



Kraus & Naimer

BLUE LINE switchgear

2015

# Switch-disconnector Catalogue

**isolating switches**

**main/emergency off switches**

**changeover switches**

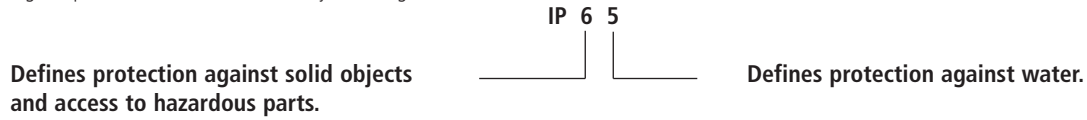
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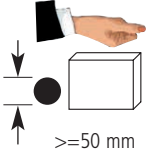
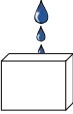
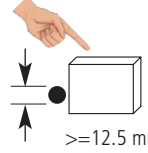
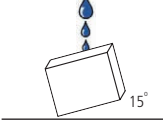
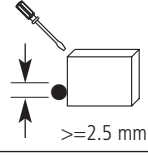
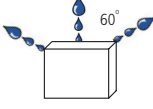
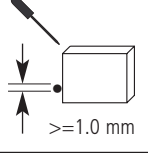
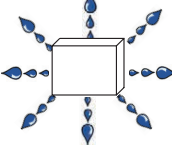
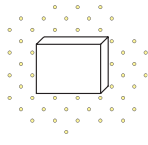
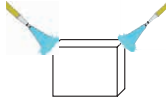
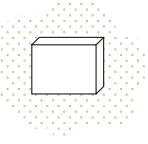
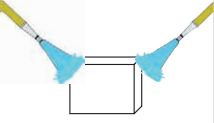
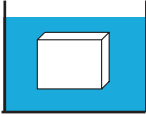
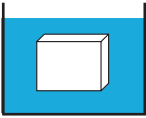
# DEGREES OF PROTECTION

## IP CODES

A coding system is defined by BS EN 60529 for the classification of degrees of protection provided by enclosures of electrical equipment against solid objects and water. This coding comprises the letters 'IP' followed by a two digit code as follows:-



Degrees of protection indicated by a number up to and including '6' implies compliance with the requirements for all lower numbers. For a code with a second digit of 7 or 8, a second code must be stated to specify protection against water jets or spray, eg IP66/IP67.

1st Digit	Protection against solid objects and access to hazardous parts.	2nd Digit	Protection against water
0	No protection	0	No protection
1	 No ingress by solid objects $\geq 50$ mm dia nor access to hazardous parts with the back of the hand	1	 Vertically falling drops of water shall have no harmful effect.
2	 No ingress by solid objects $\geq 12.5$ mm dia nor access to hazardous parts with a finger.	2	 Vertically falling drops of water shall have no harmful effect when the enclosure is tilted at any angle up to $15^\circ$ from vertical.
3	 No ingress by solid objects $\geq 2.5$ mm dia nor access to hazardous parts with a tool.	3	 Water sprayed at up to $60^\circ$ from the vertical shall have no harmful effect.
4	 No ingress by solid objects $\geq 1.0$ mm dia nor access to hazardous parts with a wire.	4	 Water splashed from any direction shall have no harmful effect.
5	 Dust protected. Ingress of dust is not completely prevented, but there should be no harmful deposits. No access to hazardous parts with a wire.	5	 Jets of water projected from any direction shall have no harmful effect.
6	 Dust-tight. No ingress of dust. No access to hazardous parts with a wire.	6	 Strong jets of water projected from any direction shall have no harmful effect.
		7	 Temporary immersion in water shall not result in ingress of harmful quantities of water.
		8	 Continuous immersion in water shall not result in ingress of harmful quantities of water.

Reference should be made to BS EN 60529:1992 for full details concerning test and acceptance criteria.

## switch-disconnector catalogue

This catalogue contains the most popular Kraus & Naimer Blue Line switch-disconnectors including our range of main/emergency-off switches, main switches and changeover switches.

The content of the catalogue has been designed for ease of use and selection; with 'one-line' product coding for ordering purposes. Please contact our Sales Team at Newbury if you would like assistance in the selection of a product or require additional information on the range of products available from Kraus & Naimer.

Tel: 01635 262626

Fax: 01635 37807

email: sales-uk@krausnaimer.com

### Off - On Switch-Disconnectors

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#### Main/Emergency-Off Switch

Front Panel Mounting Single Hole Fixing Handle	2, 3* & 4 pole	20A to 32A	<b>4</b>
Front Panel Mounting 4 Hole Fixing Handle	3 & 4 pole	20A to 315A	<b>5</b>
Base Mounting Single Hole Fixing Handle	3*, 4 & 6 pole	20A to 125A	<b>6</b>
Base Mounting 4 Hole Fixing Handle	3*, 4 & 6 pole	20A to 315A	<b>7</b>
<b>Main/Emergency-Off Switch with Defeatable Door Interlock</b>			
Base Mounting Single Hole Fixing Handle	3 & 4 pole	25A to 160A	<b>8</b>
Base Mounting 4 Hole Fixing Handle	3, 4 & 6 pole	40A to 315A	<b>9</b>

\* Including 3 pole + solid neutral

### Changeover Switch-disconnectors

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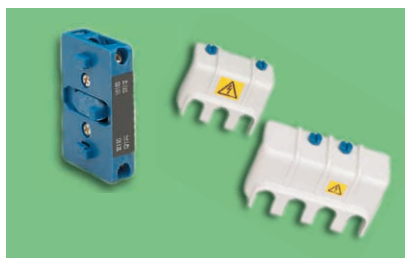


#### Changeover Switch with Centre Off

Base Mounting 4 Hole Fixing Handle	2, 3 & 4 pole	16A to 160A	<b>10</b>
Base Mounting, suitable for 45mm distribution board cutout	2 & 4 pole	16A to 125A	<b>10</b>

### Optional Extras

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Side Mounted Earth Terminal	<b>11</b>
Side Mounted Neutral Terminal	<b>11</b>
Side Mounted Auxiliary Contact	<b>11</b>
Mounting Tool	<b>11</b>
Terminal Covers	<b>11</b>

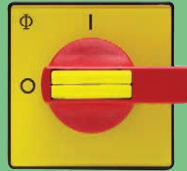
### Technical Data, Dimensions & General Information

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Technical Data	<b>12</b>
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## Main/Emergency-Off Switch - 2, 3 & 4 Pole Front Panel Mounting Single Hole Fixing Handle 20A to 32A



- red / yellow padlockable handle
- black / silver handle available for use as main switch
- fingerproof terminals
- IP66 front protection
- variations on auxiliaries available plus add - on auxiliary blocks (see page 11)
- front plate size  
-KG10A - KG32A: 48 x 48mm

### Without Auxiliaries

Ie AC-21A	2 Pole		3 Pole		3 Pole + Solid Neutral		4 Pole (3ph + Sw N <sup>2</sup> )	
20A	KG10A T202/04 FT2		KG10A T203/04 FT2				KG10A T204/04 FT2	
25A			KG20A T203/04 FT2		KG20A T207/04 FT2		KG20A T204/04 FT2	
32A			KG32A T203/04 FT2		KG32A T207/04 FT2		KG32A T204/04 FT2	

### With Auxiliaries<sup>1</sup>

Ie AC-21A	2 Pole		3 Pole		3 Pole + Solid Neutral		4 Pole (3ph + Sw N <sup>2</sup> )	
20A			KG10A T203/GBA319 FT2				KG10A T204/GBA330 FT2	
25A			KG20A T203/GBA320 FT2		KG20A T207/GBA325 FT2		KG20A T204/GBA330 FT2	
32A			KG32A T203/GBA320 FT2		KG32A T207/GBA325 FT2		KG32A T204/GBA330 FT2	

#### Notes

1) The following auxiliary contacts are provided:-

KG10A                    1 n.o. (early break) + 1 n.c.  
KG20A, KG32A        2 n.o. (early break)

2) Switched neutral pole is early make/late break

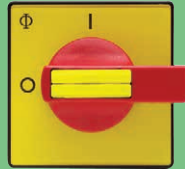
Technical data        - Page 12

Connection diagram   - Page 13

Dimensions - KG       - Page 14

# FRONT PANEL MOUNTING

## Main/Emergency-Off Switch - 3 & 4 Pole Front Panel Mounting Four Hole Fixing Handle 20A to 315A



- red / yellow padlockable handle
  - KG10A - KG160 
  - KG210 - KG315 
- black / silver handle available
- IP66 front protection
- fingerproof terminals - KG10A - KG64B
- incoming terminal cover - KG80 to KG315 (KG210 - KG315 incl. outgoing cover)
- variations on auxiliaries available plus add - on auxiliary blocks (see page 11)
- front plate size
  - KG10A - KG32A: 48 x 48mm
  - KG41B - KG105: 64 x 64mm
  - KG125 - KG315: 88 x 88mm

