

# 69 Series Isolators

# IMO

Technical Datasheet

## Key Features

- 3, 4, 6 & 8 Pole Versions
- On Load 10A - 125A
- Red/Yellow or Black Handles
- Up to 3 Padlock Positions
- Enclosed IP66 - NEMA 4X
- 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             | PE69 |    |               |                                          |
| Base Mount Door Interlock | LB69 |    |               |                                          |
| Front Panel Mount         | PM69 |    |               |                                          |
| Direct Handle Base Mount  | DM69 |    |               |                                          |
| Single Hole Mount         | SH69 |    |               |                                          |
| Number of Poles           |      |    |               |                                          |
| 3 Pole                    |      | 30 |               |                                          |
| 4 Pole                    |      | 40 |               |                                          |
| 6 Pole                    |      | 60 |               |                                          |
| 8 Pole                    |      | 80 |               |                                          |
|                           |      |    | Rating @ 400V |                                          |
|                           |      |    | 20            | 20 Amps AC21 (7.5kW AC23B)               |
|                           |      |    | 25            | 25 Amps AC21 (10kW AC23B)                |
|                           |      |    | 32            | 32 Amps AC21 (12.5kW AC23B)              |
|                           |      |    | 40            | 40 Amps AC21 (16kW AC23B)                |
|                           |      |    | 63            | 63 Amps AC21 (22kW AC23B)                |
|                           |      |    | 80            | 80 Amps AC21 (22kW AC23B)                |
|                           |      |    | 100*          | 100 Amps AC21 (37kW AC23B)               |
|                           |      |    | 125*          | 125 Amps AC21 (45kW AC23B)               |
|                           |      |    | Handle Type   |                                          |
|                           |      |    | RY48          | Direct Red/Yellow 48mm Handle            |
|                           |      |    | RY64          | Direct Red/Yellow 64mm Handle            |
|                           |      |    | B48           | Direct Black 48mm Handle                 |
|                           |      |    | B64           | Direct Black 64mm Handle                 |
|                           |      |    | GREY          | Grey with Black Handle                   |
|                           |      |    |               | Enclosed / Door Interlocked Handle       |
|                           |      |    | L             | Large Enclosed / Door Interlocked Handle |

\* 3/4 pole only

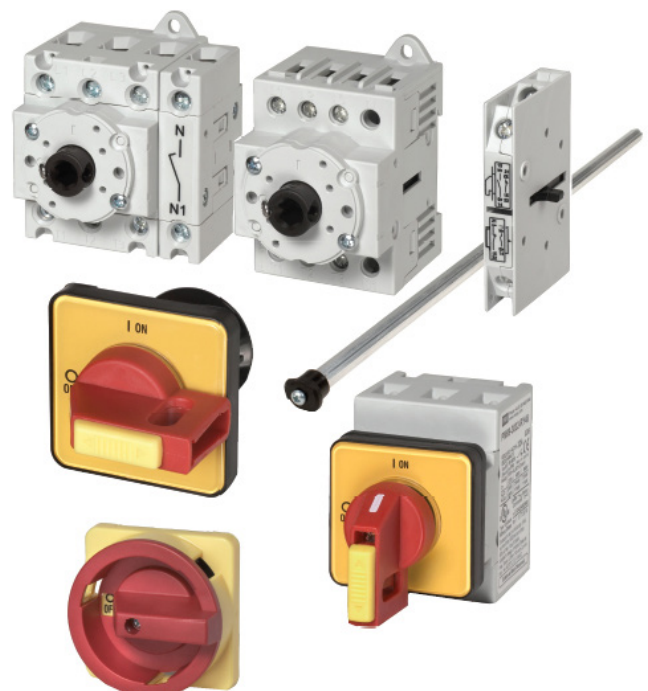
## Accessories

| 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                      |
| SP69-0001 | Add-On Neutral Switching Pole 20-40A     |

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| 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 |



