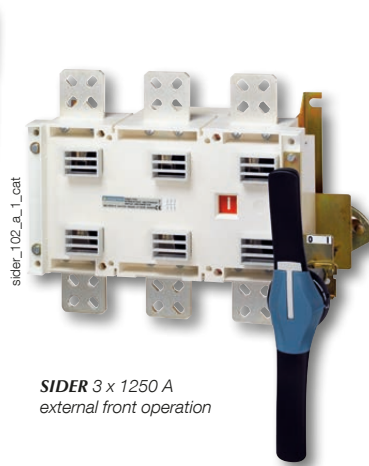


SIDER

Load break switches for power distribution from 125 to 3150 A with visible breaking



SIDER ND 4 x 500 A
External right side operation



SIDER 3 x 1250 A
external front operation



SIDER 2500 A
direct front operation handle

The solution for

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



Strong points

- > Safety thanks to visible breaking
- > Modularity

Conformity to standards

- > IEC 60947-3
- > EN 60947-3
- > VDE 0660-107 (1992)
- > NBN EN 60947-3
- > BS EN 60947-3



Approvals and certifications

- > GOST (Russia)

Function

SIDER are manually operated 3 or 4-pole load break switches.

They make and break under load conditions and provide safe isolation for any low voltage circuit.

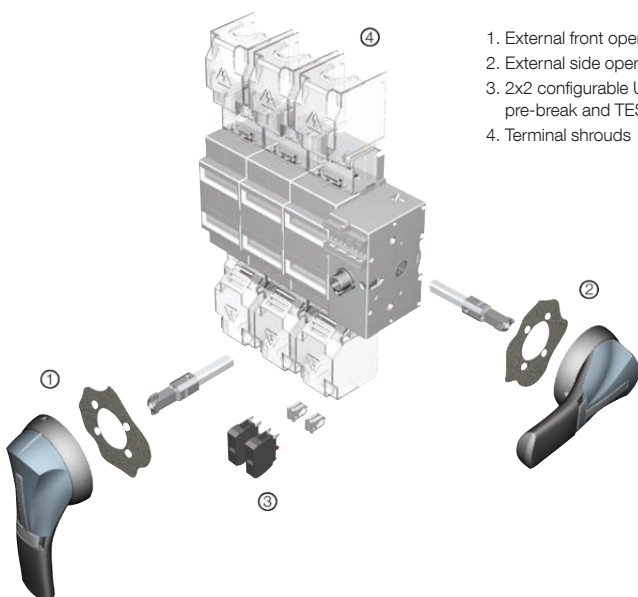
Advantages

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 maintenance check or before an operation. SIDER load break switches are most suitable for use in safety enclosures in explosive atmospheres (zones 21 and 22). The addition of a mechanical flag indicator, directly connected to the device's breaking system, provides reliable position information on the front of the enclosure.

Functional diagram

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



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

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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 3012	2921 3012	Black 3629 7901 ⁽¹⁾	S2 type Black IP55 1421 2111 ⁽¹⁾ Black IP65 1423 2111 Red IP65 1424 2111	200 mm 1400 1020 320 mm 1400 1032 ⁽⁴⁾ 500 mm 1400 1050	1 st contact NO/NC 3999 0021 ⁽²⁾⁽³⁾ 2 contacts NO/NC 3999 0022 ⁽²⁾⁽³⁾ 1 contact NO 3999 0701 ⁽⁴⁾⁽⁵⁾ 1 contact NC 3999 0702 ⁽⁴⁾⁽⁵⁾				
	4 P	2915 4012	2921 4012								
ND 200 A	3 P	2915 3021	2921 3020								
	4 P	2915 4021	2921 4020								
ND 250 A	3 P	2915 3025	2921 3025								
	4 P	2915 4025	2921 4025								
ND 315 A	3 P	2915 3031	2921 3031								
	4 P	2915 4031	2921 4031								
ND 400 A	3 P	2915 3041	2921 3041								
	4 P	2915 4041	2921 4041								
ND 500 A	3 P	2915 3051	2921 3051								
	4 P	2915 4051	2921 4051								
630 A	3 P	2900 3063	2900 3063					J3 type Black 1132 1111 ⁽¹⁾ Red 1133 1111	Type S4 Black IP65 1443 3111 ⁽¹⁾ Red / Yellow IP65 1444 3111	200 mm 1401 1520 320 mm 1401 1532 ⁽⁴⁾ 400 mm 1401 1540	1 st NO / NC contact 2799 0001 2 nd NO / NC contact 2799 0002
	4 P	2900 4063	2900 4063								
800 A	3 P	2900 3080	2900 3080								
	4 P	2900 4080	2900 4080								
1250 A	3 P	2900 3120	2900 3120								
	4 P	2900 4120	2900 4120								
1600 A	3 P	2900 3160	2900 3160								
	4 P	2900 4160	2900 4160								
1800 A	3 P	2901 3180 ⁽⁶⁾		J4 type Blue 1142 1111 ⁽¹⁾ Red 1143 1111	Type S4 Black IP65 1443 3111 Red/Yellow 1444 3111	200 mm 1401 1520 320 mm 1401 1532 400 mm 1401 1540					
2000 A	3 P	2901 3200 ⁽⁶⁾									
2500 A	3 P	2901 3250 ⁽⁶⁾									
3150 A	3 P	2901 3310 ⁽⁶⁾									

(1) Standard.