### Without Auxiliaries

le AC-21A	3 Pole		4 Pole (3ph + Sw N <sup>3</sup> )	
20A	KG10A T203/01 E		KG10A T204/01 E	
25A	KG20A T203/01 E		KG20A T204/01 E	
32A	KG32A T203/01 E		KG32A T204/01 E	
40A	KG41B T203/GBA306 E		KG41B T204/01 E	
63A	KG64B T203/GBA306 E		KG64B T204/01 E	
80A	KG80 T203/GBA306 E		KG80 T204/01 E	
100A	KG100 T203/GBA306 E		KG100 T204/01 E	
125A	KG105 T203/GBA306 E		KG105 T204/01 E	
125A	KG125 <sup>2</sup> T203/01 E		KG125 <sup>2</sup> T204/01 E	
160A	KG160 T203/01 E		KG160 T204/01 E	
200A	KG210 T203/05 E		KG210 T204/05 E	
250A	KG250 T203/05 E		KG250 T204/05 E	
315A	KG315 T203/05 E		KG315 T204/05 E	

### With Auxiliaries<sup>1</sup>

le AC-21A	3 Pole		4 Pole (3ph + Sw N <sup>3</sup> )	
20A	KG10A T203/GBA315 E		KG10A T204/GBA415 E	
25A	KG20A T203/GBA315 E		KG20A T204/GBA415 E	
32A	KG32A T203/GBA315 E		KG32A T204/GBA415 E	
40A	KG41B T203/GBA353 E		KG41B T204/GBA426 E	
63A	KG64B T203/GBA353 E		KG64B T204/GBA426 E	
80A	KG80 T203/GBA353 E		KG80 T204/GBA426 E	
100A	KG100 T203/GBA353 E		KG100 T204/GBA426 E	
125A	KG105 T203/GBA353 E		KG105 T204/GBA426 E	
125A	KG125 <sup>2</sup> T203/GBA368 E		KG125 <sup>2</sup> T204/GBA045 E	
160A	KG160 T203/GBA025 E		KG160 T204/GBA045 E	
200A	KG210 T203/GBA025 E		KG210 T204/GBA035 E	
250A	KG250 T203/GBA025 E		KG250 T204/GBA035 E	
315A	KG315 T203/GBA025 E		KG315 T204/GBA035 E	

#### Notes

1) The following auxiliary contacts are provided:-  
 KG10A 1 n.o. (early break) + 1 n.c.  
 KG20A to KG105 2 n.o. (early break)  
 KG125 - KG315 2 n.o. auxiliary (early break) + 2 n.c

2) Suitable for applications requiring larger cable termination

3) Switched neutral pole is early make/late break

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Connection diagram - Page 13

Dimensions - KG - Page 14



Main/Emergency-Off Switch - 3 ,4 & 6 Pole  
Base Mounting Single Hole Fixing Handle 20A to 125A



- red / yellow padlockable handle
- black / silver handle available for use as main switch
- door interlock
- adjustable metal operating shaft 200mm long, switches with alternate shaft lengths available
- IP66 front protection
- fingerproof terminals - KG10A to KG64B
- incoming terminal cover - KG80 to KG105
- suitable for DIN rail mounting
- variations on auxiliaries available plus add - on auxiliary blocks (see page 11)
- front plate size
  - KG10A - KG32A: 48 x 48mm
  - KG41B - KG105: 64 x 64mm

Without Auxiliaries

le AC-21A	3 Pole	3 Pole + Solid Neutral	4 Pole (3ph + Sw N <sup>2</sup> )	6 Pole
20A	KG10A T203/GBA352 VE		KG10A T204/GBA237 VE	
25A	KG20A T203/GBA352 VE	KG20A T207/GBA220 VE	KG20A T204/GBA237 VE	KG20B T206/GBA230 VE
32A	KG32A T203/GBA352 VE	KG32A T207/GBA220 VE	KG32A T204/GBA237 VE	KG32B T206/GBA230 VE
40A	KG41B T203/GBA452 VE	KG41B T207/GBA240 VE	KG41B T204/GBA447 VE	KG41B T206/GBA410 VE
63A	KG64B T203/GBA452 VE	KG64B T207/GBA240 VE	KG64B T204/GBA447 VE	KG64B T206/GBA410 VE
80A	KG80 T203/GBA452 VE	KG80 T207/GBA240 VE	KG80 T204/GBA447 VE	KG80 T206/GBA410 VE
100A	KG100 T203/GBA452 VE	KG100 T207/GBA240 VE	KG100 T204/GBA447 VE	KG100 T206/GBA410 VE
125A	KG105 T203/GBA452 VE	KG105 T207/GBA240 VE	KG105 T204/GBA447 VE	KG105 T206/GBA410 VE

With Auxiliaries<sup>1</sup>

le AC-21A	3 Pole	3 Pole + Solid Neutral	4 Pole (3ph + Sw N <sup>2</sup> )	6 Pole
20A	KG10A T203/GBA372 VE		KG10A T204/GBA247 VE	
25A	KG20A T203/GBA372 VE	KG20A T207/GBA225 VE	KG20A T204/GBA247 VE	KG20B T206/GBA236 VE
32A	KG32A T203/GBA372 VE	KG32A T207/GBA225 VE	KG32A T204/GBA247 VE	KG32B T206/GBA228 VE
40A	KG41B T203/GBA462 VE	KG41B T207/GBA245 VE	KG41B T204/GBA457 VE	KG41B T206/GBA415 VE
63A	KG64B T203/GBA462 VE	KG64B T207/GBA245 VE	KG64B T204/GBA457 VE	KG64B T206/GBA415 VE
80A	KG80 T203/GBA462 VE	KG80 T207/GBA245 VE	KG80 T204/GBA457 VE	KG80 T206/GBA415 VE
100A	KG100 T203/GBA462 VE	KG100 T207/GBA245 VE	KG100 T204/GBA457 VE	KG100 T206/GBA415 VE
125A	KG105 T203/GBA462 VE	KG105 T207/GBA245 VE	KG105 T204/GBA457 VE	KG105 T206/GBA415 VE

Notes

1) The following auxiliary contacts are provided:-

KG10A                    1 n.o. (early break) + 1 n.c.  
 KG20A to KG105    2 n.o. (early break)

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Connection diagram    - Page 13

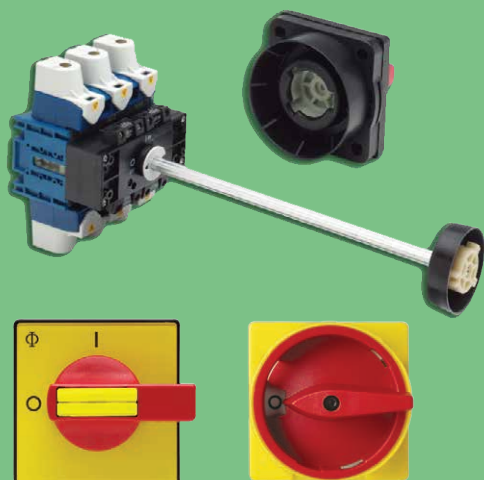
Dimensions - KG        - Page 15

2) Switched neutral pole is early make/late break



# BASE MOUNTING

## Main/Emergency-Off Switch - 3, 4 & 6 Pole Base Mounting Four Hole Fixing Handle 20A to 315A



- red / yellow padlockable handle
  - KG10A - KG160 
  - KG210 - KG315 
- black handle available
- door interlock
- adjustable metal operating shaft 200mm long (KG125 - KG315 300mm long), switches with alternate shaft lengths available
- IP66/67 front protection
- fingerproof terminals - KG10A to KG64B
- incoming terminal cover - KG80 to KG315 (KG210 - KG315 incl. outgoing cover)
- suitable for DIN rail mounting - up to KG105
- variations on auxiliaries available plus add - on auxiliary blocks (see page 11)
- front plate size
  - KG10A - KG32A: 48 x 48mm
  - KG20B - KG105: 64 x 64mm
  - KG125 - KG315: 88 x 88mm

### Without Auxiliaries

le AC-21A	3 Pole		3 Pole + Solid Neutral		4 Pole (3ph + Sw N <sup>3</sup> )		6 Pole	
20A	KG10A T203/GBA430 VE				KG10A T204/GBA450 VE			
25A	KG20A T203/GBA430 VE		KG20A T207/GBA140 VE		KG20A T204/GBA450 VE		KG20B T206/GBA221 VE	
32A	KG32A T203/GBA430 VE		KG32A T207/GBA140 VE		KG32A T204/GBA450 VE		KG32B T206/GBA221 VE	
40A	KG41B T203/GBA430 VE		KG41B T207/GBA140 VE		KG41B T204/GBA450 VE		KG41B T206/GBA221 VE	
63A	KG64B T203/GBA430 VE		KG64B T207/GBA140 VE		KG64B T204/GBA450 VE		KG64B T206/GBA221 VE	
80A	KG80 T203/GBA430 VE		KG80 T207/GBA140 VE		KG80 T204/GBA450 VE		KG80 T206/GBA221 VE	
100A	KG100 T203/GBA430 VE		KG100 T207/GBA140 VE		KG100 T204/GBA450 VE		KG100 T206/GBA221 VE	
125A	KG105 T203/GBA430 VE		KG105 T207/GBA140 VE		KG105 T204/GBA450 VE		KG105 T206/GBA221 VE	
125A	KG125 <sup>2</sup> T203/GBA050 VE		KG125 T207/GBA151 VE		KG125 <sup>2</sup> T204/GBA100 VE		KG125 <sup>2</sup> T206/GBA061 VE	
160A	KG160 T203/GBA050 VE		KG160 T207/GBA151 VE		KG160 T204/GBA100 VE		KG160 T206/GBA061 VE	
200A	KG210 T203/GBA015 VE		KG210 T207/GBA156 VE		KG210 T204/GBA020 VE			
250A	KG250 T203/GBA015 VE		KG250 T207/GBA156 VE		KG250 T204/GBA020 VE			
315A	KG315 T203/GBA015 VE		KG315 T207/GBA157 VE		KG315 T204/GBA020 VE			

