel Mount Switch



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## Technical Specifications

Data according to IEC 947-3, IEC 947-5-1, VDE 0660, EN 60947-3, EN 60947-5-1

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Type		..69..20	..69..25	..69..32	..69..40	..69..63	..69..80	..69..100	..69..125	
<b>Main Contacts</b>										
Rated thermal current $I_{th}$ open	A	20	25	32	40	63	80	100	125	
Rated thermal current $I_{th}$ enclosed	A	20	25	32	40	63	80	100	110	
Rated insulation voltage $U_i$ <sup>1)</sup>	V	690	690	690	690	690	690	1000 <sup>3)</sup>	1000 <sup>3)</sup>	
Rated operational current $I_s$ AC21A	A	20	25	32	40	63	80	100	125	
Making capacity $I_{eff}$	3x380-440V	A	160	190	220	300	370	440	725	850
Breaking capacity	3x220-240V	A	160	180	200	250	330	380	580	680
	3x380-440V	A	160	180	200	250	330	380	580	680
	3x660-690V	A	80	110	140	170	190	220	330	420
Disconnection property performed up to	V	690	690	690	690	690	690	1000	1000	
Motor switch	AC3 3x400V	A	12	16	23	30	37	37	60	72
Motor switch	AC3 3x220-240V	kW	3	4	5.5	7.5	11	11	18.5	22
Direct switching of single motors	3x380-440V	kW	5.5	7.5	11	15	18.5	18.5	30	37
	3x660-690V	kW	5.5	7.5	11	15	18.5	18.5	22	30
Main switch	AC23 3x400V	A	16	20	25	32	45	45	72	85
Motor switch	AC23A 3x220-240V	kW	4	5.5	7.5	9	15	15	22	30
Main switch	AC23B 3x380-440V	kW	7.5	10	12.5	16	22	22	37	45
Safety switch	3x660-690V	kW	5.5	7.5	11	15	18.5	18.5	30	37
Rated conditional short-circuit current	400V	kA <sub>eff</sub>	10	10	10	10	10	10	10	5
Max. fuse size	gL (gG)	A	25	35	40	40	63	80	100	125
Mechanical life	x10 <sup>3</sup>	200	200	200	200	100	100	100	100	100
Rated short-time withstand current (1 sec. current)	A	250	300	400	500	600	850	1200	1500	
<b>Temperature Range</b>		open	-40°C to +90°C							
	enclosed	-40°C to +40°C								
	storage	-50°C to +90°C								
<b>Power loss per pole AC21 = <math>I_{th}</math></b>										
P/pole [W]	PM, SH	0.322	0.503	0.824	1.288	2.739	4.416	5.330	8.328	
	LB, DM, PE	0.364	0.569	0.933	1.458	2.739	4.416	5.330	8.328	
R/pole [mΩ]	PM, SH	0.805	0.805	0.805	0.805	0.690	0.690	0.533	0.533	
	LB, DM, PE	0.911	0.911	0.911	0.911	0.690	0.690	0.533	0.533	
<b>Cable cross sections</b>		mm <sup>2</sup>	0.5 - 10			1 - 25		4 - 50		
solid or stranded	AWG	20 - 8 (10)			16 - 3 (10)		10 - 00 (10)			
flexible	mm <sup>2</sup>	0.5 - 6			4 - 16		10 - 35			
	AWG	20 - 10			16 - 6		8 - 2			
flexible (+ multicore cable end)	mm <sup>2</sup>	0.5 - 6			0.75 - 16		6 - 35			
	AWG	20 - 10			16 - 6		8 - 2			
Size of terminal screw		M3.5			M5		M6			
Tightening torque	Nm	1.7 - 2.3			2.8 - 4		1.7 - 4.5			
<b>Auxiliary contacts</b>										
Rated insulation voltage $U_i$ <sup>1)</sup>	V	690								
Rated thermal current $I_{th}$ , $i_{th}$	A	10								
Switching capacity	AC15	220-240V	A							2.5
	AC15	380-440V	A							1.5
Rated conditional short-circuit current	kA <sub>eff</sub>	3								
Max. short circuit protection	gL (gG)	A							10	
<b>Cable cross sections</b>		mm <sup>2</sup>	0.75 - 2.5							
Solid or stranded	AWG	14 - 12								
Flexible (+ multicore cable end)	mm <sup>2</sup>	0.75 - 2.5 (1.5)								
	AWG	18 - 14								