# 69 Series Isolators



## Technical Specifications

## Technical Datasheet

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

| Type                                                      |                   | ..69..20              | ..69..25 | ..69..32 | ..69..40 | ..69..63    | ..69..80 | ..69..100   | ..69..125 |
|-----------------------------------------------------------|-------------------|-----------------------|----------|----------|----------|-------------|----------|-------------|-----------|
| Main Contacts                                             |                   |                       |          |          |          |             |          |             |           |
| Rated thermal current I <sub>th</sub> open                | A                 | 20                    | 25       | 32       | 40       | 63          | 80       | 100         | 125       |
| Rated thermal current I <sub>th</sub> enclosed            | A                 | 20                    | 25       | 32       | 40       | 63          | 80       | 100         | 110       |
| Rated insulation voltage U <sub>i</sub> <sup>1)</sup>     | V                 | 690                   | 690      | 690      | 690      | 690         | 690      | 1000        | 1000      |
| Rated operational current I <sub>n</sub> AC21A            | A                 | 20                    | 25       | 32       | 40       | 63          | 80       | 100         | 125       |
| Making capacity I <sub>eff</sub> 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 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       |
| Rated short-time withstand current (1 sec. current)       | A                 | 250                   | 300      | 400      | 500      | 600         | 850      | 1200        | 1500      |
| Power loss per pole AC21 = I <sub>th</sub>                |                   |                       |          |          |          |             |          |             |           |
| 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     |
| Cable cross sections                                      | mm <sup>2</sup>   | 0.5 - 10              |          |          |          | 1 - 25      |          | 4 - 50      |           |
| solid or stranded                                         | AWG               | 20 - 8 (10)           |          |          |          | 16 - 4 (10) |          | 10 - 0 (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                | 0.8 - 1.7             |          |          |          | 2.5 - 4     |          | 3.5 - 4.5   |           |
| Auxiliary contacts                                        |                   |                       |          |          |          |             |          |             |           |
| Rated insulation voltage U <sub>i</sub> <sup>1)</sup>     | V                 | 690                   |          |          |          |             |          |             |           |
| Rated thermal current I <sub>n</sub> , i <sub>th</sub>    | 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                    |          |          |          |             |          |             |           |
| Cable cross sections                                      | 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 and 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        |
| Fuse size (RK5) Manual motor controller                   | A                 | 40                    | 50       | 50       | 70       | 90          | 110      | 125         | 125       |
| 5kA / 600V Motor disconnect                               | A                 | 40                    | 50       | 50       | 50       | 70          | 70       | 125         | 125       |
| Tightening torque                                         | Nm                | 1.2 - 2.3             |          |          |          | 2.8 - 4     |          | 1.7 - 4.5   |           |
|                                                           | lb.inch           | 11 - 20               |          |          |          | 24 - 35     |          | 15 - 40     |           |
| Max. Ambient Temperature                                  | Operation         | -40°C to +60°C (90°C) |          |          |          |             |          |             |           |
|                                                           | Enclosed          | -40°C to +40°C        |          |          |          |             |          |             |           |
|                                                           | Storage           | -50°C to +90°C        |          |          |          |             |          |             |           |

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) The values after the slash are valid for switches 6-pole or more

3) Suitable for no load application (A20A) above 690V

4) Fuse RK1 / 10kA / 600V

5) Uimp = 8kV

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## Technical Datasheet

### Dimensions (mm)

#### Base Mounting LB69..

ON-OFF Switches 3-Pole, 4-Pole

$$L = X - 40 \pm 3 \quad 20-80A$$

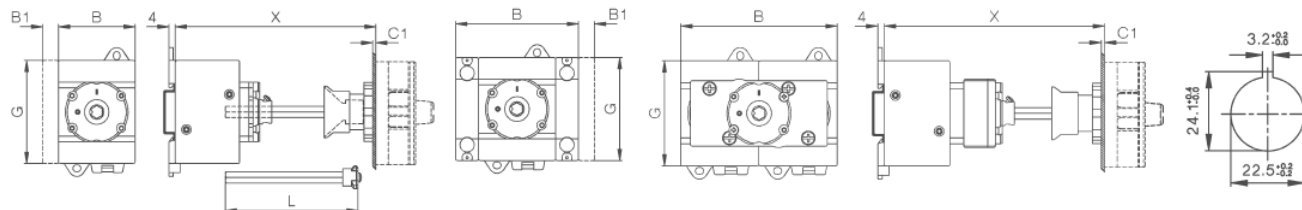
$$L = X - 44 \pm 3 \quad 100-125A$$

6-pole  
for 20-40A only  
 $L = X - 40 \pm 3$

ON-OFF Switches 6-Pole, 8-Pole

$$L = X - 60 \pm 3$$

Mounting  
holes



| Type          | A  | 3-pole<br>B | 4-pole<br>B | 6-pole<br>B | 3, 4-pole<br>8-pole<br>B | aux.<br>contact<br>B1 | 4-pole<br>PE<br>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 |