### With Auxiliaries<sup>1</sup>

le AC-21A	3 Pole		3 Pole + Solid Neutral		4 Pole (3ph + Sw N <sup>3</sup> )		6 Pole	
20A	KG10A T203/GBA435 VE				KG10A T204/GBA455 VE			
25A	KG20A T203/GBA435 VE		KG20A T207/GBA145 VE		KG20A T204/GBA455 VE		KG20B T206/GBA225 VE	
32A	KG32A T203/GBA435 VE		KG32A T207/GBA145 VE		KG32A T204/GBA455 VE		KG32B T206/GBA225 VE	
40A	KG41B T203/GBA435 VE		KG41B T207/GBA145 VE		KG41B T204/GBA455 VE		KG41B T206/GBA225 VE	
63A	KG64B T203/GBA435 VE		KG64B T207/GBA145 VE		KG64B T204/GBA455 VE		KG64B T206/GBA225 VE	
80A	KG80 T203/GBA435 VE		KG80 T207/GBA145 VE		KG80 T204/GBA455 VE		KG80 T206/GBA225 VE	
100A	KG100 T203/GBA435 VE		KG100 T207/GBA145 VE		KG100 T204/GBA455 VE		KG100 T206/GBA225 VE	
125A	KG105 T203/GBA435 VE		KG105 T207/GBA145 VE		KG105 T204/GBA455 VE		KG105 T206/GBA225 VE	
125A	KG125 <sup>2</sup> T203/GBA055 VE		KG125 T207/GBA150 VE		KG125 <sup>2</sup> T204/GBA105 VE		KG125 <sup>2</sup> T206/GBA070 VE	
160A	KG160 T203/GBA055 VE		KG160 T207/GBA150 VE		KG160 T204/GBA105 VE		KG160 T206/GBA070 VE	
200A	KG210 T203/GBA030 VE		KG210 T207/GBA155 VE		KG210 T204/GBA040 VE			
250A	KG250 T203/GBA030 VE		KG250 T207/GBA155 VE		KG250 T204/GBA040 VE			
315A	KG315 T203/GBA030 VE		KG315 T207/GBA155 VE		KG315 T204/GBA040 VE			

#### Notes

1) The following auxiliary contacts are provided:-  
 KG10A 1 n.o. (early break) + 1 n.c.  
 KG20A to KG105 2 n.o. (early break)  
 KG125 to KG315 2 n.o. (early break) + 2 n.c

2) Suitable for applications requiring larger cable termination  
 3) Switched neutral pole is early make/late break

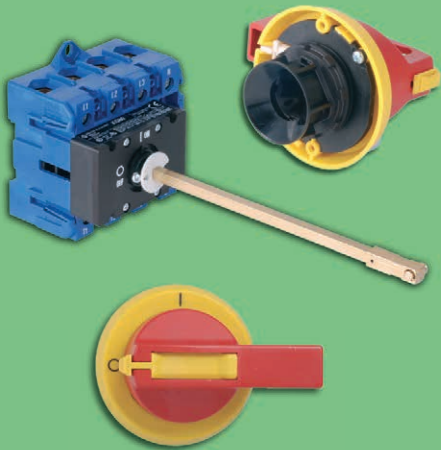
Technical data - Page 12

Connection diagram - Page 13

Dimensions - KG - Page 15-16



## Main/Emergency-Off Switch With Defeatable Door Interlock- 3 & 4 Pole Base Mounting Single Hole Fixing Handle 25A - 160A



- red / yellow padlockable handle
- black handle available for use as main switch
- IP66/67 front protection
- metal operating shaft
  - KG20B - KG105 200mm long
  - KG125 - KG160 300mm long
- switches with alternate shaft length available
- fingerproof terminals - KG20B & KG64B
- incoming terminal cover - KG80 to KG160
- suitable for DIN rail mounting up to KG105

### Without Auxiliaries

le AC-21A	3 Pole	4 Pole (3ph + Sw N <sup>2</sup> )
25A	KG20B T203/GBA340 VE	KG20B T204/GBA350 VE
32A	KG32B T203/GBA340 VE	KG32B T204/GBA350 VE
40A	KG41B T203/GBA370 VE	KG41B T204/GBA380 VE
63A	KG64B T203/GBA370 VE	KG64B T204/GBA380 VE
80A	KG80 T203/GBA370 VE	KG80 T204/GBA380 VE
100A	KG100 T203/GBA370 VE	KG100 T204/GBA380 VE
125A	KG105 T203/GBA370 VE	KG105 T204/GBA380 VE
125A	KG125 <sup>3</sup> T203/GBA180 VE	KG125 <sup>3</sup> T204/GBA190 VE
160A	KG160 T203/GBA180 VE	KG160 T204/GBA190 VE

### With Auxiliaries<sup>1</sup>

le AC-21A	3 Pole	4 Pole (3ph + Sw N <sup>2</sup> )
25A	KG20B T203/GBA345 VE	KG20B T204/GBA355 VE
32A	KG32B T203/GBA345 VE	KG32B T204/GBA355 VE
40A	KG41B T203/GBA375 VE	KG41B T204/GBA385 VE
63A	KG64B T203/GBA375 VE	KG64B T204/GBA385 VE
80A	KG80 T203/GBA375 VE	KG80 T204/GBA385 VE
100A	KG100 T203/GBA375 VE	KG100 T204/GBA385 VE
125A	KG105 T203/GBA375 VE	KG105 T204/GBA385 VE
125A	KG125 <sup>3</sup> T203/GBA185 VE	KG125 <sup>3</sup> T204/GBA195 VE
160A	KG160 T203/GBA185 VE	KG160 T204/GBA195 VE

#### Note:

When required for maintenance purposes, qualified personnel can defeat the door interlock and enable the panel door to be opened whilst the switch is in the 'ON' position.

Door clutch will accept 3mm misalignment between switch shaft and door mounted handle.

In normal operation the switch handle is padlockable in the OFF position only and interlocked with the shaft in the ON position to prevent opening of the panel door. Shaft and handle are also interlocked in the OFF position if a padlock is fitted to the handle with the panel door closed.

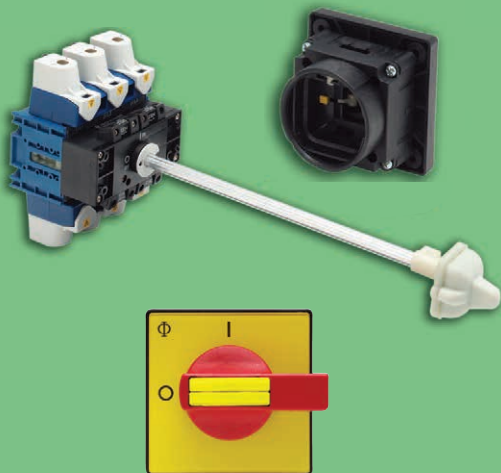
#### Notes

- 1) The following auxiliary contacts are provided:-
- |                |                               |                    |           |
|----------------|-------------------------------|--------------------|-----------|
| KG10A          | 1 n.o. (early break) + 1 n.c. | Technical data     | - Page 12 |
| KG20A to KG105 | 2 n.o. (early break)          | Connection diagram | - Page 13 |
|                |                               | Dimensions - KG    | - Page 15 |
- 2) Switched neutral pole is early make/late break
- 3) Suitable for applications requiring larger cable terminations



# BASE MOUNTING - DEFEATABLE DOOR INTERLOCK

## Main/Emergency-Off Switch With Defeatable Door Interlock- 3 , 4 & 6 Pole Base Mounting Four Hole Fixing Handle 40A - 315A



- red / yellow padlockable handle
- black / silver handle available for use as main switch
- IP66 front protection
- metal operating shaft
  - KG41B - KG105 200mm long
  - KG125 - KG315 300mm long
- switches with alternate shaft length available
- fingerproof terminals - KG41B & KG64B
- incoming terminal cover - KG80 to KG315  
(KG210 - KG315 incl. outgoing cover)
- suitable for DIN rail mounting up to KG105
- front plate size 88 x 88mm

### Without Auxiliaries

le AC-21A	3 Pole	4 Pole (3ph + Sw N <sup>2</sup> )	6 Pole
40A	KG41B T203/GBA330 VE	KG41B T204/GBA060 VE	KG41B T206/GBA121 VE
63A	KG64B T203/GBA330 VE	KG64B T204/GBA060 VE	KG64B T106/GBA121 VE
80A	KG80 T203/GBA330 VE	KG80 T204/GBA060 VE	KG80 T206/GBA121 VE
100A	KG100 T203/GBA330 VE	KG100 T204/GBA060 VE	KG100 T206/GBA121 VE
125A	KG105 T203/GBA330 VE	KG105 T204/GBA060 VE	KG105 T206/GBA121 VE
125A	KG125 T203/GBA080 VE	KG125 T204/GBA090 VE	KG125 T206/GBA104 VE
160A	KG160 T203/GBA080 VE	KG160 T204/GBA090 VE	KG160 T206/GBA104 VE
200A	KG210 T203/GBA080 VE	KG210 T204/GBA090 VE	
250A	KG250 T203/GBA080 VE	KG250 T204/GBA090 VE	
315A	KG315 T203/GBA080 VE	KG315 T204/GBA090 VE	