(2) Auxiliary signal contact - Type S.

(3) For direct operation.

(4) For external operation.

(5) Auxiliary signal contact - Type U.

(6) Switch body front operation

SIDER

Load break switches for power distribution
from 125 to 3150 A with visible breaking

References

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 3012	2921 3012	Black 3629 7901 ⁽¹⁾	S2 type Black IP55 1425 2111 ⁽¹⁾ Black IP65 1427 2111 Red / Yellow IP65 1428 2111	200 mm 1400 1020 ⁽¹⁾	1 st contact NO/NC 3999 0021 ⁽²⁾⁽³⁾ 2 contacts NO/NC 3999 0022 ⁽²⁾⁽³⁾ 1 contact NO 3999 0701 ⁽⁴⁾⁽⁶⁾ 1 contact NC 3999 0702 ⁽⁴⁾⁽⁶⁾
	4 P	2915 4012	2921 4012				
ND 200 A	3 P	2915 3021	2921 3020				
	4 P	2915 4021	2921 4020				
ND 250 A	3 P	2915 3025	2921 3025				
	4 P	2915 4025	2921 4025				
ND 315 A	3 P	2915 3031	2921 3031				
	4 P	2915 4031	2921 4031				
ND 400 A	3 P	2915 3041	2921 3041				
	4 P	2915 4041	2921 4041				
ND 500 A	3 P	2915 3051	2921 3051				
	4 P	2915 4051	2921 4051				
630 A	3 P	2905 3063	2905 3063	Black 2799 7052 ⁽¹⁾ Conversion kit 2799 7070 ⁽⁵⁾ Red 2799 7053 Conversion kit 2799 7070 ⁽⁵⁾	S3 type Black IP65 1437 3111 ⁽¹⁾ Red / Yellow IP65 1438 3111	200 mm 1404 1520 ⁽¹⁾	1 st contact NO/NC 2799 0011 2 nd contact NO/NC 2799 0012
	4 P	2905 4063	2905 4063				
800 A	3 P	2905 3080	2905 3080				
	4 P	2905 4080	2905 4080				
1250 A	3 P	2905 3120	2905 3120				
	4 P	2905 4120	2905 4120				
1600 A	3 P	2905 3160	2905 3160				
	4 P	2905 4160	2905 4160				

(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 7901
630 ... 3150	Black	1142 1111 ⁽¹⁾
630 ... 3150	Red	1143 1111

(1) Standard.

For side operation Rating (A)	Handle colour	Reference
ND 125 ... ND 500	Black	3629 7901
630 ... 1600	Black	1132 1111
630 ... 1600	Red	1133 1111

Direct side operation escutcheon Rating (A)	External IP	Reference
630 ... 1600	IP54	2799 7070 ⁽¹⁾

(1) To be ordered together with a direct side operation handle.



External operation handle

For front operation Rating (A)	Handle colour	Handle type	External IP ⁽¹⁾	Reference
ND 125 ... ND 500	Black	S2	IP55	1421 2111 ⁽²⁾
ND 125 ... ND 500	Black	S2	IP65	1423 2111
ND 125 ... ND 500	Red	S2	IP65	1424 2111
630 ... 3150	Black	S4	IP65	1443 3111 ⁽²⁾
630 ... 3150	Red	S4	IP65	1444 3111

(1) IP: protection degree according to IEC 60529 standard. (2) Standard.

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

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



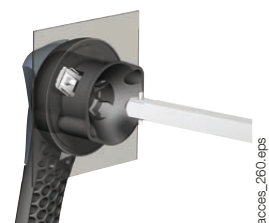
Shaft guide for external operation

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 a shaft length over 320 mm.

Description	Reference
Shaft guide	1429 0000



SIDER

Load break switches for power distribution
from 125 to 3150 A with visible breaking

Accessories (continued)

Type S handle adapter

Use

Enables S-type handles to be fitted in place of existing older style Socomec handles.

Dimensions

Adds 12 mm to the handle depth.

Handle colour	To be ordered in multiples of	External IP ⁽¹⁾	Reference
Black	1	IP65	1493 0000

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



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Alternative S type handle cover colour

Use

For single lever handle S1, S2, S3 types and double lever handle S4 type. Other colours available - please contact us.

Handle colour	To be ordered in multiples of	Handle type	Reference
Light grey	50	S1, S2	1401 0001
Dark grey	50	S1, S2	1401 0011
Light grey	50	S4	1401 0031
Dark grey	50	S4	1401 0041



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Shaft for external operation

Use

Standard lengths:

- 80 mm,
- 200 mm,
- 320 mm,
- 400 mm,
- 500 mm.

Other lengths available - please contact us.