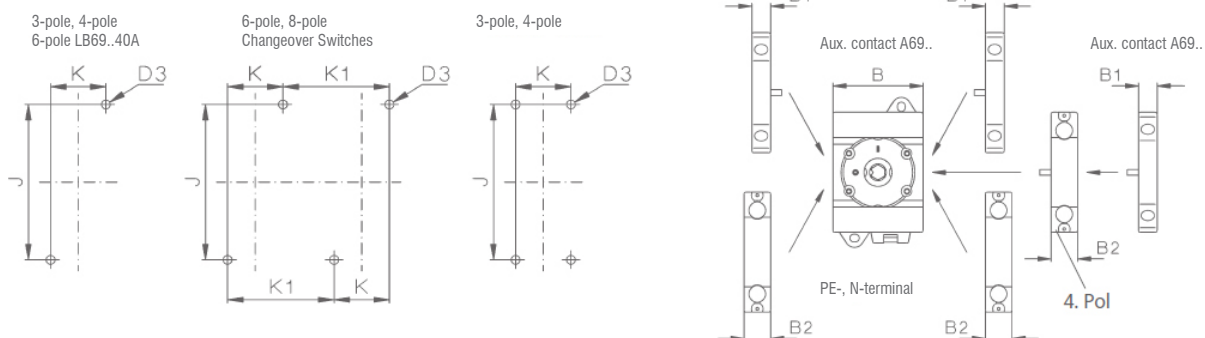
#### Base mounting

ON-OFF Switches LB69..20-80A

LB69..100-125A

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

Base mounting, for distribution boards

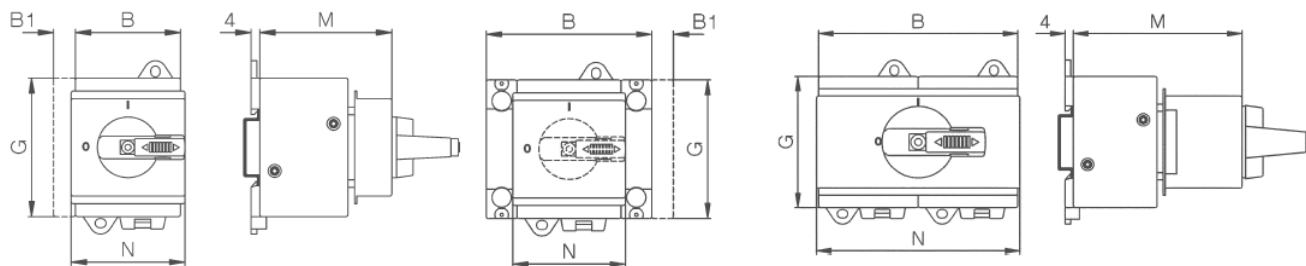


#### Installation cover DM69..

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<br>B | 4-pole<br>B | 6-pole<br>B | 8-pole<br>B | aux.<br>contact<br>B1 | 4-pole<br>N<br>B2 | 4-pole<br>N<br>G | 3-pole<br>4-pole<br>M | 6-pole<br>M | 8-pole<br>M | 3-pole<br>4-pole<br>N | 6-pole<br>N | 8-pole<br>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

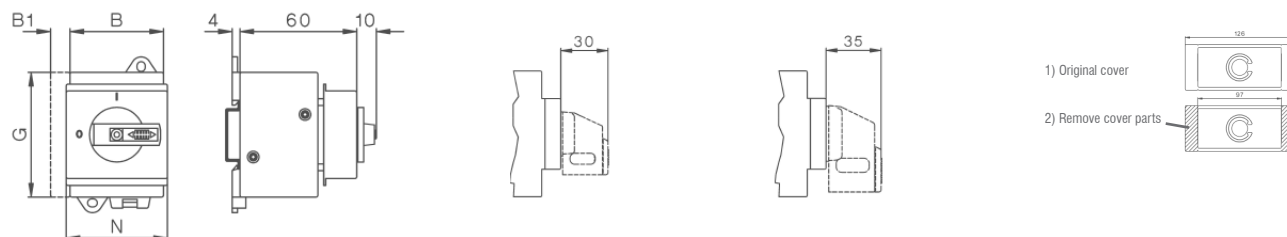
DM69..20-80A

Padlock device RY48/B48

DM69..20-80A

Padlock device RY48/B48

DM69..100-125A



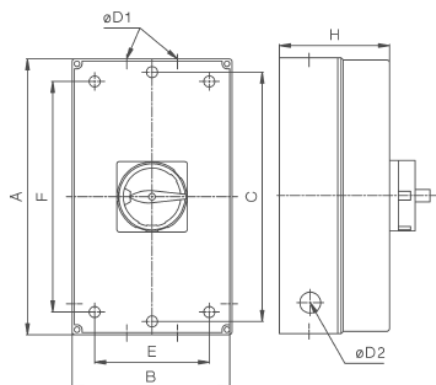
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# IMO

