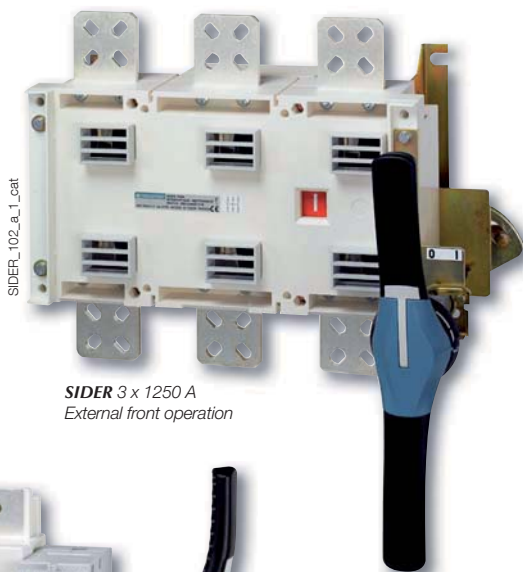




# SIDER

Load break switches for power distribution  
with visible breaking from 125 to 1600 A

Load break  
switches



SIDER\_102\_a\_1\_cat  
**SIDER 3 x 1250 A**  
External front operation



SIDER\_089\_b\_1\_cat  
**SIDER ND 4 x 500 A**  
External right side operation

## The solution for

- > Main switchboards.
- > Distribution panels.
- > Safety enclosures for emergency load break.
- > Normal atmosphere.
- > Explosive atmosphere.



## Strong points

- > Safety thanks to visible breaking.
- > Modular product.

## Function

**SIDER and SIDER ND** are manually operated 3 or 4 pole load break switches with visible breaking. They make and break under load conditions and provide safety isolation for any low voltage circuit.

## Advantages

### Safety thanks to visible breaking

Visible breaking and positive break indication ensure safe switching. The user can assess the condition of the device either during a preventive check or before an operation. The SIDER and SIDER ND load break switches are particularly suited for use in safety enclosures for explosive atmospheres (zone 21 and 22). The addition of a mechanical flag indicator, directly connected to the device's breaking system (SIDER only), provides reliable position information on the front of the enclosure.

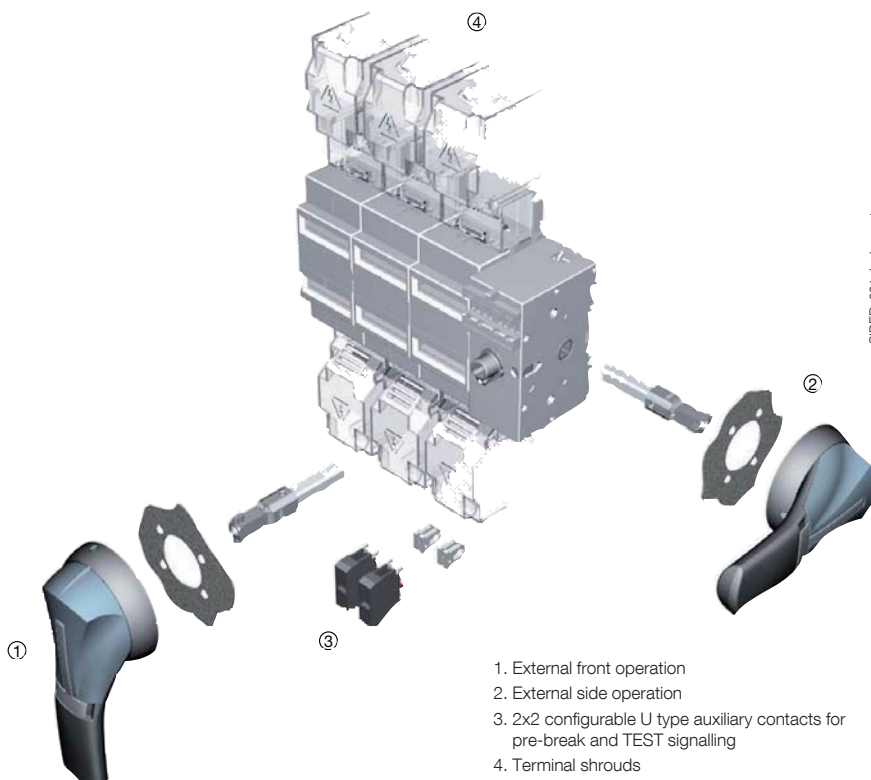
### Modular product

The modular design of the SIDER ND allows the product to be easily adapted to suit your needs:

- mixed ratings,
- defining the number of poles,
- centring or offsetting the operating mechanism.

## Functional diagram

For further details see the installation instructions supplied with the product.



SIDER\_091\_b\_1\_x\_cat

1. External front operation
2. External side operation
3. 2x2 configurable U type auxiliary contacts for pre-break and TEST signalling
4. Terminal shrouds

## References

## Front operation

Rating (A)	No. of poles	Switch body Direct operation	Switch body External operation	Direct handle	External handle	Shaft for external handle	Auxiliary contact				
ND 125 A	3 P	2915 <b>3012</b>	2921 <b>3012</b>	Black 3629 <b>7901</b> <sup>(1)</sup>	S2 type Black IP55 1421 <b>2111</b> <sup>(1)</sup> Black IP65 1423 <b>2111</b> Red IP65 1424 <b>2111</b>	200 mm 1400 <b>1020</b> 320 mm 1400 1032 <sup>(1)</sup> 500 mm 1400 <b>1050</b>	1 <sup>st</sup> contact NO/NC 3999 <b>0021</b> <sup>(2)(3)</sup> 2 contacts NO/NC 3999 <b>0022</b> <sup>(2)(3)</sup> 1 contact NC 3999 <b>0701</b> <sup>(4)(5)</sup> 1 contact NO 3999 <b>0702</b> <sup>(4)(5)</sup>				
	4 P	2915 <b>4012</b>	2921 <b>4012</b>								
ND 200 A	3 P	2915 <b>3021</b>	2921 <b>3020</b>								
	4 P	2915 <b>4021</b>	2921 <b>4020</b>								
ND 250 A	3 P	2915 <b>3025</b>	2921 <b>3025</b>								
	4 P	2915 <b>4025</b>	2921 <b>4025</b>								
ND 315 A	3 P	2915 <b>3031</b>	2921 <b>3031</b>								
	4 P	2915 <b>4031</b>	2921 <b>4031</b>								
ND 400 A	3 P	2915 <b>3041</b>	2921 <b>3041</b>								
	4 P	2915 <b>4041</b>	2921 <b>4041</b>								
ND 500 A	3 P	2915 <b>3051</b>	2921 <b>3051</b>								
	4 P	2915 <b>4051</b>	2921 <b>4051</b>								
630 A	3 P	2900 <b>3063</b>	2900 <b>3063</b>					Black 2799 <b>7012</b> <sup>(1)</sup> Red 2799 <b>7013</b>	S4 type Black IP65 1443 <b>3111</b> <sup>(1)</sup> Red / Yellow IP65 1444 <b>3111</b>	200 mm 1401 1520 320 mm 1401 <b>1532</b> <sup>(1)</sup> 400 mm 1401 <b>1540</b>	1 <sup>st</sup> contact NO/NC 2799 <b>0001</b> 2 <sup>nd</sup> contact NO/NC 2799 <b>0002</b>
	4 P	2900 <b>4063</b>	2900 <b>4063</b>								
800 A	3 P	2900 <b>3080</b>	2900 <b>3080</b>								
	4 P	2900 <b>4080</b>	2900 <b>4080</b>								
1250 A	3 P	2900 <b>3120</b>	2900 <b>3120</b>								
	4 P	2900 <b>4120</b>	2900 <b>4120</b>								
1600 A	3 P	2900 <b>3160</b>	2900 <b>3160</b>								
	4 P	2900 <b>4160</b>	2900 <b>4160</b>								