## Data according to UL & cUL

Rated voltage	V	600	600	600	600	600	600	600	600	
Ampere rating "General Use"	A	20	25	32	40	63	80	100	125	
DOL rating 3-phase	110 - 120V	HP	1	1.5	2	2	3	5	10	15
	220 - 240V	HP	3	5	5	5	10	10	25	30
	440 - 480V	HP	7.5	10	10	10	20	20	50	60
	550 - 600V	HP	10	10	15	15	25	25	60	60
DOL rating 1-phase	110 - 120V	HP	1	1	1	1	2	2	5	7.5
	200 - 208V	HP	1	2	2	2	3	3	10	10
	220 - 240V	HP	2	2	3	3	5	5	15	15
<b>Fuse size (RK5) 5kA / 600V</b>										
Manual motor controller	A	40	50	50	70	90	110	125	125	
Motor disconnect	A	40	50	50	50	70	70	125	125	
Tightening torque	Nm	1.7 - 2.3			2.8 - 4		1.7 - 4.5			
	lb.inch	11 - 20			24 - 35		15 - 40			

1) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): Uimp = 6kV. Data for other conditions on request

2) Fuse RK1 / 10kA / 600V

3) Uimp = 8kV

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## Dimensions (mm)

### Base Mounting LB69..

ON-OFF Switches 3-Pole, 4-Pole

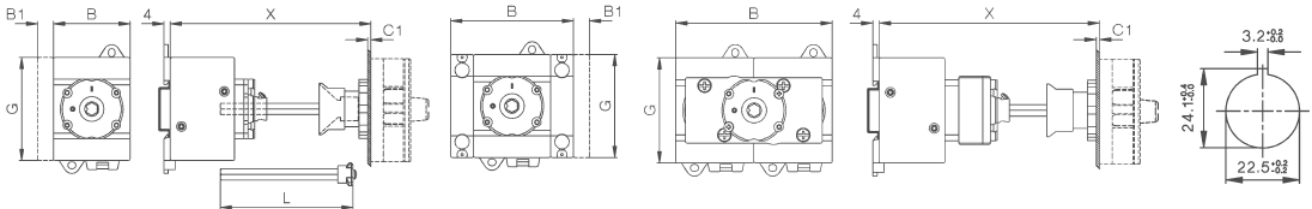
L = X - 40 ± 3 20-80A  
L = X - 44 ± 3 100-125A

ON-OFF Switches 6-Pole, 8-Pole

L = X - 60 ± 3

6-pole  
for 20-40A only  
L = X - 40 ± 3

Mounting  
holes



Type	A	3-pole B	4-pole B	6-pole B	3, 4-pole 8-pole B	aux. contact B1	4-pole PE B2	C1	D1	D2	D3	E	G	K	K1	J
LB69..20-40	64	48	48	77	97	10	14.5	1-5	9	5	M4	48	64	25	48	70
LB69..63-80	64	48	62.5	97	126	10	14.5	1-5	9	5	M4	48	64	25	48	70
LB69..100-125	64	78	78	-	-	10	-	1-5	9	5	M4	48	85	38	-	90