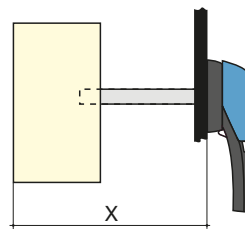
For front operation				
Rating (A)	Dimension X (mm)	Shaft length (mm)	Type	Reference
ND 125 ... ND 500	95 ... 230	200 mm	10 x 10	1400 1020
ND 125 ... ND 500	95 ... 350	320 mm	10 x 10	1400 1032
ND 125 ... ND 500	95 ... 530	500 mm	10 x 10	1400 1050
630 ... 3150	295 ... 555	200 mm	15 x 12	1401 1520
630 ... 3150	295 ... 675	320 mm	15 x 12	1401 1532
630 ... 3150	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

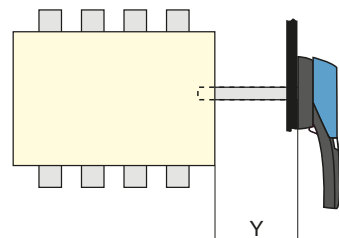
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Auxiliary contacts for pre-break and signalling - Front operation

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 st	3999 0021 ⁽¹⁾
ND 125 ... ND 500	2 nd	3999 0022 ⁽¹⁾
630 ... 1600	1 st	2799 0001
630 ... 1600	2 nd	2799 0002

(1) For direct operation.

NO contact Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 to 4	3999 0701 ⁽¹⁾

(1) For external operation.

Characteristics

Rating (A)	Contact type	Current nominal (A)	Operating current I _o (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

NC contact Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 to 4	3999 0702 ⁽¹⁾

(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

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 st	3999 0021
ND 125 ... ND 500	2	3999 0022
630 ... 1600	1 st	2799 0011
630 ... 1600	2 nd	2799 0012

NO contact Rating (A)	Position AC	Reference
ND 125 ... ND 500	1 to 4	3999 0701

NC 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 _o (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

SIDER

Load break switches for power distribution
from 125 to 3150 A with visible breaking

Accessories (continued)

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

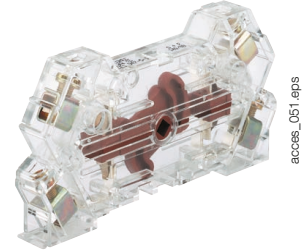
By terminals with a max. cross-section of
10 mm².

Electrical principle

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

Electrical characteristics

30 000 operations.



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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 _e (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 ⁽¹⁾
ND 125 ... ND 200	4 P	top or bottom	3998 4016 ⁽²⁾
ND 250 ... ND 500	3 P	top or bottom	3998 3025 ⁽¹⁾
ND 250 ... ND 500	4 P	top or bottom	3998 4025 ⁽²⁾

(1) Reference composed of 3 pieces.

(2) Reference composed of 4 pieces.



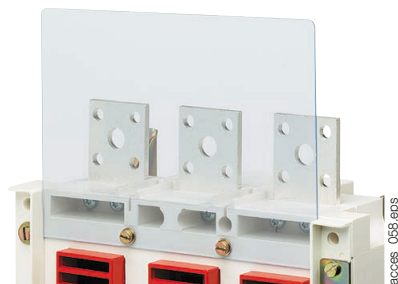
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Terminal screens

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 3080
630 ... 800	4 P	top or bottom	2998 4080
1250 ... 3150	3 P	top or bottom	2998 3120
1250 ... 1600	4 P	top or bottom	2998 4120



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Inter-phase barrier

Use

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

Rating (A)	No. of poles	Reference
630 ... 3150	3 P	2998 0003
630 ... 1600	4 P	2998 0004



access_096.eps

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).

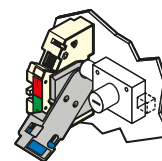


Fig. 1

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Fig.2

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

(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 7702

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

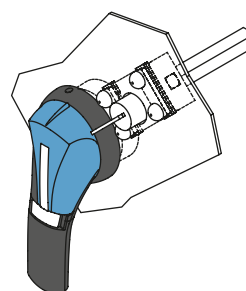


Fig. 3

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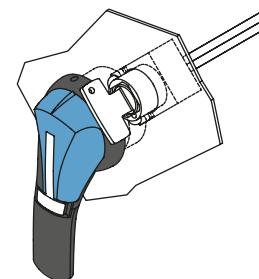


Fig.4

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Other specific accessories

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

SIDER

Load break switches for power distribution
from 125 to 3150 A with visible breaking