(1) Standard.

(2) Auxiliary signal contact - Type S.

(3) For direct operation.

(4) For external operation.

(5) Auxiliary signal contact - Type U.

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## References (continued)

### Side operation

Rating (A)	No. of poles	Switch body Direct operation	Switch body External right side operation	Direct handle	External handle	Shaft for external handle	Auxiliary contact
ND 125 A	3 P	2915 <b>3012</b>	2921 <b>3012</b>	Black 3629 <b>7901</b> <sup>(1)</sup>	S2 type Black IP55 1425 <b>2111</b> <sup>(1)</sup> Black IP65 1427 <b>2111</b> Red / Yellow IP65 1428 <b>2111</b>	200 mm 1400 <b>1020</b> <sup>(1)</sup>	1 <sup>st</sup> contact NO/NC 3999 <b>0021</b> <sup>(2)(3)</sup> 2 contacts NO/NC 3999 <b>0022</b> <sup>(2)(3)</sup> 1 contact NC 3999 <b>0701</b> <sup>(4)(6)</sup> 1 contact NO 3999 <b>0702</b> <sup>(4)(6)</sup>
	4 P	2915 <b>4012</b>	2921 <b>4012</b>				
ND 200 A	3 P	2915 <b>3021</b>	2921 <b>3020</b>				
	4 P	2915 <b>4021</b>	2921 <b>4020</b>				
ND 250 A	3 P	2915 <b>3025</b>	2921 <b>3025</b>				
	4 P	2915 <b>4025</b>	2921 <b>4025</b>				
ND 315 A	3 P	2915 <b>3031</b>	2921 <b>3031</b>				
	4 P	2915 <b>4031</b>	2921 <b>4031</b>				
ND 400 A	3 P	2915 <b>3041</b>	2921 <b>3041</b>				
	4 P	2915 <b>4041</b>	2921 <b>4041</b>				
ND 500 A	3 P	2915 <b>3051</b>	2921 <b>3051</b>				
	4 P	2915 <b>4051</b>	2921 <b>4051</b>				
630 A	3 P	2905 <b>3063</b>	2905 <b>3063</b>	Black 2799 <b>7052</b> <sup>(1)</sup> Conversion kit 2799 <b>7070</b> <sup>(5)</sup> Red 2799 <b>7053</b> Conversion kit 2799 <b>7070</b> <sup>(5)</sup>	S3 type Black IP65 1437 <b>3111</b> <sup>(1)</sup> Red / Yellow IP65 1438 <b>3111</b>	200 mm 1404 <b>1520</b> <sup>(1)</sup>	1 <sup>st</sup> contact NO/NC 2799 <b>0011</b> 2 <sup>nd</sup> contact NO/NC 2799 <b>0012</b>
	4 P	2905 <b>4063</b>	2905 <b>4063</b>				
800 A	3 P	2905 <b>3080</b>	2905 <b>3080</b>				
	4 P	2905 <b>4080</b>	2905 <b>4080</b>				
1250 A	3 P	2905 <b>3120</b>	2905 <b>3120</b>				
	4 P	2905 <b>4120</b>	2905 <b>4120</b>				
1600 A	3 P	2905 <b>3160</b>	2905 <b>3160</b>				
	4 P	2905 <b>4160</b>	2905 <b>4160</b>				

(1) Standard.

(2) Auxiliary signal contact - Type S.

(3) For direct operation.

(4) For external operation.

(5) Conversion kit necessary for any direct operation.

(6) Auxiliary signal contact - Type U.

## Accessories

### Direct operation handle

For front operation		
Rating (A)	Handle colour	Reference
ND 125 ... ND 500	Black	3629 <b>7901</b>
630 ... 1600	Black	2799 <b>7012<sup>(1)</sup></b>
630 ... 1600	Red	2799 <b>7013</b>

(1) Standard.

For side operation		
Rating (A)	Handle colour	Reference
ND 125 ... ND 500	Black	3629 <b>7901</b>
630 ... 1600	Black	2799 <b>7052</b>
630 ... 1600	Red	2799 <b>7053</b>

Direct side operation escutcheon		
Rating (A)	External IP	Reference
630 ... 1600	IP54	2799 <b>7070<sup>(1)</sup></b>

(1) To be ordered together with the direct side operation handles.



### Door interlocked external operation

For front operation				
Rating (A)	Handle colour	Handle	External IP <sup>(1)</sup>	Reference
ND 125 ... ND 500	Black	S2 type	IP55	1421 <b>2111<sup>(2)</sup></b>
ND 125 ... ND 500	Black	S2 type	IP65	1423 <b>2111</b>
ND 125 ... ND 500	Red	S2 type	IP65	1424 <b>2111</b>
630 ... 1600	Black	S4 type	IP65	1443 <b>3111<sup>(2)</sup></b>
630 ... 1600	Red	S4 type	IP65	1444 <b>3111</b>

(1) IP: protection degree according to IEC 60529 standard.

(2) Standard.

For right side operation				
Rating (A)	Handle colour	Handle	External IP <sup>(1)</sup>	Reference
ND 125 ... ND 500	Black	S2 type	IP55	1425 <b>2111</b>
ND 125 ... ND 500	Red	S2 type	IP65	1428 <b>2111</b>
630 ... 1600	Black	S3 type	IP65	1437 <b>3111</b>
630 ... 1600	Red	S3 type	IP65	1438 <b>3111</b>

(1) IP: protection degree according to IEC 60529 standard.



### Shaft guide for external operation

#### Use

To guide the shaft extension into the external handle. This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm.

Required for shaft lengths over 320 mm.

Description	Reference
Shaft guide	1429 <b>0000</b>



### S type handle adapter

#### Use

Enables S type handles to be fitted in place of existing older style Socomec handles. Adapter can also be utilised as a spacer to increase the distance between the panel door and the handle lever.

#### Dimensions

Adds 12 mm to the depth.

