

Air Circuit Breakers Ex9A32



- Air circuit breakers, frame size A32
- Rated current up to 3200 A
- Rated operating voltage 690 V AC
- Breaking capacity Icu 65, 85 and 100 kA
- Fixed and withdrawable versions
- Utilization category B acc. to EN 60947-2
- Arbitrary selection of tripping unit SU
- Compact and modular design
- Wide range of accessories

Air Circuit Breakers from Ex9A series are designed for power distribution protection on high demand installations such as industrial and commercial among others. Testing according IEC / EN 60947-2 standards ensures the required functionality and reliability for the higher power applications.

The Ex9A series are divided in four frame sizes according the characteristics of the installation, the divisions are as follow:

Ex9A16: from 630 A to 1600 A with breaking capacities from 55 kA to 65 kA.

Ex9A25: from 1000 A to 2500 A with breaking capacities from 65 kA to 85 kA.

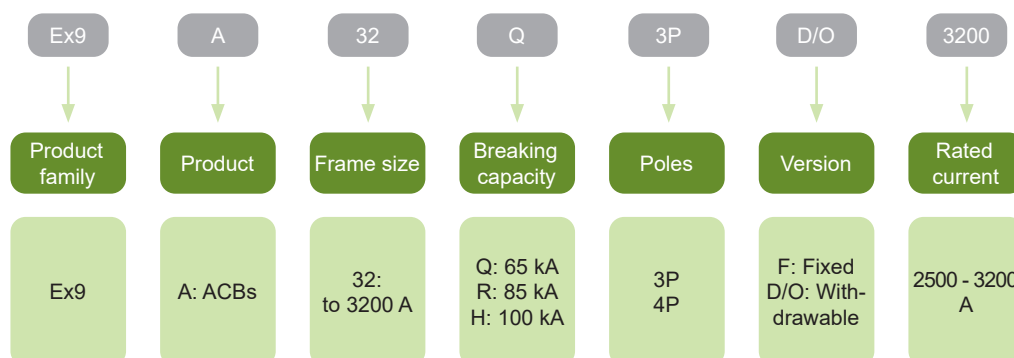
Ex9A32: from 2500 A to 3200 A with breaking capacities from 65 kA to 100 kA.

Ex9A40: from 3200 A to 4000 A with breaking capacities from 65 kA to 100 kA.

Ex9A devices are compatible with all the variants of Smart Units, giving the possibility to perfectly fit the smart functionalities to any current range, ACB construction and installation requirements.

Utilization category B circuit breakers.

Type Key



Air Circuit Breakers Ex9A32

- Fixed version
- Frame size A32
- Rated current up to 3200 A
- Rated short-circuit breaking capacity I_{cu} 65, 85 and 100 kA
- Device body only, tripping unit must be selected separately
- In the scope of delivery: fixed Air Circuit Breaker body, full set of secondary terminals, tripping unit (according to the selection), door frame, main terminals mounted in horizontal position, alarm contacts
- Basic parameter setting range of tripping units SU (all versions):

$$I_r = 0.4 - 1 \times I_n$$

$$I_{sd} = 1.5 - 10 \times I_r$$

$$I_i = 2 - 15 \times I_n$$

Fixed version, $I_{cu} = 65$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	2000 A	800-2000 A	4000-30000 A	112215	Ex9A32Q 3P F 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112216	Ex9A32Q 3P F 2500	1
3P	3200 A	1280-3200 A	6400-48000 A	112217	Ex9A32Q 3P F 3200	1
4P	2000 A	800-2000 A	4000-30000 A	112221	Ex9A32Q 4P F 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112222	Ex9A32Q 4P F 2500	1
4P	3200 A	1280-3200 A	6400-48000 A	112223	Ex9A32Q 4P F 3200	1

Fixed version, $I_{cu} = 85$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	2000 A	800-2000 A	4000-30000 A	112227	Ex9A32R 3P F 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112228	Ex9A32R 3P F 2500	1
3P	3200 A	1280-3200 A	6400-48000 A	112229	Ex9A32R 3P F 3200	1
4P	2000 A	800-2000 A	4000-30000 A	112233	Ex9A25R 4P F 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112234	Ex9A25R 4P F 2500	1
4P	3200 A	1280-3200 A	6400-48000 A	112235	Ex9A25R 4P F 3200	1