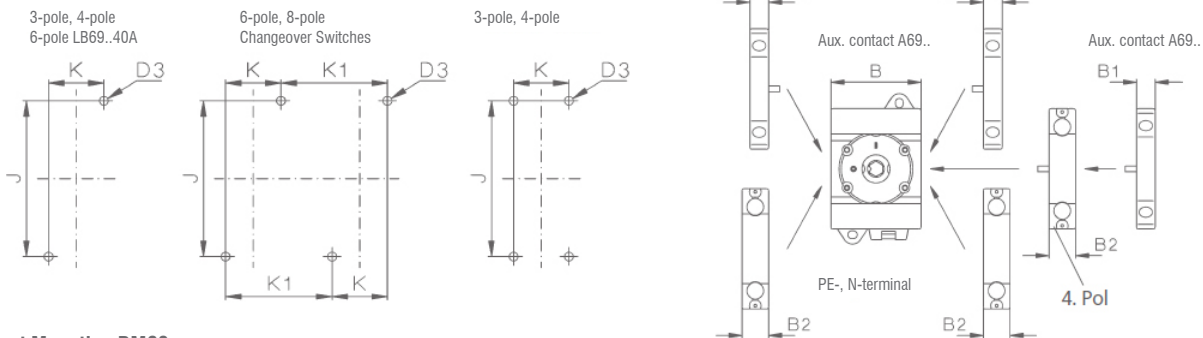
### Base mounting

ON-OFF Switches LB/PM69..20-80A

LB/PM69..100-125A

### Mounting of Accessories LB69..20-80A

Base mounting, for distribution boards

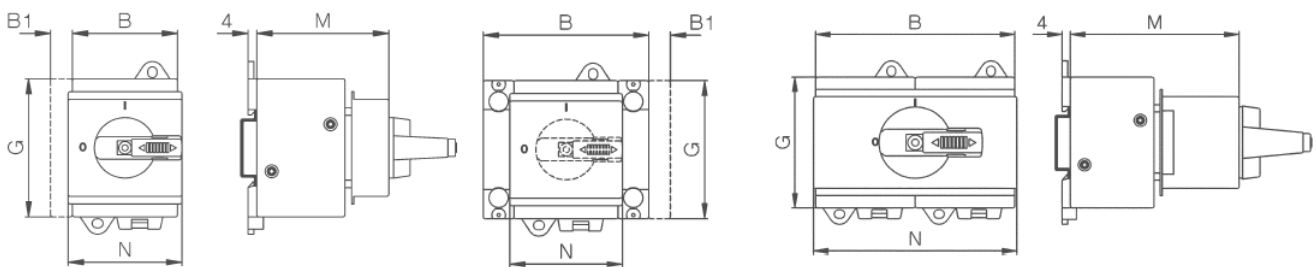


### Direct Mounting DM69..

ON-OFF Switches 3-Pole, 4-Pole

ON-OFF Switches 6-pole  
for DM69..20-40A only

ON-OFF Switches 6-pole, 8-pole



Type	Handle Type	3-pole B	4-pole B	6-pole B	8-pole B	aux. contact B1	4-pole N B2	4-pole N G	3-pole 4-pole M	6-pole M	8-pole M	3-pole 4-pole N	6-pole N	8-pole N
DM69..20-40	RY48/B48	48	48	77	96	10	14.5	64	60	60	74	52	52	97
DM69..63-80	RY48/B48	48	62.5	96	125	10	14.5	64	60	74	74	52	97	126
DM69..100-125	RY48/B48	78	78	-	-	10	-	85	60	-	-	78	-	-

### Installation cover with low height handle DM69.. -LH

Main switch 3-pole, 4-pole

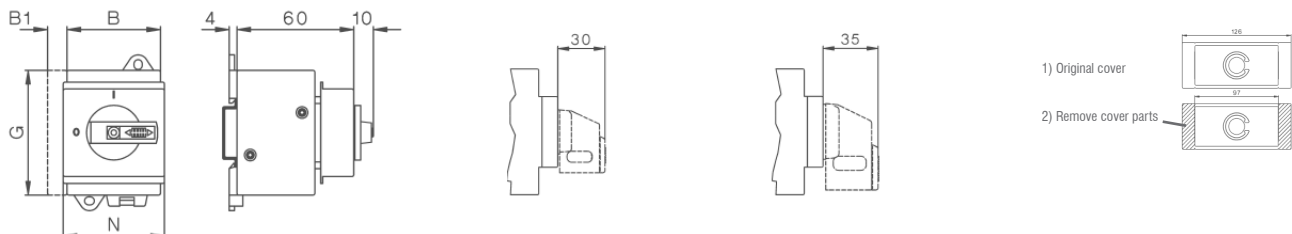
DM69..20-80A

### Padlock device RY48/B48

DM69..20-80A

### Padlock device RY48/B48

DM69..100-125A



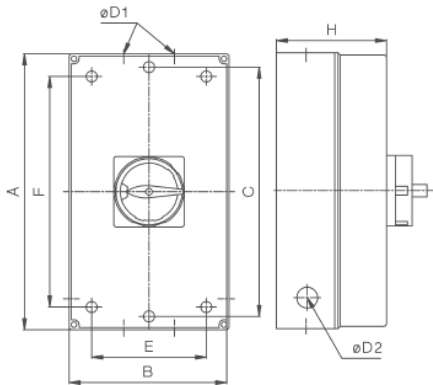
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## Dimensions (mm)

Enclosed PE69..