Handle colour	To be ordered in multiples of	External IP <sup>(1)</sup>	Reference
Black	1	IP65	1493 <b>0000</b>

(1) IP: protection degree according to IEC 60529 standard.



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## Accessories (continued)

### Alternative S type handle cover colours

#### Use

For single lever handles S1, S2 and S3 types and double lever handle, S4 type.

Other colours: Please consult us.



Handle colour	To be ordered in multiples of	Handle	Reference
Light grey	50	Type S1, S2	14010001
Dark grey	50	Type S1, S2	1401 0011
Light grey	50	S4 type	1401 0031
Dark grey	50	S4 type	1401 0041

### Shaft for external handle

#### Use

Standard lengths:

- 80 mm,
- 200 mm,
- 320 mm,

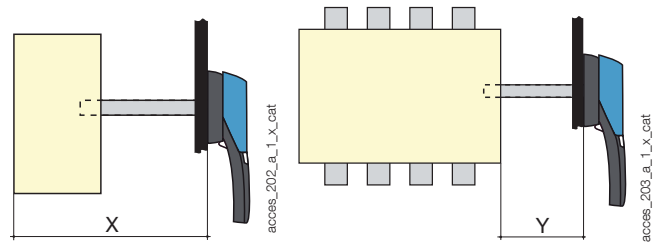
- 400 mm,
- 500 mm.

Other lengths: Please consult us.



For front operation				
Rating (A)	Dimension X (mm)	Shaft length (mm)	Type	Reference
ND 125 ... ND 500	95 ... 230	200 mm	10 x 10	1400 1020
ND 125 ... ND 500	95 ... 350	320 mm	10 x 10	1400 1032
ND 125 ... ND 500	95 ... 530	500 mm	10 x 10	1400 1050
630 ... 1600	295 ... 555	200 mm	15 x 12	1401 1520
630 ... 1600	295 ... 675	320 mm	15 x 12	1401 1532
630 ... 1600	295 ... 755	400 mm	15 x 12	1401 1540

For side operation				
Rating (A)	Dimension Y (mm)	Shaft length (mm)	Type	Reference
ND 125 ... ND 500	20 ... 110	80 mm	10 x 10	included
ND 125 ... ND 500	20 ... 230	200 mm	10 x 10	1400 1020
630 ... 1600	98 ... 258	200 mm	15 x 12	1404 1520



### Auxiliary contacts for pre-break and signalling - Front operation

#### Use

Pre-break and signalling of positions 0 and I:

- 1 to 2 NO/NC auxiliary contacts,
- 1 to 4 NO or NC auxiliary contacts,
- 1 to 4 NO+NC auxiliary contacts.

#### Connection to the control circuit

6.35 mm fast-on terminal.

#### Characteristics

NO/NC A/C: IP2X.

#### Electrical characteristics

30 000 operations.



NO/NC contact		
Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 <sup>st</sup>	3999 0021 <sup>(1)</sup>
ND 125 ... ND 500	2 <sup>nd</sup>	3999 0022 <sup>(1)</sup>
630 ... 1600	1 <sup>st</sup>	2799 0001
630 ... 1600	2 <sup>nd</sup>	2799 0002

(1) For direct operation.

NC contact		
Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 to 4	3999 0701 <sup>(1)</sup>

(1) For external operation.

NO contact		
Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 to 4	3999 0702 <sup>(1)</sup>

(1) For external operation.

NO + NC contact		
Rating (A)	Position AC	Reference
630 ... 1600	1	2799 0005

Low level NO/NC auxiliary contacts		
Rating (A)	Position AC	Reference
630 ... 1600	1	2699 0101

#### Characteristics

Rating (A)	Contact type	Current nominal (A)	Operating current I <sub>e</sub> (A)			
			250 VAC AC-13	400 VAC AC-13	24 VDC DC-13	48 VDC DC-13
ND 125 ... ND 500	changeover NO/NC	16		3	12	2
ND 125 ... ND 500	NC	10	6	4	5	3
ND 125 ... ND 500	NO	10	6	4	5	3
630 ... 1600	changeover NO/NC	16	12	8	14	6
630 ... 1600	NO + NC	15	10	6	15	12

## Auxiliary contacts for pre-break and signalling - Right side operation

### Use

Pre-break and signalling of positions 0 and I:  
- 1 to 2 NO/NC auxiliary contacts,  
- 1 to 4 NO or NC auxiliary contacts.

### Connection to the control circuit

By 6.35 mm fast-on terminal.

### Characteristics

NO/NC A/C: IP2X.

### Electrical characteristics

30 000 operations.



NO/NC contact		
Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 <sup>st</sup>	3999 0021
ND 125 ... ND 500	2	3999 0022
630 ... 1600	1 <sup>st</sup>	2799 0011
630 ... 1600	2 <sup>nd</sup>	2799 0012

NC contact		
Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 to 4	3999 0701

NO contact		
Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 to 4	3999 0702

Low level NO/NC auxiliary contacts		
Rating (A)	Position AC	Reference
630 ... 1600	1	2799 0111

### Characteristics

Rating (A)	Contact type	Current nominal (A)	Operating current I <sub>e</sub> (A)			
			250 VAC AC-13	400 VAC AC-13	24 VDC DC-13	48 VDC DC-13
ND 125 ... ND 500	changeover NO/NC	16		3	12	2
ND 125 ... ND 500	NC	10	6	4	5	3
ND 125 ... ND 500	NO	10	6	4	5	3
630 ... 1600	changeover NO/NC	16	12	8	14	6

## S type auxiliary contacts for signalisation - Front and right side operation

### Use

Signalling of positions 0 and I,  
1 to 4 NO+NC auxiliary contacts.

### Connection to the control circuit

By terminals with a max. cross-section of 10 mm<sup>2</sup>.

### Electrical principle

The NO+NC S-type auxiliary contacts can be configured as 2 NO or 2 NC.

### Electrical characteristics

30 000 operations.



NO+NC contact		
Rating (A)	Position AC	Reference
ND 125 ... ND 500	1	3999 0041
ND 125 ... ND 500	2	3999 0042
ND 125 ... ND 500	3	3999 0043
ND 125 ... ND 500	4	3999 0044

### Characteristics

Rating (A)	Contact type	Current nominal (A)	Operating current I <sub>e</sub> (A)	
			250 VAC AC-13	400 VAC AC-13
ND 125 ... ND 500	NO + NC	20	10	8

## Terminal shrouds

### Use

Top or bottom protection against direct contact with terminals or connection parts.

Perforations allow remote thermographic inspection without the need to remove the shrouds.

### Advantage

Rating (A)	No. of poles	Position	Reference
ND 125 ... ND 200	3 P	top or bottom	3998 3016 <sup>(1)</sup>
ND 125 ... ND 200	4 P	top or bottom	3998 4016 <sup>(2)</sup>
ND 250 ... ND 500	3 P	top or bottom	3998 3025 <sup>(1)</sup>
ND 250 ... ND 500	4 P	top or bottom	3998 4025 <sup>(2)</sup>



(1) Reference composed of 3 pieces.