Characteristics according to IEC 60947-3

SIDER ND 125 to 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 ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-20 A / AC-20 B	125/125	200/200	250/250	315/315	400/400
415 VAC	AC-21 A / AC-21 B	125/125	200/200	250/250	315/315	400/400
415 VAC	AC-22 A / AC-22 B	125/125	200/200	250/250	315/315	400/400
415 VAC	AC-23 A / AC-23 B	125/125	200/200	250/250	315/315	400/400
500 VAC	AC-20 A / AC-20 B	125/125	200/200	250/250	315/315	400/400
500 VAC	AC-21 A / AC-21 B	125/125	160/160	250/250	250/250	400/400
500 VAC	AC-22 A / AC-22 B	125/125	160/160	250/250	250/250	400/400
500 VAC	AC-23 A / AC-23 B	125/125	160/160	250/250	250/250	315/315
690 VAC ⁽²⁾	AC-20 A / AC-20 B	125/125	200/200	250/250	315/315	400/400
690 VAC ⁽²⁾	AC-21 A / AC-21 B	125/125	160/160	250/250	315/315	400/400
690 VAC ⁽²⁾	AC-22 A / AC-22 B	125/125	160/160	250/250	315/315	400/400
690 VAC ⁽²⁾	AC-23 A / AC-23 B	125/125	160/160	250/250	250/250	315/315
220 VDC	DC-20 A / DC-20 B	125/125	200/200	250/250	315/315	400/400
220 VDC	DC-21 A / DC-21 B	125/125	160/160	250/250	250/250	315/315 ⁽³⁾
220 VDC	DC-22 A / DC-22 B	125/125	160/160	250/250	250/250	315/315 ⁽³⁾
220 VDC	DC-23 A / DC-23 B	125/125	125/125	200/200	200/200	200/315 ⁽³⁾
440 VDC	DC-20 A / DC-20 B	125/125	200/200	250/250	315/315	400/400
440 VDC	DC-21 A / DC-21 B	125/125 ⁽⁴⁾	160/160 ⁽⁴⁾	250/250 ⁽⁴⁾	250/250 ⁽⁴⁾	315/315 ⁽⁴⁾
440 VDC	DC-22 A / DC-22 B	125/125 ⁽⁴⁾	160/160 ⁽⁴⁾	250/250 ⁽⁴⁾	250/250 ⁽⁴⁾	315/315 ⁽⁴⁾
440 VDC	DC-23 A / DC-23 B	125/125 ⁽⁴⁾	125/125 ⁽⁴⁾	200/200 ⁽⁴⁾	200/200 ⁽⁴⁾	200/315 ⁽⁴⁾
500 VDC	DC-20 A / DC-20 B	125/125	200/200	250/250	315/315	400/400
500 VDC	DC-21 A / DC-21 B	125/125 ⁽⁴⁾	160/160 ⁽⁴⁾	250/250 ⁽⁴⁾	250/250 ⁽⁴⁾	315/315 ⁽⁴⁾
500 VDC	DC-22 A / DC-22 B	125/125 ⁽⁴⁾	160/160 ⁽⁴⁾	250/250 ⁽⁴⁾	250/250 ⁽⁴⁾	315/315 ⁽⁴⁾
500 VDC	DC-23 A / DC-23 B	125/125 ⁽⁴⁾	125/125 ⁽⁴⁾	200/200 ⁽⁴⁾	200/200 ⁽⁴⁾	200/315 ⁽⁴⁾
Operational power in AC-23 A (kW) ⁽¹⁾⁽⁵⁾						
At 400 VAC without pre-break in AC-23 (kW) ⁽¹⁾	63/63	110/110	140/140	160/160	220/220	295/295
At 500 VAC without pre-break in AC-23 (kW) ⁽¹⁾	85/85	110/110	160/160	160/160	220/220	220/220
At 690 VAC without pre-break in AC-23 (kW) ⁽¹⁾	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
Current rated as conditional short-circuit with fuse gG DIN						
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
Short-circuit operation (switch only)						
Rated short-time withstand current 1s. I_{cw} (kA rms)	7	7	9	9	9	9
Rated peak withstand current (kA peak) ⁽⁶⁾	20	20	32.5	32.5	40	40
Connection						
Maximum Cu cable cross-section (mm ²)	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) ⁽⁶⁾	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.

Characteristics according to IEC 60947-3

SIDER 630 to 3150 A

Thermal current I_{th} at 40°C	630 A	800 A	1250 A	1600 A	1800 A	2000 A	2500 A	3150 A
Rated insulation voltage U_i (V)	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)	12	12	12	12	12	12	12	12
Rated operational currents I_e (A)								
Rated voltage	Utilisation category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-20 A / AC-20 B	630 / 630	800 / 800	1250 / 1250	1600 / 1600	1800 / 1800	2000/2000	2500/2500
415 VAC	AC-21 A / AC-21 B	630 / 630	800 / 800	1250 / 1250	1600 / 1600	1800 / 1800	2000/2000	2500/2500
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	1800 / 1800	2000/2000	2500/2500
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 ⁽²⁾	AC-20 A / AC-20 B	630 / 630	800 / 800	1250 / 1250	1600 / 1600	1800 / 1800	2000/2000	2500/2500
690 VAC ⁽²⁾	AC-21 A / AC-21 B	630 / 630	800 / 800	1000 / 1000	1250 / 1250	-	-	-
690 VAC ⁽²⁾	AC-22 A / AC-22 B	315 / 315	315 / 315	400 / 400	400 / 400	-	-	-
690 VAC ⁽²⁾	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 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	-	-	-
440 VDC	DC-23 A / DC-23 B	630 / 630 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	-	-	-
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 ⁽⁴⁾	1000 / 1000	-	-	-
500 VDC	DC-22 A / DC-22 B	630 / 630 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	-	-	-
500 VDC	DC-23 A / DC-23 B	630 / 630 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	800 / 800 ⁽⁴⁾	-	-	-
Operational power in AC-23 (kW)⁽¹⁾⁽⁵⁾								
At 400 VAC without pre-break auxiliary contact in AC-23 (kW) ⁽¹⁾	355 / 355	355 / 355	560 / 560	560 / 560	-	-	-	-
At 500 VAC without pre-break in AC-23 (kW) ⁽¹⁾	355 / 355	355 / 355	560 / 560	560 / 560	-	-	-	-
At 690 VAC without pre-break in AC-23 (kW) ⁽¹⁾	90 / 90	110 / 110	185 / 185	185 / 185	-	-	-	-
Reactive power (kvar)								
At 400 VAC (kvar)	290	365	575	-	-	-	-	-
Current rated as conditional short-circuit with fuse gG DIN								
Prospective short-circuit current (kA rms) ⁽⁶⁾	100	70	100	120	-	-	-	-
Associated fuse rating (A) ⁽⁵⁾	630	800	1250	2 x 800	-	-	-	-
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s								
Rated short-time withstand current 0.3s. I_{cw} (kA rms)	50	50	100	100	-	-	-	-
Short-circuit operation (switch only)								
Rated short-time withstand current 1s I_{sw} (kA rms)	26	26	50	50	50	50	50	50
Rated peak withstand current in I_{cc} (kA peak) ⁽⁶⁾	55	55	100	110	80	80	80	80
Connection								
Minimum Cu cable cross-section (mm ²)	2 x 150	2 x 185	-	-	-	-	-	-
Minimum Cu cable cross-section (mm ²)	2 x 30 x 5	2 x 40 x 5	2 x 60 x 5	2 x 80 x 5	2 x 80 x 5	2 x 80 x 10	4 x 100 x 5	-
Maximum Cu cable cross-section (mm ²)	2 x 300	2 x 300	4 x 185	6 x 240	6 x 240	3 x 100 x 5	2 x 100 x 10	3 x 100 x 10
Maximum Cu busbar width (mm)	63	63	100	100	100	100	100	100
Tightening torque min/max (Nm)	20	20	20	40	40	-	-	-
Mechanical characteristics								
Durability (number of operating cycles) ⁽⁷⁾	5000	4000	4000	3000	3000	-	-	-
Operating effort (Nm)	45	45	45	65	65	-	-	-
Weight of a 3-pole device (kg)	8	8.5	11	16.5	16.5	-	-	-
Weight of a 4-pole device (kg)	9.5	10	14	20.5	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 $U_n = 415$ VAC.