### With Auxiliaries<sup>1</sup>

le AC-21A	3 Pole	4 Pole (3ph + Sw N <sup>1</sup> )	6 Pole
40A	KG41B T203/GBA335 VE	KG41B T204/GBA065 VE	KG41B T206/GBA125 VE
63A	KG64B T203/GBA335 VE	KG64B T204/GBA065 VE	KG64B T206/GBA125 VE
80A	KG80 T203/GBA335 VE	KG80 T204/GBA065 VE	KG80 T206/GBA125 VE
100A	KG100 T203/GBA335 VE	KG100 T204/GBA065 VE	KG100 T206/GBA125 VE
125A	KG105 T203/GBA335 VE	KG105 T204/GBA065 VE	KG105 T206/GBA125 VE
125A	KG125 <sup>3</sup> T203/GBA085 VE	KG125 T204/GBA095 VE	KG125 T206/GBA105 VE
160A	KG160 T203/GBA085 VE	KG160 T204/GBA095 VE	KG160 T206/GBA105 VE
200A	KG210 T203/GBA085 VE	KG210 T204/GBA095 VE	
250A	KG250 T203/GBA085 VE	KG250 T204/GBA095 VE	
315A	KG315 T203/GBA085 VE	KG315 T204/GBA095 VE	

#### Notes

1) The following auxiliary contacts are provided:-

KG10A                    1 n.o. (early break) + 1 n.c.  
 KG20A to KG105      2 n.o. (early break)  
 KG125 to KG 315      2 n.o. (early break) + 2 n.c.

2) Switched neutral pole is early make/late break

3) Suitable for applications requiring larger cable terminations

Technical data                    - Page 12

Connection diagram           - Page 13

Dimensions - KG                - Page 15

#### Note:

When required for maintenance purposes, qualified personnel can use the simple tool provided to defeat the door interlock and enable the panel door to be opened whilst the switch is in the 'ON' position.

Door clutch will accept 5mm misalignment between switch shaft and door mounted handle.

In normal operation the switch handle is padlockable in the OFF position only and interlocked with the shaft in the ON position to prevent opening of the panel door. Shaft and handle are also interlocked in the OFF position if a padlock is fitted to the handle with the panel door closed.



## Changeover Switch, Centre Off - 2, 3 & 4 pole Base Mounting 4 Hole Fixing Handle



- black / silver padlockable handle
- door interlock
- IP66/67 front protection
- metal operating shaft
- 120mm Long KH16 to KH25, KG20B & KG32B
- 130mm Long KH32 to KH85, KG41B to KG105
- 190mm long KG125 & KG160
- switches with alternate shaft lengths available.
- fingerproof terminals – KG20B to KG64B  
– KH16 to KH40
- suitable for DIN rail mounting up to KG105 and all KH switches
- front plate size

KH16 - KH85: 64 x 64mm  
 KG20B - KG64B: 64 x 64mm  
 KG80 - KG160 88 x 88mm

le AC-21A	3 Pole		3 Pole + aux <sup>1)</sup>		4 Pole (3ph + Sw N <sup>2)</sup> ) + aux <sup>1)</sup>	
16A	KH16 T902/GBA005 VE					
20A	KH20 T902/GBA005 VE					
25A	KH25 T902/GBA005 VE		KG20B T903/GBA005 VE		KG20B T904/GBA006 VE	
32A	KH32 T902/GBA005 VE		KG32B T903/GBA005 VE		KG32B T904/GBA006 VE	
40A	KH40 T902/GBA005 VE		KG41B T903/GBA005 VE		KG41B T904/GBA006 VE	
63A	KH63 T902/GBA005 VE		KG64B T903/GBA005 VE		KG64B T904/GBA006 VE	
80A	KH80 T902/GBA005 VE		KG80 T903/GBA005 VE		KG80 T904/GBA006 VE	
100A	KH85 T902/GBA005 VE		KG100 T903/GBA005 VE		KG100 T904/GBA006 VE	
125A			KG105 T903/GBA005 VE		KG105 T904/GBA006 VE	
125A			KG125 <sup>3)</sup> T903/GBA010 VE		KG125 T904/GBA020 VE	
160A			KG160 T903/GBA010 VE		KG160 T904/GBA020 VE	

### Notes

- 1) 2-off volt-free, early break, auxiliary contacts are provided. One of these contacts closes in position 1 and the other contact closes in position 2. Both of the contacts are open in the Off position.
- 2) Switched neutral pole is early make/late break
- 3) Suitable for applications requiring larger cable termination

- Technical data - Page 12  
 Connection diagram - Page 13  
 Dimensions – KG - Page 17  
 – KH - page 19

## Changeover Switch, Centre Off 2 & 4 pole - Base Mounting



- grey handle, padlockable in OFF position
- grey escutcheon plate with "1 - OFF - 2" Legend
- escutcheon suitable for 45mm cut out
- fingerproof terminals – KG41B & KG64B  
– KH16 to KH40
- suitable for DIN rail mounting

le AC-21A	3 Pole		4 Pole (3ph + Sw N <sup>1)</sup> )	
16A	KH16 T902/GBA011 VE2			
20A	KH20 T902/GBA011 VE2			
25A	KH25 T902/GBA011 VE2			
32A	KH32 T902/GBA011 VE2			
40A	KH40 T902/GBA011 VE2		KG41B T904/GBA035 VE2	
63A	KH63 T902/GBA011 VE2		KG64B T904/GBA035 VE2	
80A	KH80 T902/GBA011 VE2		KG80 T904/GBA035 VE2	
100A	KH85 T902/GBA011 VE2		KG100 T904/GBA035 VE2	
125A			KG105 T904/GBA035 VE2	

### Notes

- 1) Switched neutral pole is early make/late break.

- Technical data - Page 12  
 Connection diagram - Page 13  
 Dimensions – KG - Page 18  
 – KH - page 19

## OPTIONAL EXTRAS

### Side Mounted Earth Terminal



Switch Type	Code Number	
KG20A, KG32A, KG20B, KG32B	K0 H052/A	
KG41B,KG64B	K1 H052/B	
KG80-KG105	K2 H052/C	

### Side Mounted Neutral Terminal (Fully Rated)



Switch Type	Code Number	
KG20A, KG32A, KG20B, KG32B	K0 H053/A	
KG41B,KG64B	K1 H053/B	
KG80-KG105	K2 H053/C	

### Side Mounted Auxiliary Contacts



KG switches are also available with a variety of factory fitted auxiliary contacts. Please enquire for details

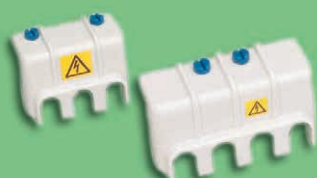
Switch Type	Contact Arrangements	Contact Rating		Code Number	
		AC-21A	AC-15 @ 110-240V		
<b>Panel Mounting E</b>					
KG20A,KG32A	1 n.o. + 1 n.c.	10A	2.5A	K0 H010/A11-E	
KG41B,KG64B	1 n.o. + 1 n.c.	16A	6A	K1 H010/A11-E	
KG80-KG105	1 n.o. + 1 n.c.	16A	6A	K2 H010/A11-E	
KG125,KG160	2 n.o. + 1 n.c.	16A	6A	K3A H010/A21-E	
KG210-KG315	2 n.o. + 1 n.c.	16A	6A	K3 H010/A21-E	
<b>Panel Mounting VE</b>					
KG20B,KG32B	1 n.o. + 1 n.c.	10A	2.5A	K0 H010/A11-VE	
KG41B,KG64B	1 n.o. + 1 n.c.	16A	6A	K1 H010/A11-VE	
KG80-KG105	1 n.o. + 1 n.c.	16A	6A	K2 H010/A11-VE	
KG125-KG160	2 n.o. + 1 n.c.	16A	6A	K3A H010/A21-VE	
KG210-KG315	2 n.o. + 1 n.c.	16A	6A	K3 H010/A21-VE	

### Mounting Tool



Switch Type	Code Number	
For single hole mounting operators	S00 T170 09	

### Terminal Covers



Switch Type	3 main terminals	4 main terminals	
	Code number	Code number	
KG10A	S0 M160/A12 K2	S0 M160/A12 K2	
KG20A&B/KG32A&B	K0 M160/3	K0 M160/4	
KG41B/KG64B	K1 M160/3	K1 M160/4	
KG80/KG105	K2 M160/3	K2 M160/4	
KG125/KG160	K3 M160/32	K3 M160/42	
KG210/KG315	K3 M160/30	K3 M160/40	
KH32/KH40		K1 M160/45 VE <sup>1)</sup>	
KH63/KH85		K1 M160/44 VE <sup>1)</sup>	