(2) Reference composed of 4 pieces.



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## Accessories (continued)

### Terminal screens

#### Use

Top or bottom protection against direct contact with terminals or connection parts.

Rating (A)	No. of poles	Position	Reference
630 ... 800	3 P	top or bottom	2998 <b>3080</b>
630 ... 800	4 P	top or bottom	2998 <b>4080</b>
1250 ... 1600	3 P	top or bottom	2998 <b>3120</b>
1250 ... 1600	4 P	top or bottom	2998 <b>4120</b>



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### Cage terminals

#### Use

Connection of bare copper cables onto the terminals (without lugs).

#### Connections

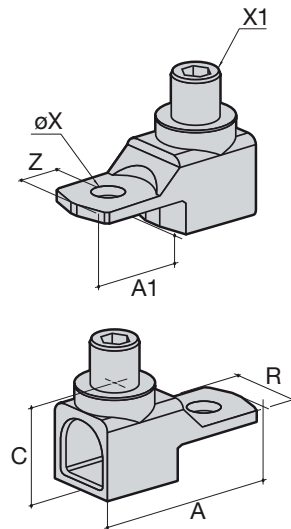
Rating (A)	Flexible cable cross-section (mm <sup>2</sup> )	Rigid cable cross-section (mm <sup>2</sup> )	Flexible bar width (mm)	Stripped over (mm)
ND 125	16 ... 95	16 ... 95	13	22
ND 200 ... ND 250	16 ... 185	16 ... 185	18	27
ND 315 ... ND 400	50 ... 240	50 ... 300	20	34
ND 500 ... 630	70 ... 300	70 ... 300	24	34



access\_063\_a\_1\_cat

#### Dimensions

Rating (A)	A	A1	C	R	ØX	X1	Z
ND 125	47.5	22.5	25	20	8.5	M12	10
ND 200 ... ND 250	62	31.5	31.5	25	10.5	M16	14
ND 315 ... ND 400	71.5	32	38	32	10.5	M20	15
ND 500 ... 630	76.5	37	38	40	12.5	M20	15



access\_091\_a\_1\_x\_cat

access\_092\_a\_1\_x\_cat

Rating (A)	No. of poles	Reference
ND 125	3 P	5400 <b>3016</b>
ND 125	4 P	5400 <b>4016</b>
ND 200 ... ND 250	3 P	5400 <b>3025</b>
ND 200 ... ND 250	4 P	5400 <b>4025</b>
ND 315 ... ND 400	3 P	5400 <b>3040</b>
ND 315 ... ND 400	4 P	5400 <b>4040</b>
ND 500 ... 630	3 P	5400 <b>3063</b>
ND 500 ... 630	4 P	5400 <b>4063</b>

### Inter-phase barrier

#### Use

Safety isolation between the terminals, essential for use at 690 VAC or in a polluted or dusty atmosphere.

Rating (A)	No. of poles	Reference
630 ... 1600	3 P	2998 <b>0003</b>
630 ... 1600	4 P	2998 <b>0004</b>



access\_006\_a\_1\_cat

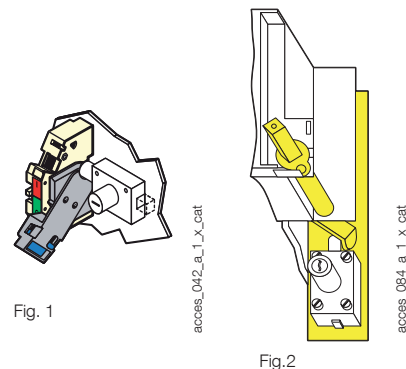
## Handle key interlocking accessories

### Use

Locking in position 0 of the front or side operation handle:

- using RONIS EL11AP lock in direct right-side operation (Fig. 1),
- using RONIS EL11AP lock in direct front operation (Fig. 2),

- using RONIS EL11AP or CASTELL type K-type lock in external front operation (Fig. 3),
- using RONIS EL11AP lock in external right-side operation,
- using CASTELL FS-type in external front operation (Fig. 4).



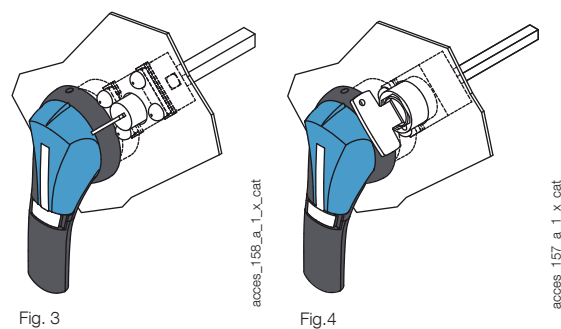
Locking using RONIS EL11AP lock (not supplied)			
Rating (A)	Operation	Figure	Reference
ND 125 ... ND 500	front direct	1	3629 <b>7913</b> <sup>(1)</sup>
630 ... 1600	front direct	2	2799 <b>7007</b> <sup>(2)</sup>
ND 125 ... 1600	external front	3	1499 <b>7701</b>
ND 125 ... ND 500	Direct side operation	1	3629 <b>7913</b> <sup>(1)</sup>
ND 125 ... 1600	External right side	3	1499 <b>7701</b>

(1) Handle included.

(2) Factory mounting only.

Locking using type K CASTELL lock (not supplied)			
Rating (A)	Operation	Figure	Reference
ND 125 ... ND 500	external front	3	1499 <b>7702</b>

Locking using type FS CASTELL lock (not supplied)			
Rating (A)	Operation	Figure	Reference
ND 125 ND 500	external front	4	1499 <b>7703</b>



## Other specific accessories

- Mechanical coupling device for combining switches of the same or different ratings.
- Mechanical interlocking device.
- Mechanical plates and escutcheon for standard systems.