(7) For higher durabilities, please contact us.

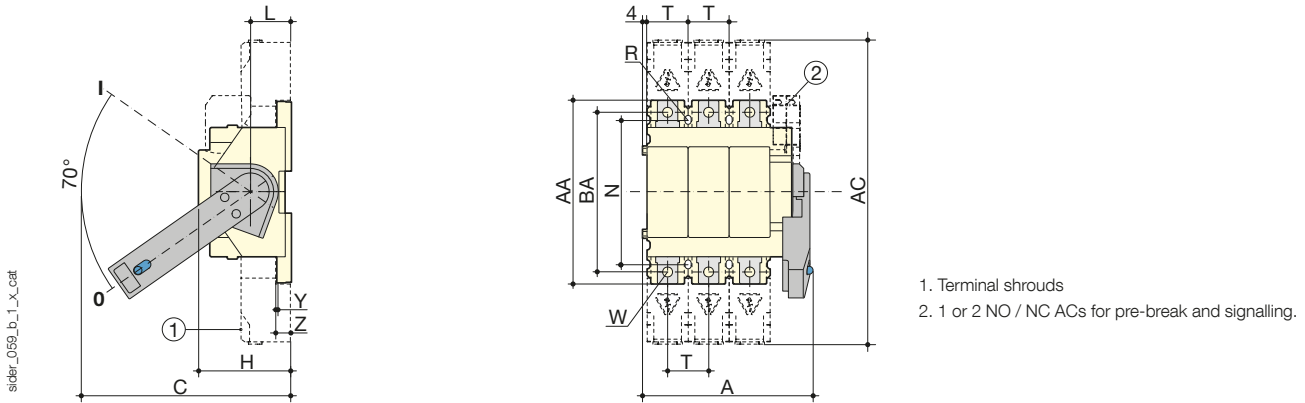
SIDER

Load break switches for power distribution
from 125 to 3150 A with visible breaking