#### Notes

1) Suffix VE is applicable for base mounting switches only



## Switch - Disconnectors

Switch Type	Thermal Rating	Insulation Voltage, U <sub>i</sub>	Rated Operating Current & Power								Short Circuit Protection	Terminal Capacity				
			Operational Current, I <sub>e</sub>				Operational Power					Max. fuse gL/gG char.	Single core/stranded wire.	Flexible wire, with sleeve.	Terminal bolt for Cu bar/lug.	
Open rating			AC-15		AC-21A	AC-3		AC-23A		A	mm <sup>2</sup>					mm <sup>2</sup>
A	V		110v	220-240v	380-415v	690v	220-240v, 1 ph.	220-240v	380-415v	220-240v, 1 ph.	220-240v	380-415v				
<b>Switch-disconnectors - selection data in accordance with: IEC 60947, IEC 60204, BS EN 60947, BS EN 60204</b>																
KG10	20	690	-	-	-	20	1.1	2.2	3.7	1.5	3	5.5	20	2.5	1.5	-
KG20	25	690	-	-	-	25	1.5	4	5.5	2.2	5.5	7.5	35	6	4	-
KG32	32	690	-	-	-	32	2.2	5.5	7.5	3	5.5	11	35	6	4	-
KG41	40	690	-	-	-	40	3	7.5	11	4	7.5	15	50	16	10	-
KG64	63	690	-	-	-	63	4	11	18.5	5.5	11	22	63	16	10	-
KG80	80	690	-	-	-	80	7.5	15	22	10	18.5	30	80	50	35	-
KG100	100	690	-	-	-	100	8.5	18.5	30	11	22	37	100	50	35	-
KG105	125	690	-	-	-	125	-	22	37	-	25	45	125	50	35	-
KG125	125	1000 <sup>1)</sup>	-	-	-	125	-	22	37	-	30	45	125	95	70	-
KG160	160	1000 <sup>1)</sup>	-	-	-	160	-	30	45	-	30	55	160	95	70	-
KG210	200	1000 <sup>1)</sup>	-	-	-	200	-	37	55	-	37	75	200	185	120	-
KG250	250	1000 <sup>1)</sup>	-	-	-	250	-	37	55	-	37	90	250	185	120	-
KG315	315	1000 <sup>1)</sup>	-	-	-	315	-	45	75	-	55	110	315	185	120	-
KH16	16	800 <sup>1)</sup>	-	-	-	16	1.5	3	5.5	2	4.5	7.5	25	6	4	-
KH20	20	800 <sup>1)</sup>	-	-	-	20	2	3.5	6.5	2.5	5.5	10	32	6	4	-
KH25	25	800 <sup>1)</sup>	-	-	-	25	2.5	4	7.5	3.3	7	12	35	6	4	-
KH32	32	800 <sup>1)</sup>	-	-	-	32	3	5.5	11	4.2	9	16	35	10	6	-
KH40	40	800 <sup>1)</sup>	-	-	-	40	4.5	7.5	15	5.5	11	20	50	10	6	-
KH63	63	1000 <sup>1)</sup>	-	-	-	63	7.5	11	22	8.5	18.5	30	80	35	25	-
KH80	80	1000 <sup>1)</sup>	-	-	-	80	10	15	30	11	23	40	100	35	25	-
KH85	100	1000 <sup>1)</sup>	-	-	-	100	10	-	-	11	-	-	100	35	25	-
<b>Auxiliary contacts - selection data in accordance with: IEC 60947, BS EN 60947.</b>																
KG10	20	690	6	6	4	20	-	-	-	-	-	-	20	2.5	2.5	-
KG20 & KG32	10	500	2.5	2.5	1.5	10 <sup>2)</sup>	-	-	-	-	-	-	10	1.5	1.5	-
KG41 - KG105	16	690	6	6	3	16	-	-	-	-	-	-	16	2.5	2.5	-
KG125 - KG315	16	690	6	6	3	16	-	-	-	-	-	-	16	2.5	2.5	-

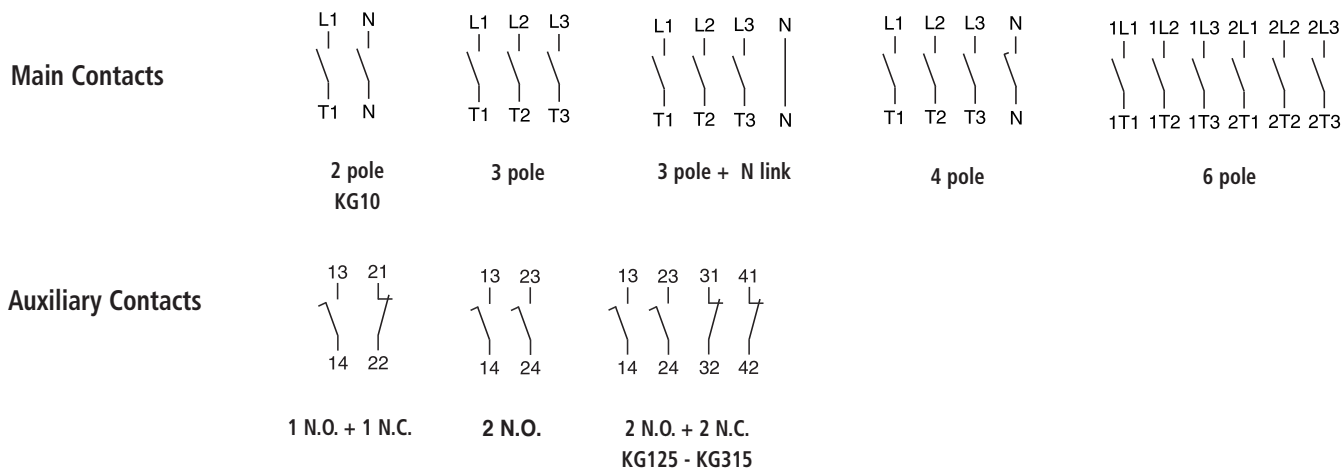
### Switch Selection – Common Rating Data and Utilization Categories

Switch Rating or Utilization Category	Description
Rated insulation voltage, U <sub>i</sub>	Maximum value of operational voltage
Thermal current, I <sub>th</sub>	Maximum value of current that the switch can carry (not switch) when mounted in free air Max. ambient air temperature for stated value:- KG/KH switches : +50°C average over 24 hours with peaks up to 55°C
AC-3	For the selection of switches used for starting of squirrel cage motors and switching off during running
AC-15	For selection of switches to be used for the control of an a.c. electromagnetic load, e.g. contactor coils
AC-21A	For selection of switches required for switching of resistive loads, including moderate overloads
AC-23A	For selection of switches required for switching motor loads or other highly inductive loads
	Normal selection criteria for emergency-off switches for motors and switches used for safety isolation of motors (switch-disconnectors) such as Off/On, main or main/emergency-off switches.

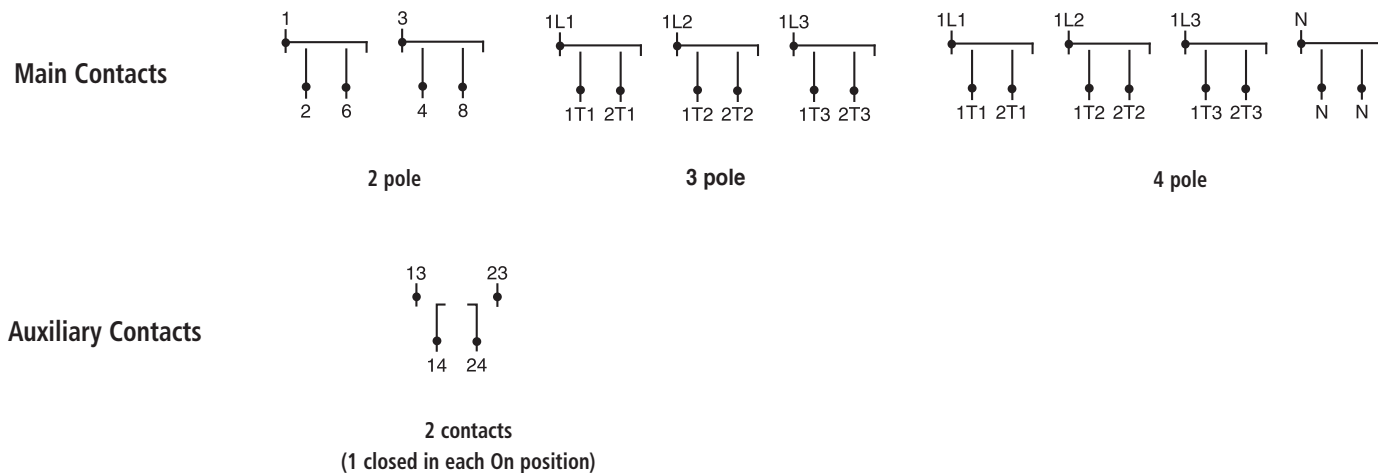
Notes: 1) Only valid for no-load switching (AC-20A) above 690v.  
2) Max 500v