## Characteristics according to IEC 60947-3

### ND 125 to ND 500 A

Thermal current $I_{th}$ at 40°C	ND 125 A	ND 200 A	ND 250 A	ND 315 A	ND 400 A	ND 500 A
Rated insulation voltage $U_i$ (V)	800	800	800	800	800	800
Rated impulse withstand voltage $U_{imp}$ (kV)	8	8	8	8	8	8

### Rated operational currents $I_e$ (A)

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-20 A / AC-20 B	125/125	200/200	250/250	315/315	400/400	500/500
415 VAC	AC-21 A / AC-21 B	125/125	200/200	250/250	315/315	400/400	500/500
415 VAC	AC-22 A / AC-22 B	125/125	200/200	250/250	315/315	400/400	500/500
415 VAC	AC-23 A / AC-23 B	125/125	200/200	250/250	315/315	400/400	500/500
500 VAC	AC-20 A / AC-20 B	125/125	200/200	250/250	315/315	400/400	500/500
500 VAC	AC-21 A / AC-21 B	125/125	160/160	250/250	250/250	400/400	500/500
500 VAC	AC-22 A / AC-22 B	125/125	160/160	250/250	250/250	400/400	500/500
500 VAC	AC-23 A / AC-23 B	125/125	160/160	250/250	250/250	315/315	315/315
690 VAC <sup>(2)</sup>	AC-20 A / AC-20 B	125/125	200/200	250/250	315/315	400/400	500/500
690 VAC <sup>(2)</sup>	AC-21 A / AC-21 B	125/125	160/160	250/250	315/315	400/400	500/500
690 VAC <sup>(2)</sup>	AC-22 A / AC-22 B	125/125	160/160	250/250	315/315	400/400	500/500
690 VAC <sup>(2)</sup>	AC-23 A / AC-23 B	125/125	160/160	250/250	250/250	315/315	315/315
220 VDC	DC-20 A / DC-20 B	125/125	200/200	250/250	315/315	400/400	500/500
220 VDC	DC-21 A / DC-21 B	125/125	160/160	250/250	250/250	315/315 <sup>(3)</sup>	315/315 <sup>(3)</sup>
220 VDC	DC-22 A / DC-22 B	125/125	160/160	250/250	250/250	315/315 <sup>(3)</sup>	315/315 <sup>(3)</sup>
220 VDC	DC-23 A / DC-23 B	125/125	125/125	200/200	200/200	200/315 <sup>(3)</sup>	200/315 <sup>(3)</sup>
440 VDC	DC-20 A / DC-20 B	125/125	200/200	250/250	315/315	400/400	500/500
440 VDC	DC-21 A / DC-21 B	125/125 <sup>(4)</sup>	160/160 <sup>(4)</sup>	250/250 <sup>(4)</sup>	250/250 <sup>(4)</sup>	315/315 <sup>(4)</sup>	315/315 <sup>(4)</sup>
440 VDC	DC-22 A / DC-22 B	125/125 <sup>(4)</sup>	160/160 <sup>(4)</sup>	250/250 <sup>(4)</sup>	250/250 <sup>(4)</sup>	315/315 <sup>(4)</sup>	315/315 <sup>(4)</sup>
440 VDC	DC-23 A / DC-23 B	125/125 <sup>(4)</sup>	125/125 <sup>(4)</sup>	200/200 <sup>(4)</sup>	200/200 <sup>(4)</sup>	200/315 <sup>(4)</sup>	200/315 <sup>(4)</sup>
500 VDC	DC-20 A / DC-20 B	125/125	200/200	250/250	315/315	400/400	500/500
500 VDC	DC-21 A / DC-21 B	125/125 <sup>(4)</sup>	160/160 <sup>(4)</sup>	250/250 <sup>(4)</sup>	250/250 <sup>(4)</sup>	315/315 <sup>(4)</sup>	315/315 <sup>(4)</sup>
500 VDC	DC-22 A / DC-22 B	125/125 <sup>(4)</sup>	160/160 <sup>(4)</sup>	250/250 <sup>(4)</sup>	250/250 <sup>(4)</sup>	315/315 <sup>(4)</sup>	315/315 <sup>(4)</sup>
500 VDC	DC-23 A / DC-23 B	125/125 <sup>(4)</sup>	125/125 <sup>(4)</sup>	200/200 <sup>(4)</sup>	200/200 <sup>(4)</sup>	200/315 <sup>(4)</sup>	200/315 <sup>(4)</sup>

### Operational power in AC-23 A (kW) <sup>(1)(5)</sup>

At 400 VAC without pre-break in AC-23 (kW) <sup>(1)</sup>	63/63	110/110	140/140	160/160	220/220	295/295
At 500 VAC without pre-break in AC-23 (kW) <sup>(1)</sup>	85/85	110/110	160/160	160/160	220/220	220/220
At 690 VAC without pre-break in AC-23 (kW) <sup>(1)</sup>	110/110	150/150	220/220	220/220	295/295	295/295

### Reactive power (kvar)

At 400 VAC (kvar)	55	90	115	145	185	230
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### Fuse protected short-circuit withstand (kA rms prospective)<sup>(6)</sup>

Prospective short-circuit current (kA rms)	100	60	100	60	50	30
Associated fuse rating (A)	125	200	150	315	400	500

### Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s

Prospective short-circuit 0.3s (kA rms)	15	15	17	17	17	17
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### Short-circuit capacity (without protection)

Rated short-time withstand current 1s. $I_{cw}$ (kA rms)	7	7	9	9	9	9
Short-circuit making capacity without fuses $I_{cm}$ (kA assumed peak)	11.9	11.9	15.3	15.3	15.3	15.3

### Connection

Minimum Cu cable cross-section (mm <sup>2</sup> )						
Minimum Cu busbar cross-section (mm <sup>2</sup> )						
Maximum Cu cable cross-section (mm <sup>2</sup> )	120	120	240	240	2 x 150	2 x 150
Maximum Cu busbar width (mm)	20	20	32	32	45	45
Tightening torque min (Nm)	9	9	20	20	20	20

### Mechanical characteristics

Durability (number of operating cycles) <sup>(6)</sup>	10 000	10 000	10 000	10 000	10 000	10 000
Operating effort (Nm)	10	10	12	12	15	15
Weight of a 3 pole device (kg)	1.8	1.8	3.2	3.2	4.8	4.8
Weight of a 4 pole device (kg)	2.3	2.3	4.5	4.5	6.1	6.1

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barrier.

(3) 3-pole device with 2 poles in series for the "+" and 1 pole for the "-".

(4) 4-pole device with 2 poles in series per polarity.

(5) The power value is given for information only, the current values vary from one manufacturer to another.

(6) For a rated operational voltage  $U_e = 415$  VAC.

**630 to 1600 A**

Thermal current $I_{th}$ at 40°C	630 A	800 A	1250 A	1600 A
Rated insulation voltage $U_i$ (V)	1000	1000	1000	1000
Rated impulse withstand voltage $U_{imp}$ (kV)	12	12	12	12