Dimensions - Front operation

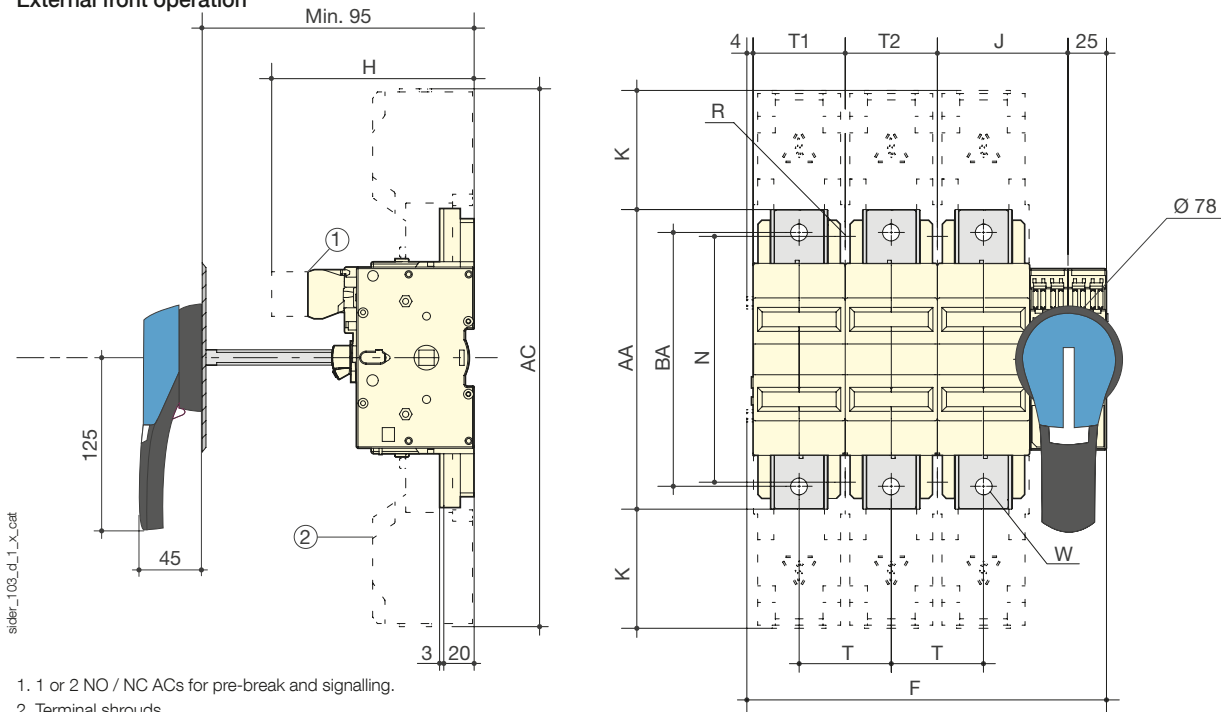
SIDER ND 125 to 500 A

Direct front operation



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

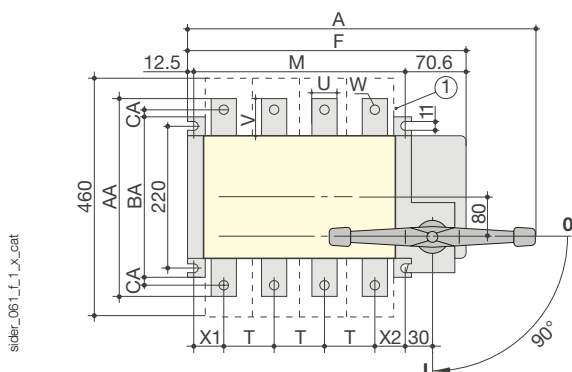
External front operation



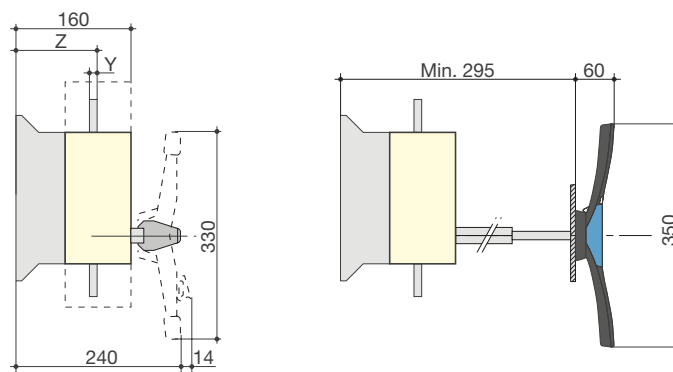
Rating (A)	Terminal shrouds		Switch body				Switch mounting		Connection					
	AC	F 3p.	F 4p.	H	J	K	N	R	T	W	AA	BA	T1	T2
ND 125	268	148	184	137	54	53	130	5	36	8	162	141	36	36
ND 200	268	148	184	137	54	53	130	5	36	8	162	141	36	36
ND 250	350	234	294	132	85	77.5	162	6	60	10	195	165	60	60
ND 315	350	234	294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

SIDER 630 to 1800 A

Direct front operation



External front operation

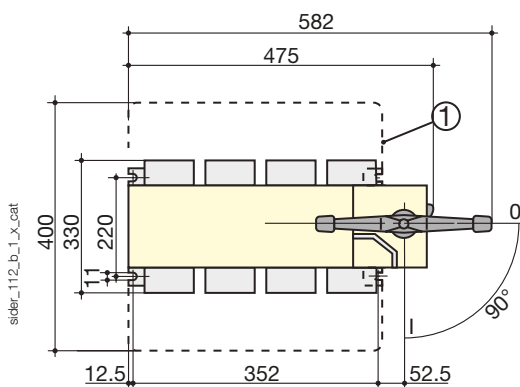


1. Terminal screens

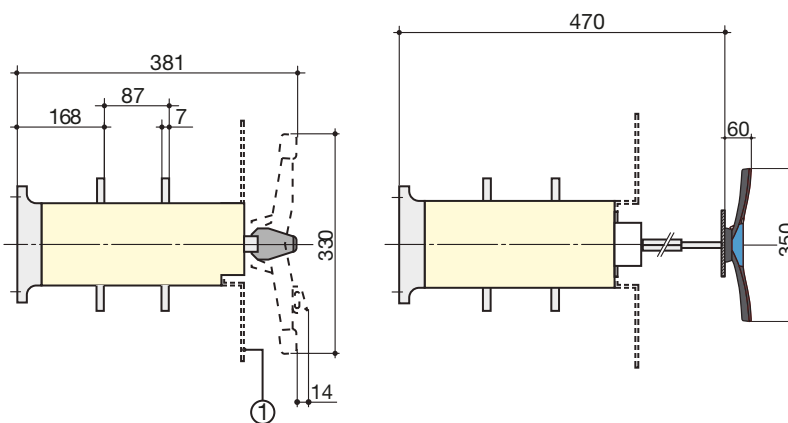
Rating (A)	Overall dimensions		Switch body		Switch mounting		Connection											
	A 3p.	A 4p.	F 3p.	F 4p.	M 3p.	M 4p.	T	U	V	W	X1	X2	Y	Z	AA	BA	AC	
630	463	543	358	438	255	335	80	40	50	13	42.5	52.5	6	106	300	260	20	
800	463	543	358	438	255	335	80	50	60	9	47.5	47.5	6	106	320			
1250	555	675	430	550	347	467	120	63	65	16 x 11	46.5	60.5	7	107	330			
1600	555	675	430	550	347	467	120	80	80	13	46.5	60.5	15	111	360			
1800	479		417		345		120	100	80		46.5	60.5	15	112	360	250		