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Type PE69..	Pole	A	B	C	D1	D2	E	F	H
20-40A Standard Enc. <sup>3)</sup>	3, 4	130	98	120	2 x 25.5/20.5	-	75	100	76
20-40A Large Enc. <sup>3)</sup>	3, 4	180	98	170	2 x 25.5/20.5 / 16.5/12.5	-	75	150	76
20-40A Enc. <sup>4)</sup>	6	200	140	188.5	40.5/32.5 + 16.5 + 12.5	-	100	160	86
63-80A Enc. <sup>4)</sup>	3, 4	200	140	188.5	40.5/32.5 + 16.5 + 12.5	-	100	160	86
100-125A Enc. <sup>4)</sup>	3, 4	200	140	188.5	40.5/32.5 + 16.5 + 12.5	-	100	160	86
20-40A Enc. <sup>5)</sup>	8	240	176	228.5	2 x 40.5/32.5	-	120	200	120
63-80A Enc. <sup>5)</sup>	6, 8	240	176	228.5	2 x 40.5/32.5	-	120	200	120

Max. quantity of poles + aux. contact in enclosure:-  
 3) 1 additional pole + 1 auxiliary  
 4) 20-40A no addition, 63-80A + 1 additional pole + 1 auxiliary, 100-125A no addition  
 5) 20-40A + 2 additional poles, 63-80A 8 pole no addition, 63-80A 6 pole + 1 auxiliary

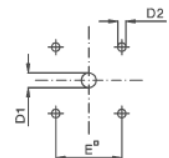
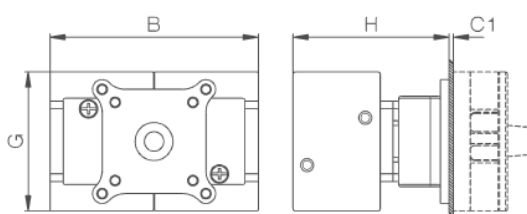
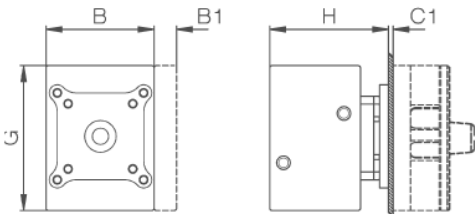
## Main Switches, Switches Disconnectors PM69..

### Panel mounting PM69..

ON-OFF Switches 3-pole, 4-pole

### ON-OFF Switches 6-pole, 8-pole

Mounting holes



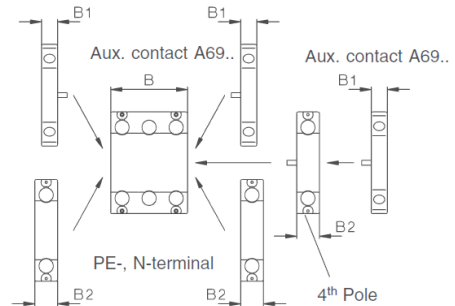
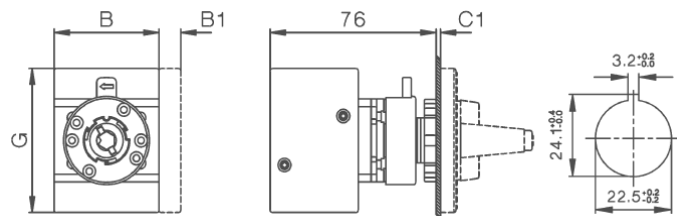
### Single hole mounting SH69..

ON-OFF Switches 3-pole, 4-pole

Mounting holes

### Mounting of add-on modules 20-80A

Panel mounting, Single hole mounting



Type	Handle Type	A	3-pole B	4-pole B	6-pole B	8-pole B	aux contact B1	4-pole N B2	C1	D1	D2	E	F	G	3-pole 4-pole H	6-pole 8-pole H
PM69/SH69	RY48/B48	48	48	62.5	-	-	10	14.5	1 - 5	9	5	36	-	64	54	-
PM69/SH69	RY64/B64	64	48	62.5	97	126	10	14.5	1 - 5	9	5	48	-	64	54	74
PM69/SH69 100-125A	RY64/B64	64	78	78	-	-	10	-	1 - 5	9	5	48	-	85	60	-

## Handles for LB69.. Switches

H69-0001 / RY64  
 H69-0001-B / B64

H69-0003 / RY48  
 H69-0004 / B48