## Switch - Disconnectors

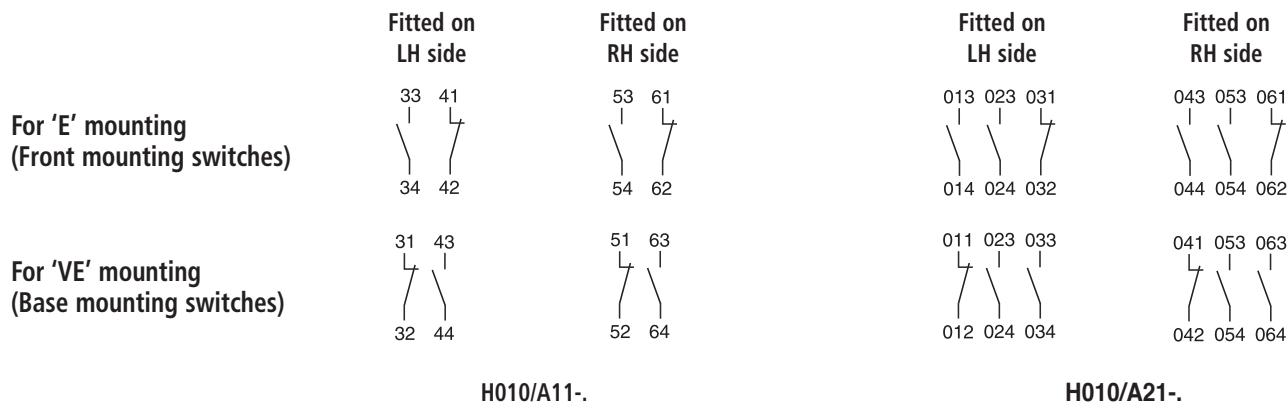
### Off - On



### Changeover with Centre Off



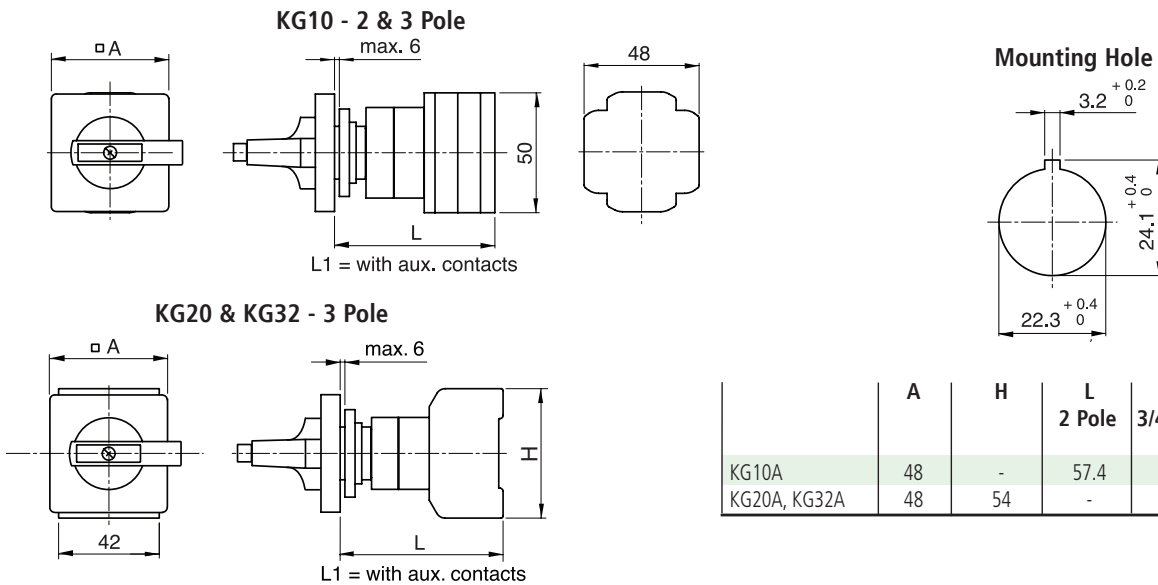
### Side Mounting Auxiliary Contacts





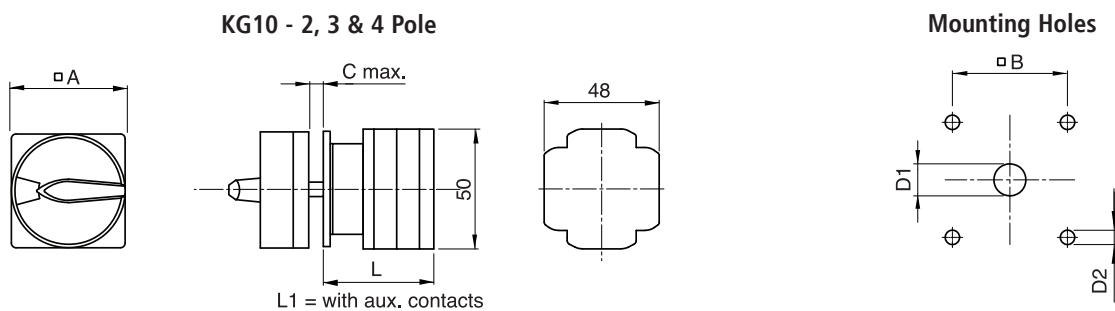
# KG Main / Emergency-Off Switches

## Front Panel Mounting - Single Hole Fixing

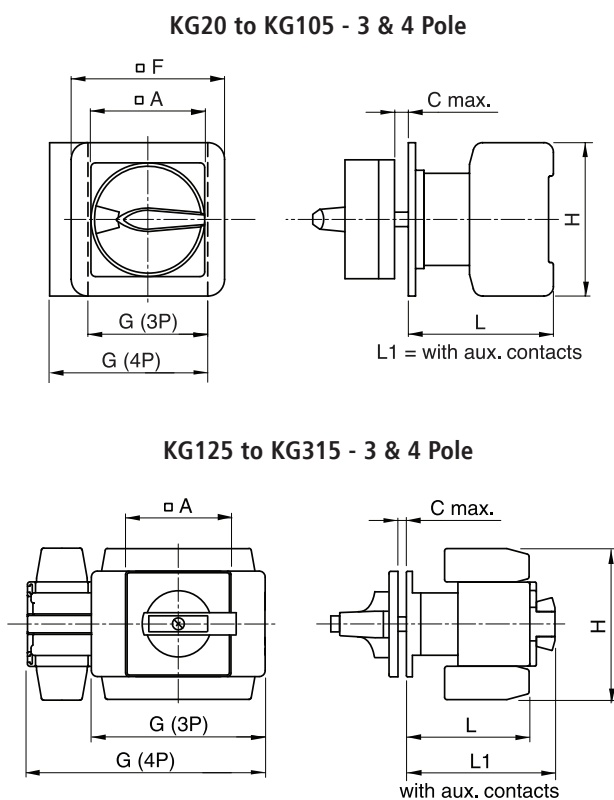


	A	H	L 2 Pole	L 3/4 Pole	L1 3/4 Pole
KG10A	48	-	57.4	66.9	76.4
KG20A, KG32A	48	54	-	68.3	77.3

## Front Panel Mounting - 4 Hole Fixing



	A	B	C	D1	D2	F
KG10A	48	36	4	11 - 15	5	-
KG20A, KG32A	48	36	4	10 - 15	5	48
KG41B, KG64B	64	48	4	10 - 15	5	64
KG80, KG100, KG105	64	48	4	10 - 15	5	70
KG125, KG160	88	68	5.5	13 - 17	6	-
KG210, KG250, KG315	88	68	5.5	13 - 17	6	-



	G 3 Pole	G 4 Pole	H	L	L1
KG10A - 2 pole	-	-	-	38.7	-
KG10A - 3/4 pole	-	-	-	48.2	57.7
KG20A, KG32A	42	55.5	54	53.8	62.8
KG41B, KG64B	50	66	64	60.5	70.5
KG80, KG100	70	92	80	70.6	80.6
KG105	70	92	80	70.6	80.6
KG125, KG160	112	150	108	96	117
KG210, KG250, KG315	145	197.5	126	103	124

'H' dimension does not include the terminal covers. To obtain the dimension across the terminal cover(s) add the following to dimension 'H'.

KG80/100/105: add 26 mm on side that cover is fitted.

KG125/160: add 22.5 mm on side that cover is fitted

KG210/250/315: add 50 mm to 'H' dimension

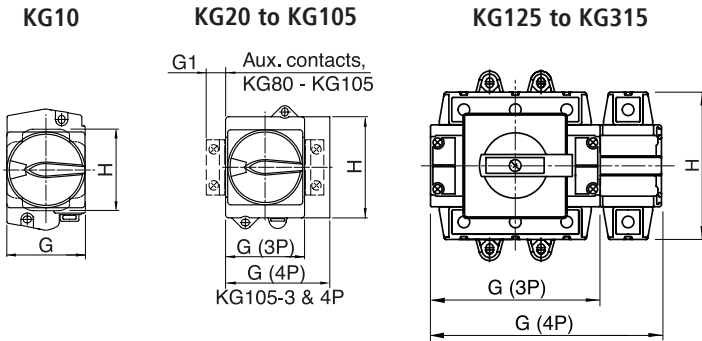
Factory fitted auxiliary contacts are integral with the main switch body – they are not side mounting type.