SIDER 2000 to 2500 A

Direct front operation



External front operation



1. Terminal screens.

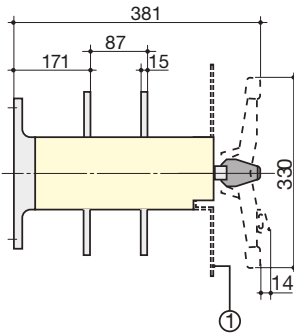
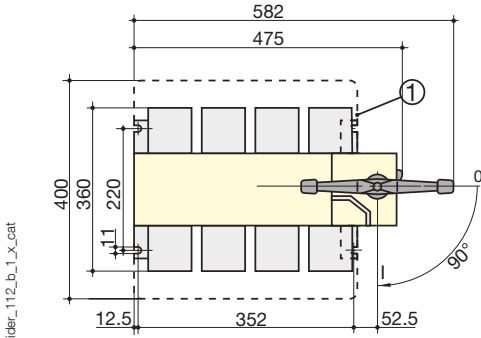
SIDER

Load break switches for power distribution
from 125 to 3150 A with visible breaking

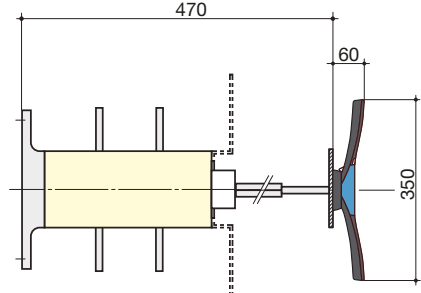
Dimensions - Front operation (continued)

SIDER 3150 A

Direct front operation



External front operation

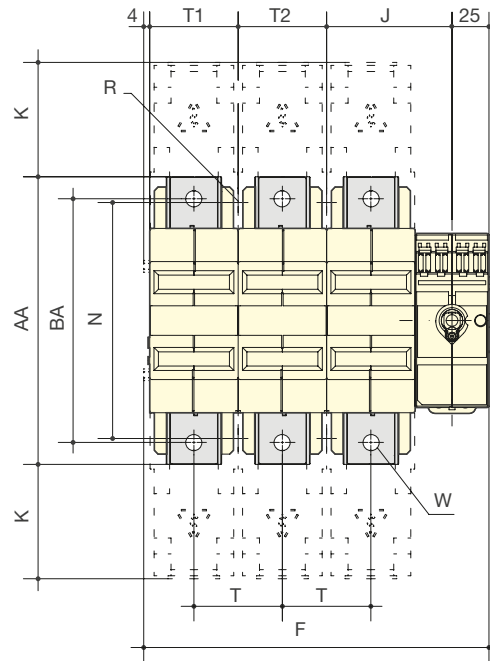
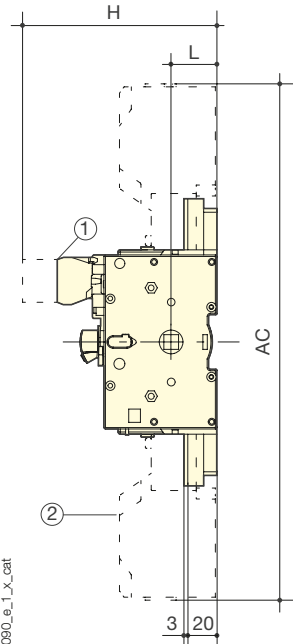


1. Terminal screens.

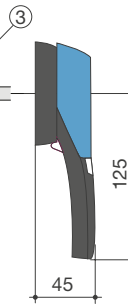
Dimensions - Side operation

SIDER ND 125 to 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

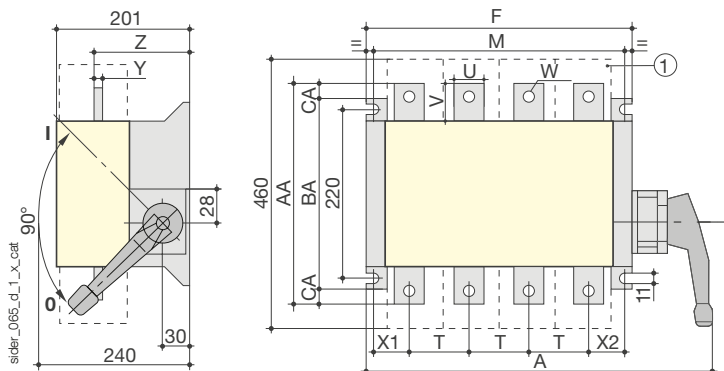


Rating (A)	Terminal shrouds		Overall dimensions				Switch body				Switch mounting				Connection			
	AC	F 3p.	F 4p.	H	J	K	L	N	R	T	W	AA	BA	T1	T2			
ND 125	268	148	184	137	54	53	36	130	5	36	8	162	141	36	36			
ND 200	268	148	184	137	54	53	36	130	5	36	8	162	141	36	36			
ND 250	350	234	294	132	85	77.5	31	162	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			