Fixed version, $I_{cu} = 100$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	2000 A	800-2000 A	4000-30000 A	112239	Ex9A32H 3P F 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112240	Ex9A32H 3P F 2500	1
3P	3200 A	1280-3200 A	6400-48000 A	112241	Ex9A32H 3P F 3200	1
4P	2000 A	800-2000 A	4000-30000 A	112245	Ex9A32H 4P F 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112246	Ex9A32H 4P F 2500	1
4P	3200 A	1280-3200 A	6400-48000 A	112247	Ex9A32H 4P F 3200	1

Air Circuit Breakers Ex9A32

- Withdrawable version
- Frame size A32
- Rated current up to 3200 A
- Rated short-circuit breaking capacity I_{cu} 65, 85 and 100 kA
- Device body only, tripping unit must be selected separately
- In the scope of delivery: withdrawable Air Circuit Breaker body, cassette, tripping unit (according to the selection), door frame, alarm contacts
- Cassete to be selected separately (ordered as premounted or separate delivery)
- Cassete equipped with full set of secondary terminals, mechanical device position indicator, safety shutters of main terminals
- Setting range of tripping units SU (all versions):

$$\begin{aligned} I_r &= 0.4 - 1 \times I_n \\ I_{sd} &= 1.5 - 10 \times I_r \\ I_i &= 2 - 15 \times I_n \end{aligned}$$

Withdrawable version, $I_{cu} = 65$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	2000 A	800-2000 A	4000-30000 A	112212	Ex9A32Q 3P D/O 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112213	Ex9A32Q 3P D/O 2500	1
3P	3200 A	1280-3200 A	6400-48000 A	112214	Ex9A32Q 3P D/O 3200	1
4P	2000 A	800-2000 A	4000-30000 A	112218	Ex9A32Q 4P D/O 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112219	Ex9A32Q 4P D/O 2500	1
4P	3200 A	1280-3200 A	6400-48000 A	112220	Ex9A32Q 4P D/O 3200	1

Withdrawable version, $I_{cu} = 85$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	2000 A	800-2000 A	4000-30000 A	112224	Ex9A32R 3P D/O 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112225	Ex9A25R 3P D/O 2500	1
3P	3200 A	1280-3200 A	6400-48000 A	112226	Ex9A25R 3P D/O 3200	1
4P	2000 A	800-2000 A	4000-30000 A	112230	Ex9A25R 4P D/O 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112231	Ex9A25R 4P D/O 2500	1
4P	3200 A	1280-3200 A	6400-48000 A	112232	Ex9A25R 4P D/O 3200	1

Withdrawable version, $I_{cu} = 100$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	2000 A	800-2000 A	4000-30000 A	112236	Ex9A32H 3P D/O 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112237	Ex9A32H 3P D/O 2500	1
3P	3200 A	1280-3200 A	6400-48000 A	112238	Ex9A32H 3P D/O 3200	1
4P	2000 A	800-2000 A	4000-30000 A	112242	Ex9A32H 4P D/O 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112243	Ex9A32H 4P D/O 2500	1
4P	3200 A	1280-3200 A	6400-48000 A	112244	Ex9A32H 4P D/O 3200	1

Air Circuit Breakers Ex9A32

Cassete for Ex9A32 withdrawable ACBs

- Safety shutters of main terminals connectors in the scope of delivery
- Equipped with full set of secondary terminals and mechanical device position indicator
- Delivered with main terminals in horizontal position



Version	Poles	Rated current I_n	Article No.	Type	Packing
Premounted	3P	2500 A	112248	+CAS 13 3P 2000-2500	1
Premounted	3P	3200 A	112249	+CAS 13 3P 3200	1
Premounted	4P	2500 A	112250	+CAS 13 4P 2000-2500	1
Premounted	4P	3200 A	112251	+CAS 13 4P 3200	1
Separately orderable	3P	2500 A	112252	CAS 13 3P 2000-2500	1
Separately orderable	3P	3200 A	112253	CAS 13 3P 3200	1
Separately orderable	4P	2500 A	112254	CAS 13 4P 2000-2500	1
Separately orderable	4P	3200 A	112255	CAS 13 4P 3200	1