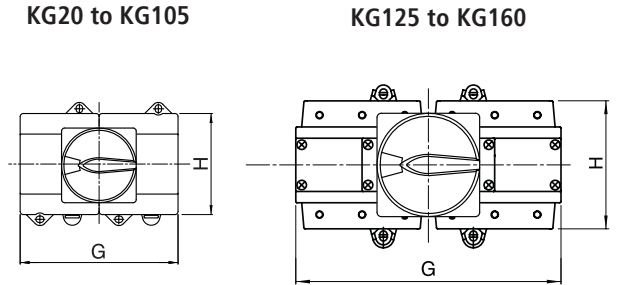
# KG Main / Emergency-Off Switches

## Base Mounting with Door Interlock

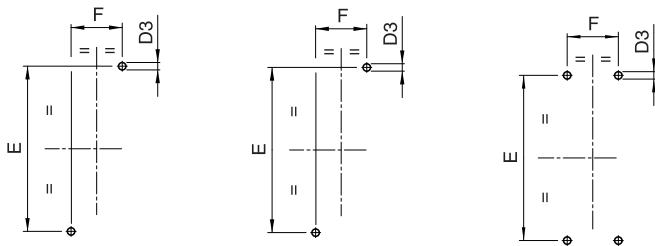
### 3, 3 + N & 4 Pole - plan view



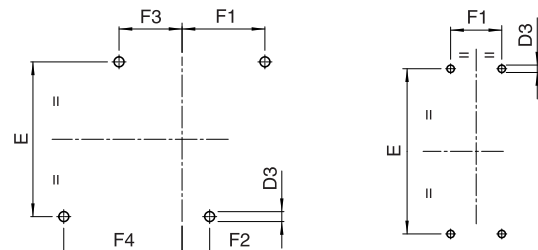
### 6 Pole - plan view



### Base Mounting Holes



### Base Mounting Holes



	D3	E	F	F1	F2	F3	F4	G 3 Pole	G 3 Pole+N	G 4 Pole	G 6 Pole	G1	H
KG10A & B	5	60	22	-	-	-	-	48	-	48	-	-	50
KG20A & B, KG32A & B	5	60	22	32	10	10	32	42	55.5	55.5	84	-	54
KG41B, KG64B	5	70	25	37.5	12.5	12.5	37.5	50	66	66	100	-	64
KG80, KG100	6	90	25	47.5	22.5	22.5	47.5	70	92	92	140	12.2	80
KG105	6	90	25	-	-	-	-	70	92	92	140	12.2	80
KG125, KG160	6.4	120	36	76	-	-	-	112	-	150	224	-	108
KG210, KG250, KG315	6.4	142	44	-	-	-	-	145	-	197.5	-	-	126

'H' dimension does not include the terminal covers. To obtain the dimension across the terminal cover(s) add the following to dimension 'H'.

KG80/100/105: add 26 mm on side that cover is fitted.

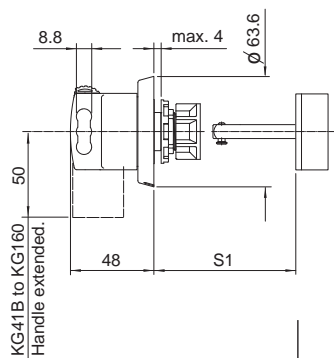
KG125/160: add 22.5 mm on side that cover is fitted

KG210/250/315: add 50 mm to 'H' dimension

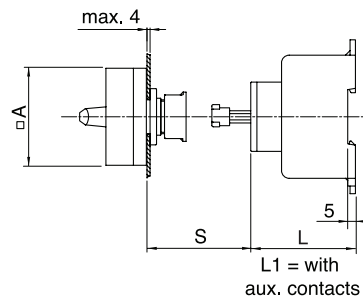
Factory fitted auxiliary contacts are integral with the main switch body – they are not side mounting type.

Note: Handle styles vary - see relevant catalogue section for handle style used.

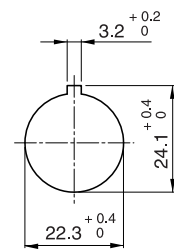
### Defeatable Door Interlock, Single Hole Fixing. 3 & 4 Pole Switches



### Door Interlock, Single Hole Fixing. 3, 3+N, 4 & 6 Pole KG10 to KG105



### Handle Mounting Hole

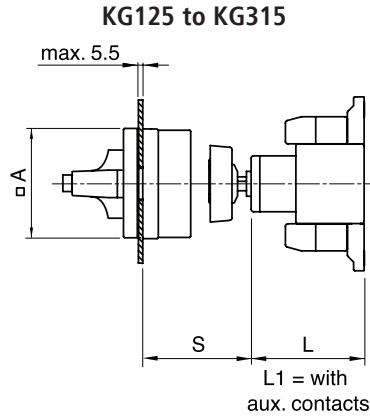
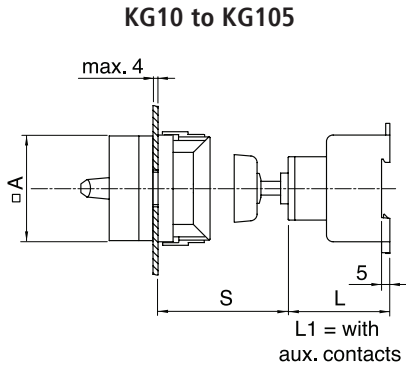


	A	L 3/4 Pole	L1 3/4 Pole	S	S1 3/4 pole	L 6 Pole	L1 6 Pole	S 6 Pole
KG10A	48	49.2	58.7	31-191	-	-	-	-
KG20A, KG32A	48	50	59	31-196	-	-	-	-
KG20B, KG32B	64	50	59	-	47-202mm	57.5	66.5	31-199
KG41B, KG64B	64	61	71	31-192	31-202mm	67	77	31-193
KG80, KG100, KG105	64	68	78	32-189	32-202mm	79.2	89.2	32-189
KG125, KG160	-	91	91	-	34-263mm	-	-	-

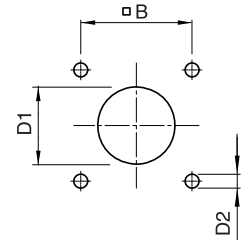
# KG Main / Emergency-Off Switches

## Base Mounting with Door Interlock, Continued

Door Interlock, 4 Hole Fixing. 3, 4 & 6 Pole Switches - side view.

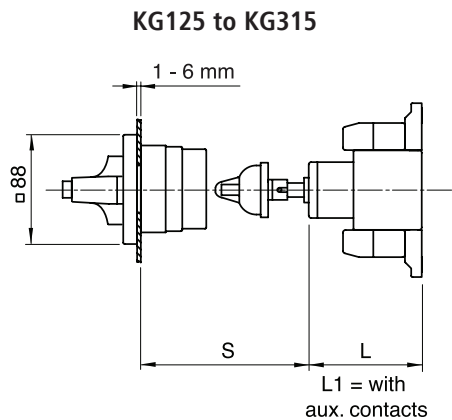
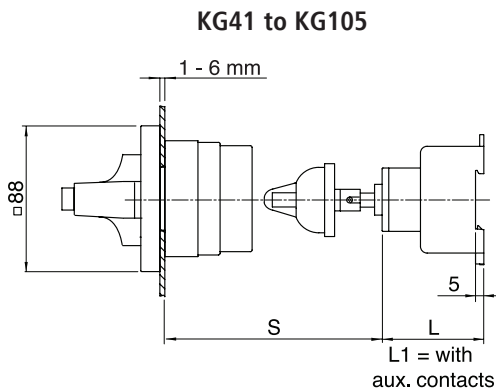


Handle Mounting Holes

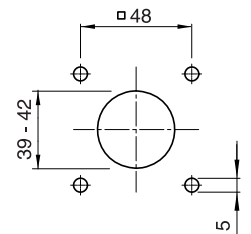


	Shaft Length	A	B	D1	D2	3/4 Pole & 3 Pole + N			6 Pole		
						L	L1	S	L	L1	S
KG10A	200	48	36	18-22	5	49.2	58.7	37-197	-	-	-
KG20A, KG32A	200	48	36	18-22	5	50	59	37-202	-	-	-
KG20B, KG32B	200	64	48	19-22	5	-	-	-	57.5	66.5	37-205
KG41B, KG64B	200	64	48	19-22	5	61	71	35-200	67	77	35-201
KG80, KG100, KG105	200	64	48	19-22	5	68	78	36-197	79.2	89.2	36-197
KG125, KG160	300	88	68	26-30	6	91	91	45-306	93	93	45-306
KG210, KG250, KG315	300	88	68	26-30	6	98	98	45-306	-	-	-

Defeatable Door Interlock, 4 Hole Fixing. 3, 4 & 6 Pole Switches - side view.