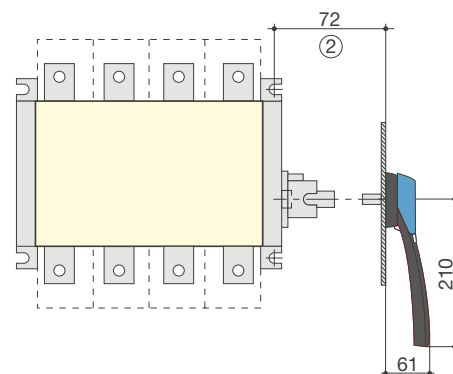
Dimensions - Side operation (continued)

SIDER 630 to 1600 A

Direct side operation



External side operation



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

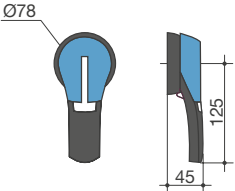
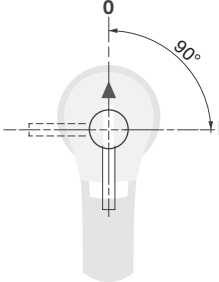
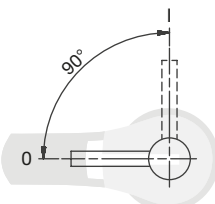
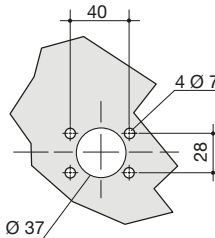
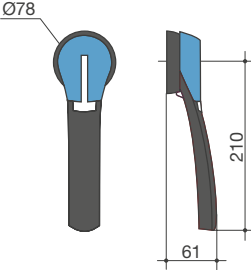
Rating (A)	Overall dimensions		Switch body		Switch mounting		Connection										
	A 3p.	A 4p.	F 3p.	F 4p.	M 3p.	M 4p.	T	U	V	W	X1	X2	Y	Z	AA	BA	AC
630	395	475	280	360	255	335	80	40	50	13	42.5	52.5	6	147	300	260	20
800	395	475	280	360	255	335	80	50	60	15	47.5	47.5	6	147	320		
1250	480	600	372	492	347	467	120	63	65	16 x 11	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		

SIDER

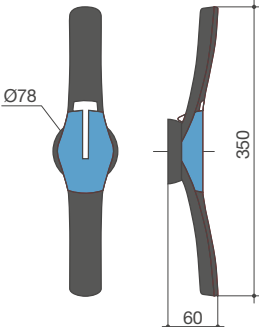
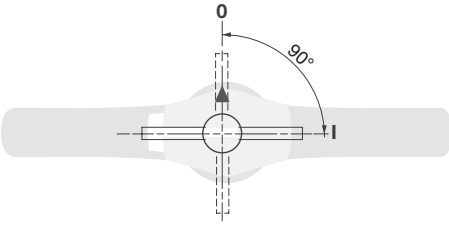
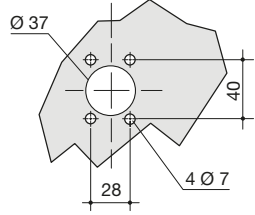
Load break switches for power distribution
from 125 to 3150 A with visible breaking

Dimensions for external handles

SIDER ND 125 to 500 A

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S2 type 		Right side operation 	
S3 type 			

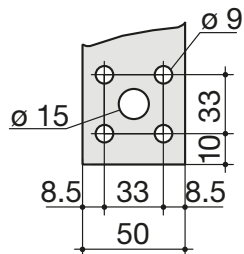
SIDER 630 to 1800 A

Handle type	Front operation Direction of operation	Door drilling
S4 type 		

Connection terminal

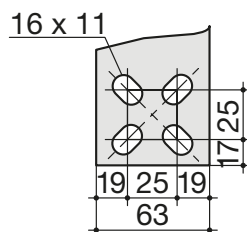
800 A

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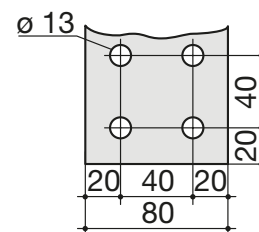
1250 A

sider_074_a_1_x_cat



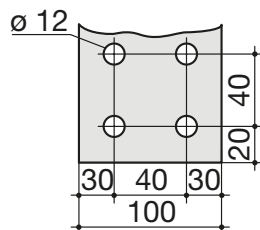
1600 A

sider_075_a_1_x_cat



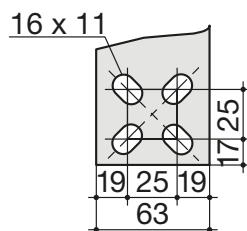
1800 A

sider_115_a_1_x_cat



2000 to 2500 A

sider_074_a_1_x_cat



3150 A

sider_111_a_1_x_cat