Technical Data Ex9A32

Air Circuit Breakers up to 3200 A

General parameters

Arbitrary choice of tripping unit +SU

Suitable for commercial as well as industrial applications

I_r can be set in range $(0.4 — 1.0) \times I_n$

I_{sd} can be set in range $(1.5 — 10) \times I_r$

I_i can be set in range $(2 — 15) \times I_n$

Internal accessories

Smart Unit - basic analysis Current measurement	+SU30A	112324 — 112326
	+SU40A	112327 — 112329
Smart Unit - Power measurement Current, voltages and power measurement	+SU30P	112330 — 112332
	+SU40P	112333 — 112335
Smart Unit - Advanced analysis Current, voltage, power, Harmonics analyzer	+SU30H	112336 — 112338
	+SU40H	112339 — 112341
Auxiliary contact unit	AX12	112400 — 112403
Signal contact unit	Premounted	Premounted
Closing releases	XF12	112432 — 112437
Shunt trip releases	SHT12	112418 — 112423
Undervoltage releases	UVT12	112446 — 112451
Motor drive operator	MD13	112466 — 112470
Key lock	KLK12	112475 — 112477
Position indicator	+EF12	112508
Pushbutton lock	+VBP12	112510

External accessories

Phase barriers - Fixed	PHS12	112496, 112497
Phase barriers - Withdrawable	DPS12	112490, 112491
Mechanical interlocks	IPA12	112502, 112505

Accessories marked with " + " in this list must be preordered together with the circuit breaker, since separate purchase is not allowed due to mechanical / software adaptation requirements

In any case, it is recommended to directly communicate with the technical +Support or your representative sales engineer in order to confirm all the possible configurations and additional personalizations of the selected product

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Air Circuit Breakers up to 3200 A

Electrical parameters

	Ex9A32Q	Ex9A32R	Ex9A32H
Tested according to	IEC / EN 60947-2		
Rated operational voltage U_e	380 / 400 / 415 / 660 / 690 V AC		
Rated insulation voltage U_i	1000 V		
Rated impulse withstand voltage U_{imp}	12 kV		
Rated current I_n at 40°C	2500 — 3200 A		
Rated frequency f	50 / 60 Hz		
Rated ultimate short-circuit breaking capacity I_{cu}	65 kA / 415 V 50 kA / 690 V	85 kA / 415 V 65 kA / 690 V	100 kA / 415 V 75 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	65 kA / 415 V 50 kA / 690 V	85 kA / 415 V 65 kA / 690 V	100 kA / 415 V 75 kA / 690 V
Rated short-circuit making capacity I_{cm}	143 kA / 415 V 105 kA / 690 V	187 kA / 415 V 143 kA / 690 V	220 kA / 415 V 165 kA / 690 V
Rated short-circuit withstand current I_{cw} for 1s	50 kA / 415 V 35 kA / 690 V	65 kA / 415 V 40 kA / 690 V	85 kA / 415 V 50 kA / 690 V
Poles	3P / 4P		
Breaking operation time	20 — 30 ms		
Closing operation time	< 70 ms		
Electrical service life	6000 operation cycles / 415 V 3000 operation cycles / 690 V		
Mechanical service life	10000 operation cycles without maintenance		
Utilization category	B		
Line voltage connection	arbitrary above or below (with external power supply for SU)		

Mechanical parameters

	fixed	withdrawable
Device width (3P / 4P)	424 mm / 539 mm	377 mm / 472 mm
Device height	390.5 mm	430 mm
Device depth	304 mm	406 mm
Degree of protection	IP40	
Ambient temperature	-25°C — +60°C	
Storage temperature	40°C — +85°C (without SU) -25°C — +75°C (with SU)	
Altitude	< 2000 m	
Relative humidity	< 50 %	
Average relative humidity	< 90 %	
Installation category	IV (main circuit) / III (secondary circuit)	
Pollution degree	3	
Weight (3P / 4P)	52.5 kg / 66.5 kg	98 kg / 121 kg (including cassette)