Handle Mounting Holes



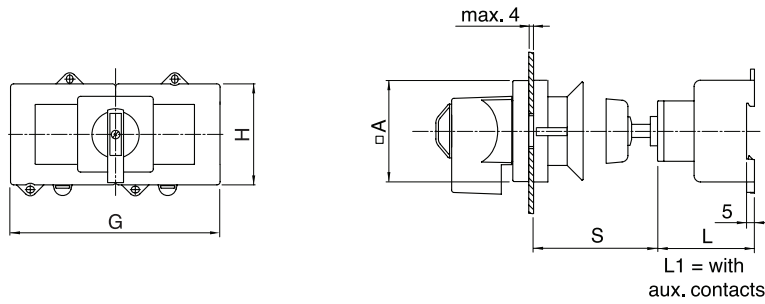
	L	L1	S	L	L1	S
	3/4 Pole	3/4 Pole	3/4 Pole	6 Pole	6 Pole	6 Pole
KG41B, KG64B	61	71	72-224	67	77	72-225
KG80, KG100, KG105	68	78	73-221	79.2	89.2	73-221
KG125, KG160	91	91	83-336	93	93	83-336
KG210, KG250, KG315	98	98	83-336	-	-	-



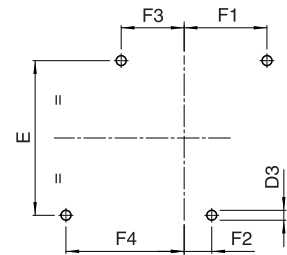
# KG Changeover Switches

## Base Mounting with Door Interlock, 4 Hole Fixing

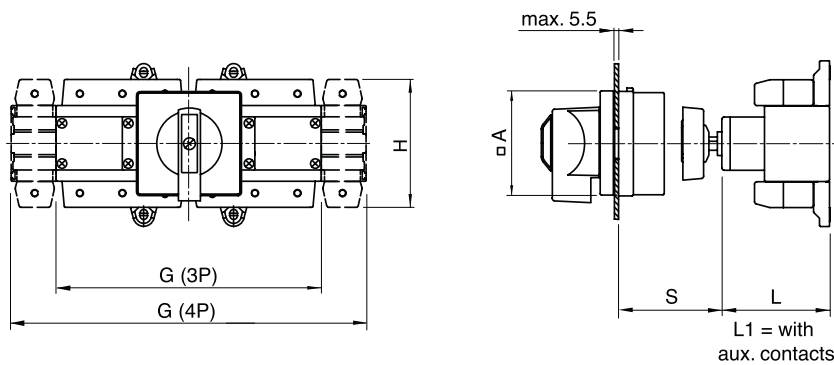
KG20 to KG105 - 3 & 4 Pole



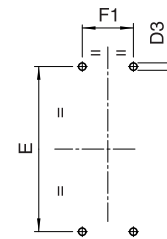
Base Mounting Holes



KG125 to KG160 - 3 & 4 Pole

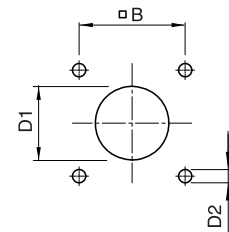


Base Mounting Holes



	A	B	D1	D2	D3	E	F1	F2	F3 3 Pole
KG20B, KG32B	64	48	19 - 22	5	5	60	32	10	10
KG41B, KG64B	64	48	19 - 22	5	5	70	37.5	12.5	12.5
KG80, KG100	88	48	19 - 22	5	6	90	47.5	22.5	22.5
KG105	88	48	19 - 22	5	6	90	47.5	22.5	-
KG125, KG160	88	68	26 - 30	6	6.4	120	76	-	-

Handle Mounting Holes



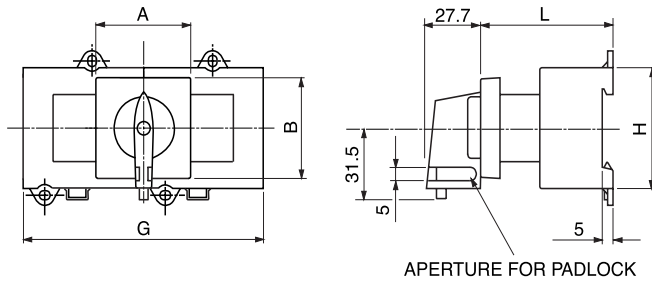
	F4 3 Pole	F3 4 Pole	F4 4 Pole	G 3 Pole	G 4 Pole	H	L	L1	S
KG20B, KG32B	32	23.5	45.5	84	111	54	57.5	66.5	37-125
KG41B, KG64B	37.5	28.5	53.5	100	132	64	67	77	35-131
KG80, KG100	47.5	44.5	69.5	140	184	80	79.2	89.2	36-127
KG105	-	44.5	69.5	140	184	80	79.2	89.2	36-127
KG125, KG160	-	-	-	224	300	108	93	93	45-196

Factory fitted auxiliary contacts are integral with the main switch body – they are not side mounting type.

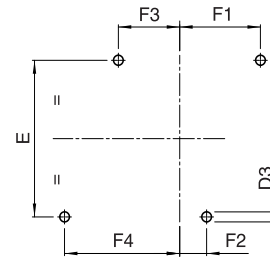
# KG Changeover Switches

## Base Mounting - For 45 mm Installation Cut - Out

KG41 to KG105 - 4 Pole



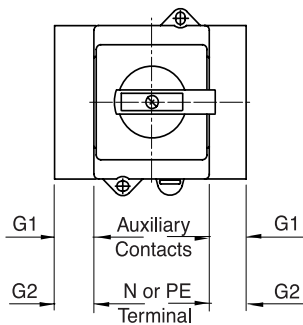
Mounting Holes



	A	B	D3	E	F1	F2	F3	F4	G	H	L
KG41B, KG64B	105.4	45.4	5	70	37.5	12.5	28.5	53.5	132	64	67.5
KG80, KG100, KG105	70	45	6	90	47.5	22.5	44.5	69.5	184	80	81.2

# KG Switch Options

## Side Mounting Modules

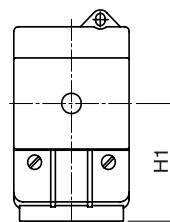


	G1	G2
KG20A & B, KG32A & B	10	13.5
KG41B, KG64B	11	16
KG80, KG100, KG105	11	22
KG125, KG160	14	38
KG210, KG250, KG315	14	52.5

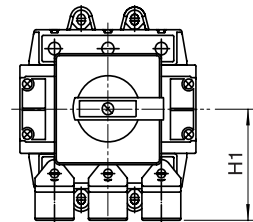
**Note:**  
KG125 to KG315 4 pole switches cannot have additional modules fitted on the side adjacent to the 4th pole (switched neutral).

## Terminal Covers

KG10 to KG105



KG125 to KG315



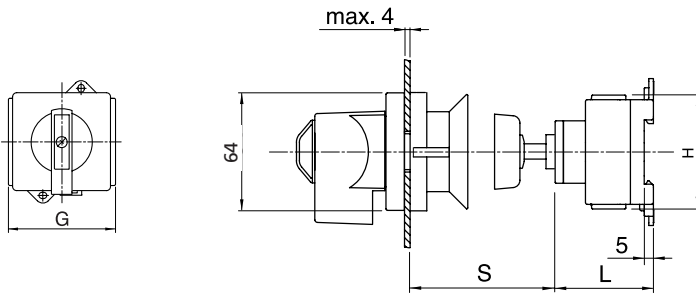
	H1
KG10A & B	32
KG20A & B, KG32A & B	47
KG41B, KG64B	49
KG80, KG100, KG105	66
KG125, KG160	76.2
KG210, KG250, KG315	88



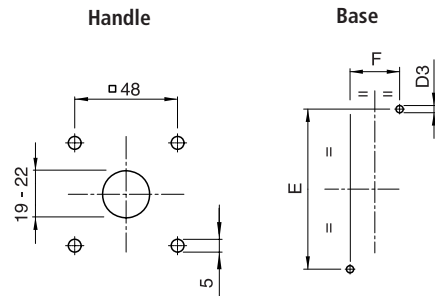
# KH Changeover Switches

## Base Mounting With Door Interlock, 4 Hole Fixing

KH16 to KH85 - 2 Pole



Mounting Holes

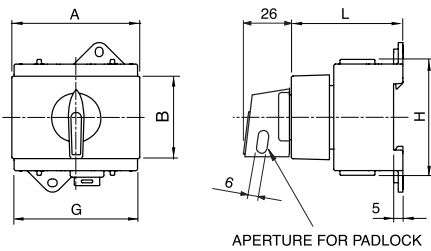


'H' dimension for KH63/80/85 does not include the terminal cover. To obtain the dimension across the terminal cover(s) add 23.5 mm on side that cover is fitted.

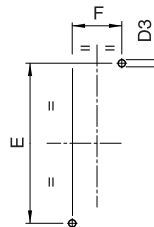
	D3	E	F	G	H	L	S
KH16, KH20, KH25	5	60	22	60	56	47	37-122
KH32, KH40	5	70	25	70	62	53.5	39-132
KH63, KH80, KH85	6	90	25	86	90	59.5	39-132

## Base Mounting - For 45 mm Installation Cut-Out

KH16 to KH85 - 2 Pole



Mounting Holes

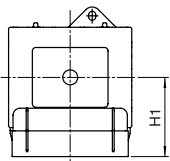


	A	B	D3	E
KH16, KH20, KH25	43.7	45.4	5	60
KH32, KH40	70.4	45.4	5	70
KH63, KH80, KH85	70.4	45.4	6	90

	F	G	H	L
KH16, KH20, KH25	22	60	56	58.5
KH32, KH40	25	70	62	59.7
KH63, KH80, KH85	25	86	90	66.7

# KH Switch Options

## Terminal Covers



	H1
KH32, KH40	45
KH63, KH80, KH85	68.5

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