**Rated operational currents  $I_e$  (A)**

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-20 A / AC-20 B	630/630	800/800	1250/1250	1600/1600
415 VAC	AC-21 A / AC-21 B	630/630	800/800	1250/1250	1600/1600
415 VAC	AC-22 A / AC-22 B	630/630	800/800	1250/1250	1250/1250
415 VAC	AC-23 A / AC-23 B	630/630	630/800	1000/1000	1000/1000
500 VAC	AC-20 A / AC-20 B	630/630	800/800	1250/1250	1600/1600
500 VAC	AC-21 A / AC-21 B	630/630	800/800	1250/1250	1600/1600
500 VAC	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1000/1000
500 VAC	AC-23 A / AC-23 B	500/500	500/500	800/800	800/800
690 VAC <sup>(2)</sup>	AC-20 A / AC-20 B	630/630	800/800	1250/1250	1600/1600
690 VAC <sup>(2)</sup>	AC-21 A / AC-21 B	630/630	800/800	1000/1000	1250/1250
690 VAC <sup>(2)</sup>	AC-22 A / AC-22 B	315/315	315/315	400/400	400/400
690 VAC <sup>(2)</sup>	AC-23 A / AC-23 B	100/100	125/125	200/200	200/200
220 VDC	DC-20 A / DC-20 B	630/630	800/800	1250/1250	1600/1600
220 VDC	DC-21 A / DC-21 B	630/630	800/800	1000/1000	1250/1250
220 VDC	DC-22 A / DC-22 B	630/630	800/800	800/800	800/800
220 VDC	DC-23 A / DC-23 B	630/630	800/800	800/800	800/800
440 VDC	DC-20 A / DC-20 B	630/630	800/800	1250/1250	1600/1600
440 VDC	DC-21 A / DC-21 B	500/500	630/630	800/800	1000/1000
440 VDC	DC-22 A / DC-22 B	630/630 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>
440 VDC	DC-23 A / DC-23 B	630/630 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>
500 VDC	DC-20 A / DC-20 B	630/630	800/800	1250/1250	1600/1600
500 VDC	DC-21 A / DC-21 B	500/500	630/630	800/800 <sup>(4)</sup>	1000/1000
500 VDC	DC-22 A / DC-22 B	630/630 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>
500 VDC	DC-23 A / DC-23 B	630/630 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>	800/800 <sup>(4)</sup>

**Operational power in AC-23 A (kW) <sup>(1)(5)</sup>**

At 400 VAC without pre-break in AC-23 (kW) <sup>(1)</sup>	355/355	355/355	560/560	560/560
At 500 VAC without pre-break in AC-23 (kW) <sup>(1)</sup>	355/355	355/355	560/560	560/560
At 690 VAC without pre-break in AC-23 (kW) <sup>(1)</sup>	90/90	110/110	185/185	185/185

**Reactive power (kvar)**

At 400 VAC (kvar)	290	365	575	
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**Fuse protected short-circuit withstand (kA rms prospective)**

Prospective short-circuit (kA rms) <sup>(5)</sup>	100	70	100	120
Associated fuse rating (A) <sup>(6)</sup>	630	800	1250	2 x 800

**Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s**

Prospective short-circuit 0.3s (kA rms)	50	50	100	100
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**Short-circuit capacity (without protection)**

Rated short-time withstand current 1s. $I_{CW}$ (kA rms)	26	26	50	50
Short-circuit making capacity without fuses $I_{cm}$ (kA assumed peak)	50	50	70	70

**Connection**

Minimum Cu cable cross-section (mm <sup>2</sup> )	2 x 150	2 x 185		
Minimum Cu busbar cross-section (mm <sup>2</sup> )	2 x 30 x 5	2 x 40 x 5	2 x 60 x 5	2 x 80 x 5
Maximum Cu cable cross-section (mm <sup>2</sup> )	2 x 300	2 x 300	4 x 185	6 x 240
Maximum Cu busbar width (mm)	63	63	100	100
Tightening torque min/max (Nm)	20	20	20	40

**Mechanical characteristics**

Durability (number of operating cycles) <sup>(6)</sup>	5 000	4 000	4 000	3 000
Operating effort (Nm)	45	45	45	65
Weight of a 3 pole device (kg)	8	8.5	11	16.5
Weight of a 4 pole device (kg)	9.5	10	14	20.5

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barrier.

(3) 3-pole device with 2 poles in series for the "+" and 1 pole for the "-".

(4) 4-pole device with 2 poles in series per polarity.

(5) The power value is given for information only, the current values vary from one manufacturer to another.

(6) For a rated operational voltage  $U_e = 415$  VAC

# SIDER

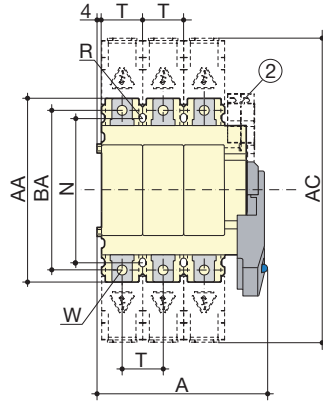
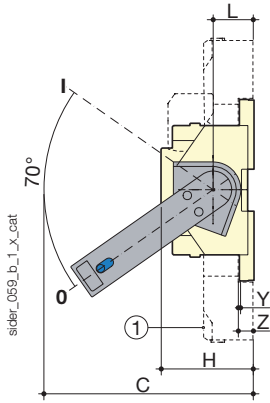
Load break switches for power distribution  
with visible breaking from 125 to 1600 A

## Dimensions

### Front operation

SIDER ND 125 to ND 500 A

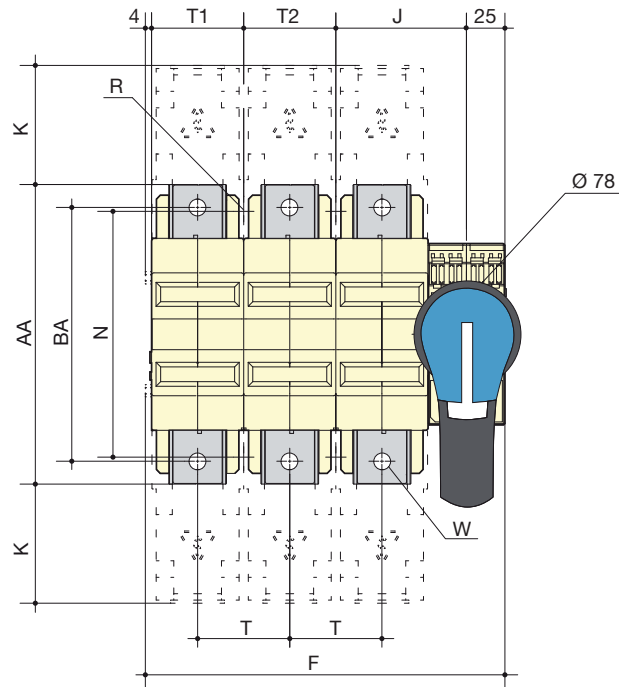
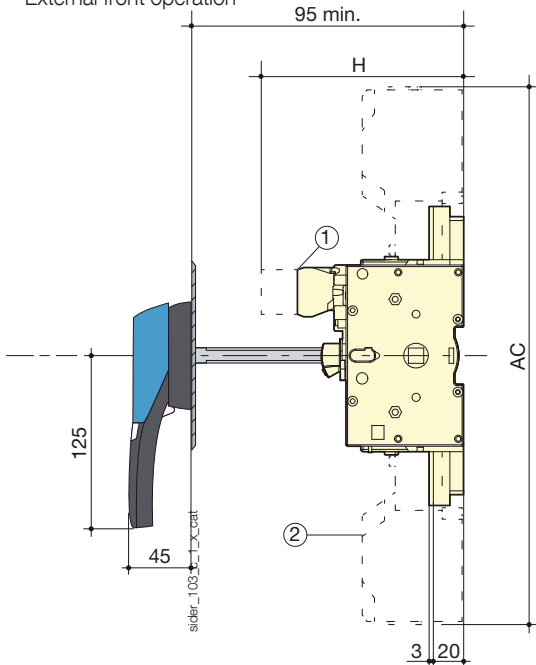
Direct front operation



- 1. Terminal shrouds
- 2. 1 or 2 NO / NC ACs for pre-break and signalling.