## Technical Datasheet

## Dimensions (mm)

Maintenance and Safety Switches PE69..



| 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 Tall Enc. <sup>3)</sup>     | 3, 4 | 180 | 98  | 170   | 2 x 25.5/20.5 / 16.5/12.5 | -  | 75  | 150 | 76  |
| 20-40A Large Enc. <sup>4)</sup>    | 6    | 200 | 140 | 188.5 | 40.5/32.5 + 16.5 + 12.5   | -  | 100 | 160 | 86  |
| 63-80A Large Enc. <sup>4)</sup>    | 3, 4 | 200 | 140 | 188.5 | 40.5/32.5 + 16.5 + 12.5   | -  | 100 | 160 | 86  |
| 100-125A Large Enc. <sup>4)</sup>  | 3, 4 | 200 | 140 | 188.5 | 40.5/32.5 + 16.5 + 12.5   | -  | 100 | 160 | 86  |
| 20-40A Large Enc. <sup>5)</sup>    | 8    | 240 | 176 | 228.5 | 2 x 40.5/32.5             | -  | 120 | 200 | 120 |
| 63-80A Large 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

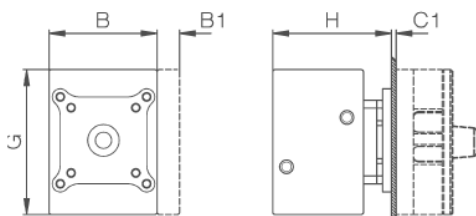
4) 20-40A no addition, 63-80A + 1 additional pole + 1 auxiliary, 100-125A no addition

5) 20-40A + 2 additional poles, 63-80A 8 pole no addition, 63-80A 6 pole + 1 auxiliary

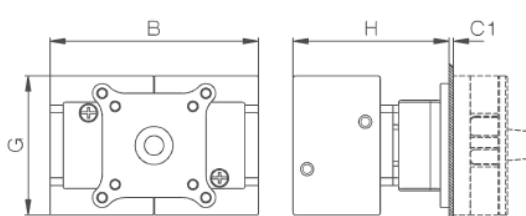
## Main Switches, Switches Disconnectors PM69..

### Panel mounting PM69..

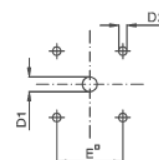
ON-OFF Switches 3-pole, 4-pole



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

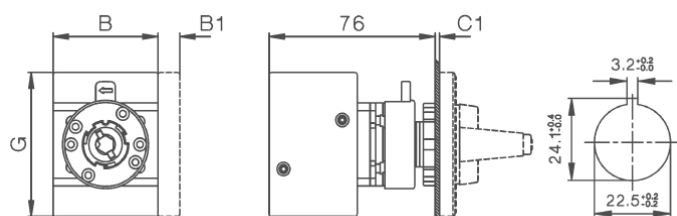


Mounting holes



### Single hole mounting SH69..

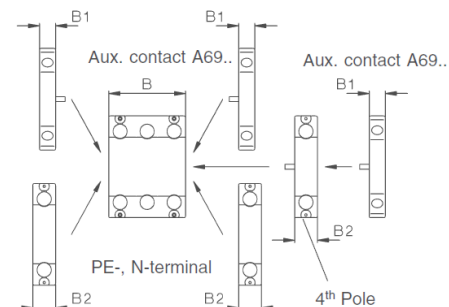
ON-OFF Switches 3-pole, 4-pole



Mounting holes

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

Panel mounting, Single hole mounting



| Type               | Handle Type | A  | 3-pole<br>B | 4-pole<br>B | 6-pole<br>B | 8-pole<br>B | aux<br>contact<br>B1 | 4-pole<br>N<br>B2 | C1    | D1 | D2 | E  | F | G  | 3-pole<br>4-pole<br>H | 6-pole<br>8-pole<br>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