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Air Circuit Breakers up to 3200 A

Power dissipation at 3P device

Rated current [A]	Fixed version	Withdrawable version
2500 A	260 W	600 W
3200 A	420 W	670 W

Temperature derating

T [°C]	$I_u(T)$ [A]	
	$I_n = 2500$ A	$I_n = 3200$ A
-25 — +40	2500	3200
45	2500	3200
50	2500	3100
55	2450	3000
60	2350	2900

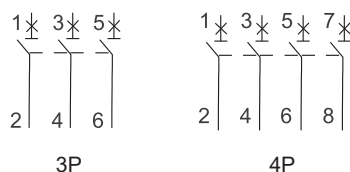
Altitude derating

Altitude	2000 m	3000 m	4000 m	5000 m
Impulse withstand voltage U_{imp}	3500 V	3000 V	2500 V	2000 V
Insulation voltage U_i	1000 V AC	800 V AC	700 V AC	600 V AC
Rated voltage U_e	690 V AC	580 V AC	500 V AC	400 V AC
Rated uninterrupted current I_u	$1 \times I_u(T)$	$0.96 \times I_u(T)$	$0.91 \times I_u(T)$	$0.87 \times I_u(T)$

Secondary terminals

Secondary terminals	screw type
Terminals capacity	0.5 — 1.2 mm ²

Main terminals wiring diagrams

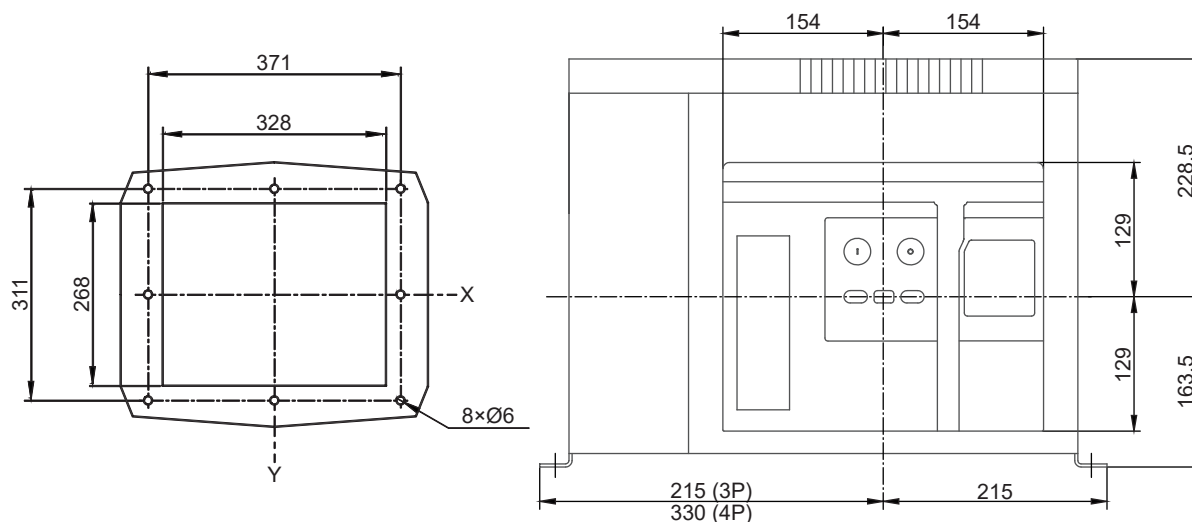


Technical Data Ex9A32

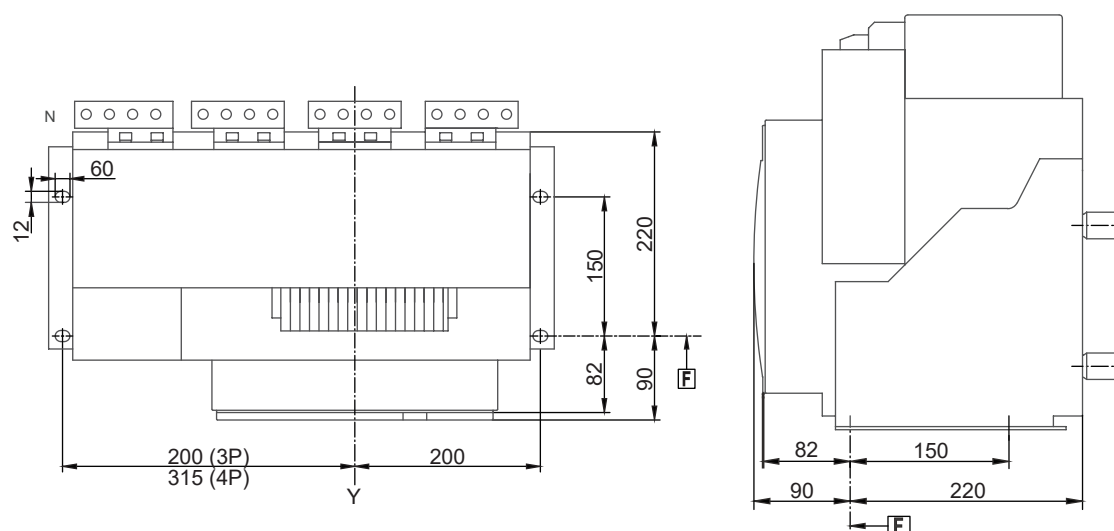
Air Circuit Breakers up to 3200 A

Dimensions - fixed version

Front dimensions



Installation dimensions



X, Y - door cut-out centering
F - Mounting screw reference point

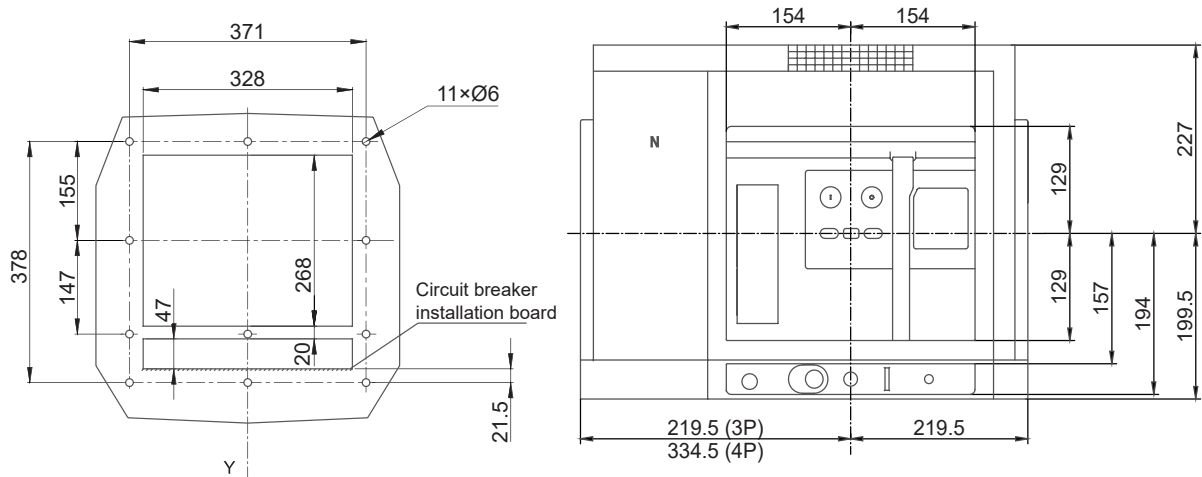
Technical Data Ex9A32

Air Circuit Breakers up to 3200 A

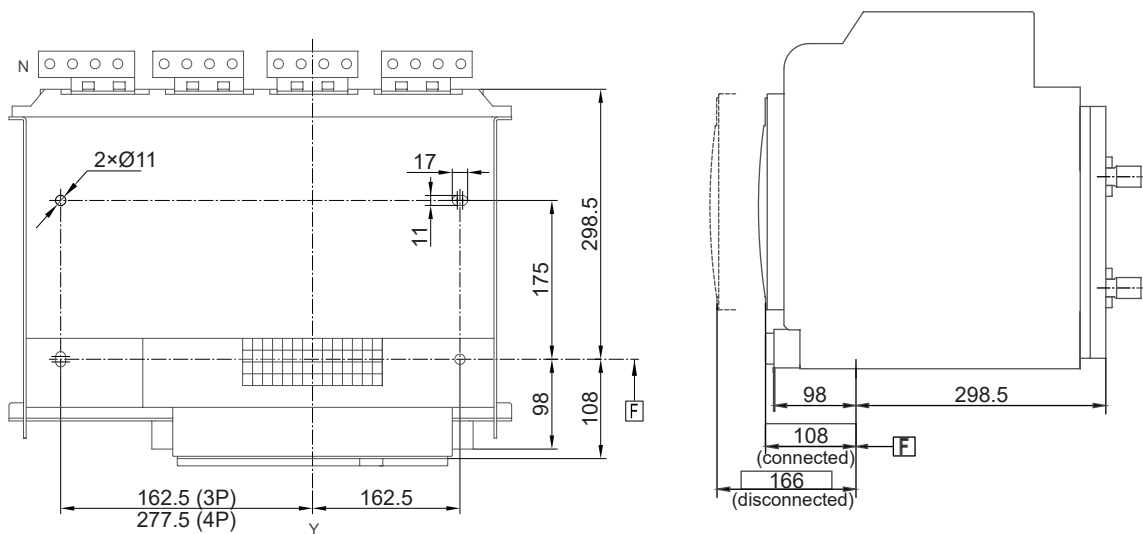
Dimensions - withdrawable version