Rating (A)	Overall dimensions			Terminal shrouds	Switch body		Switch mounting		Connection					
	A 3p.	A 4p.	C	AC	H	L	N	R	T	W	Y	Z	AA	BA
ND 125	160	196	178	268	82	36	130	5	36	8	3	20	162	141
ND 200	160	196	178	268	82	36	130	5	36	8	3	20	162	141
ND 250	232	322	173	350	77	31	162	6	60	10	3	20	195	165
ND 315	232	322	173	350	77	31	162	6	60	10	3	20	195	165
ND 400	280	346	173	360	77	31	172	6	66	10	3	20	214	175
ND 500	280	346	173	360	77	31	172	6	66	10	3	20	214	175

External front operation



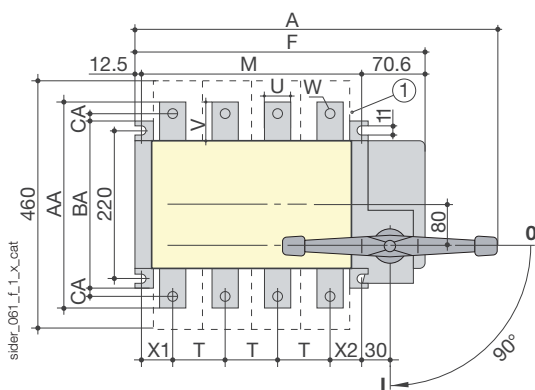
- 1. 1 or 2 NO / NC ACs for pre-break and signalling.
- 2. Terminal shrouds

Rating (A)	Terminal shrouds		Switch body				Switch mounting		Connection					
	AC	F 3p.	F 4p.	H	J	K	N	R	T	W	AA	BA	T1	T2
ND 125	268	148	184	137	54	53	130	5	36	8	162	141	36	36
ND 200	268	148	184	137	54	53	130	5	36	8	162	141	36	36
ND 250	350	234	294	132	85	77.5	162	6	60	10	195	165	60	60
ND 315	350	234	294	132	85	77.5	162	6	60	10	195	165	60	60
ND 400	360	252	318	132	91	73	172	6	66	10	214	175	66	66
ND 500	360	252	318	132	91	73	172	6	66	10	214	175	66	66

## Front operation

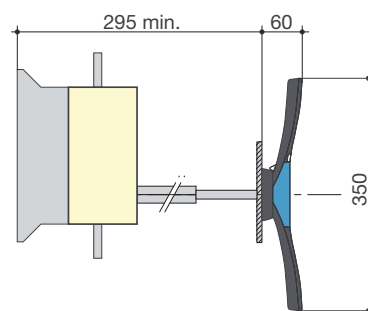
### SIDER 630 to 1600 A

Direct front operation



1. Terminal screens

External front operation



Rating (A)	Overall dimensions		Switch body		Switch mounting		Connection										
	A 3p.	A 4p.	F 3p.	F 4p.	M 3p.	M 4p.	T	U	V	W	X1	X2	Y	Z	AA	BA	AC
630	463	543	358	438	255	335	80	40	50	13	42.5	52.5	6	106	300	260	20
800	463	543	358	438	255	335	80	50	60		47.5	47.5	6	106	320		
1250	555	675	430	550	347	467	120	63	65		46.5	60.5	7	107	330		
1600	555	675	430	550	347	467	120	80	80		46.5	60.5	15	111	360		

# SIDER

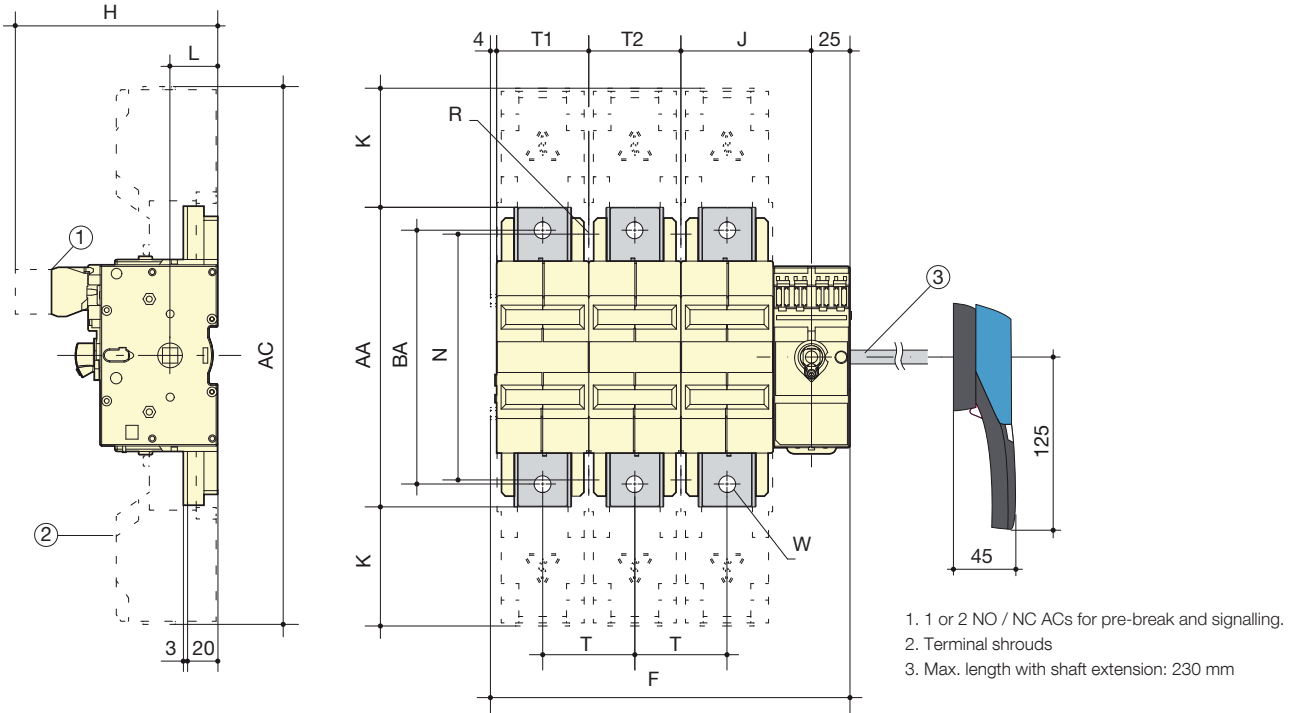
Load break switches for power distribution  
with visible breaking from 125 to 1600 A

## Dimensions (continued)

### Side operation

#### SIDER ND 125 to ND 500 A

External side operation



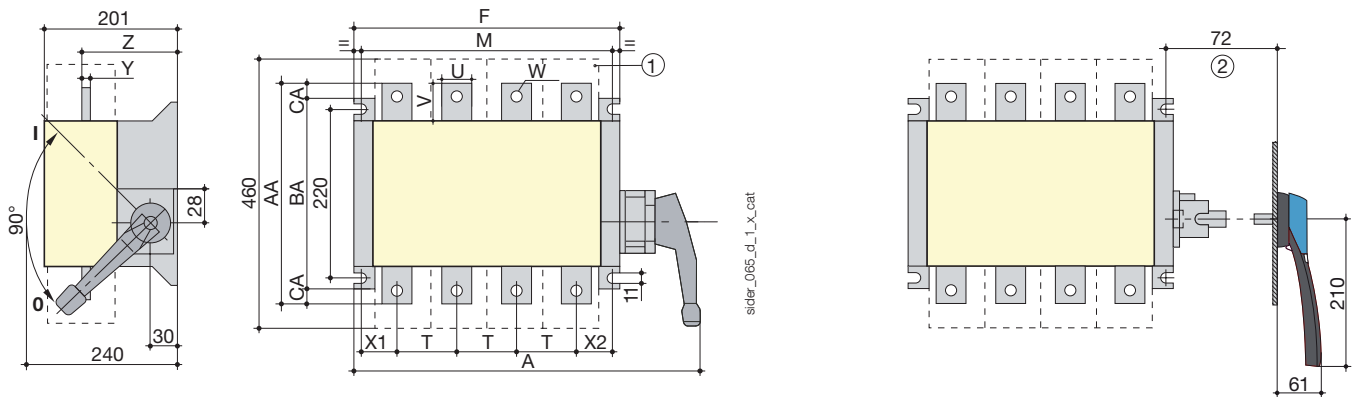
- 1. 1 or 2 NO / NC ACs for pre-break and signalling.
- 2. Terminal shrouds
- 3. Max. length with shaft extension: 230 mm

Rating (A)	Terminal shrouds	Overall dimensions		Switch body				Switch mounting		Connection					
	AC	F 3p.	F 4p.	H	J	K	L	N	R	T	W	AA	BA	T1	T2
ND 125	268	148	184	137	54	53	36	130	5	36	8	162	141	36	36
ND 200	268	148	184	137	54	53	36	130	5	36	8	162	141	36	36
ND 250	350	234	294	132	85	77.5	31	162	6	60	10	195	165	60	60
ND 315	350	234	294	132	85	77.5	31	162	6	60	10	195	165	60	60
ND 400	360	252	318	132	91	73	31	172	6	66	10	214	175	66	66
ND 500	360	252	318	132	91	73	31	172	6	66	10	214	175	66	66

#### SIDER 630 to 1600 A

Direct side operation

External side operation

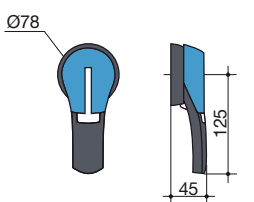
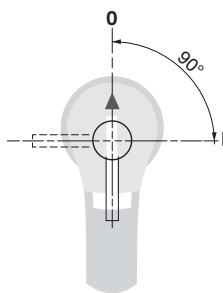
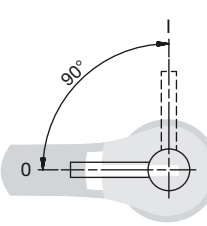
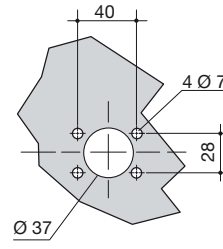
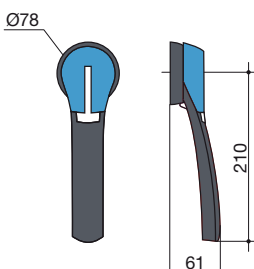


- 1. Terminal screen
- 2. Max length with shaft extension: 111 mm

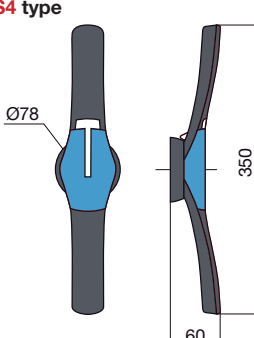
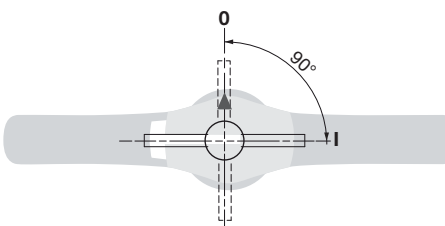
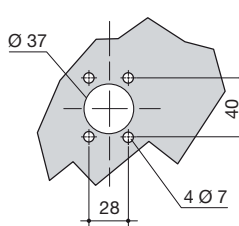
Rating (A)	Overall dimensions		Switch body		Switch mounting		Connection										
	A 3p.	A 4p.	F 3p.	F 4p.	M 3p.	M 4p.	T	U	V	W	X1	X2	Y	Z	AA	BA	AC
630	395	475	280	360	255	335	80	40	50	13	42.5	52.5	6	147	300	260	20
800	395	475	280	360	255	335	80	50	60	15	47.5	47.5	6	147	320		
1250	480	600	372	492	347	467	120	63	65	16x11	46.5	60.5	7	148	330		
1600	480	600	372	492	347	467	120	80	80	13	46.5	60.5	15	152	360		

## Dimensions for external handles

### SIDER ND 125 to ND 500 A

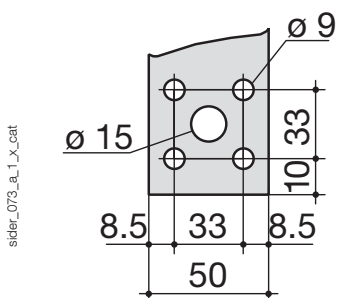
Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
<b>S2 type</b> 		<b>Right side operation</b> 	
<b>S3 type</b> 			

### SIDER 630 to 1600 A

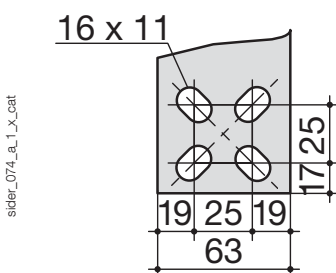
Handle type	Front operation Direction of operation	Door drilling
<b>S4 type</b> 		

## Connection terminal

### SIDER 800 A



### SIDER 1250 A



### SIDER 1600 A