Front dimensions

mm



Installation dimensions



X, Y - door cut-out centering
F - Mounting screw reference point

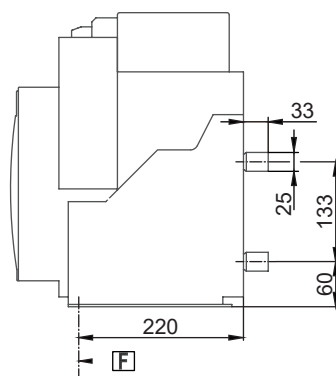
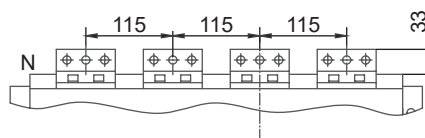
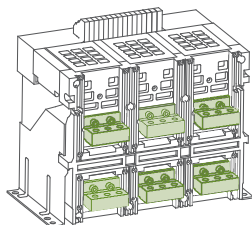
Technical Data Ex9A32

Air Circuit Breakers up to 3200 A

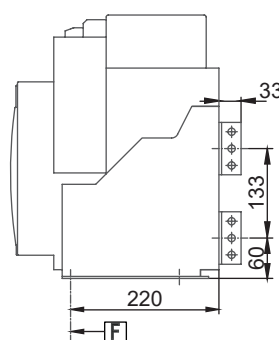
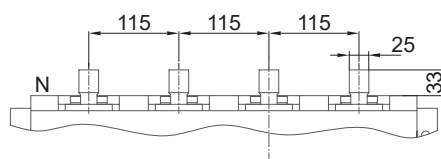
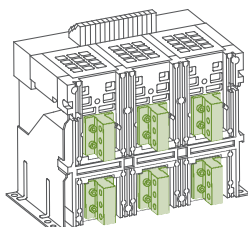
Power connectors dimensions 1600 — 2500 A (Fixed)

Horizontal connection

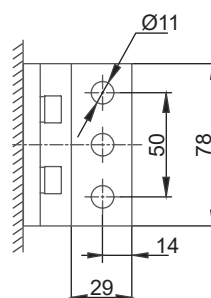
mm



Vertical connection



Horizontal / Vertical Power connector



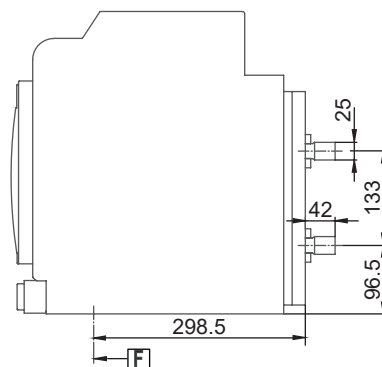
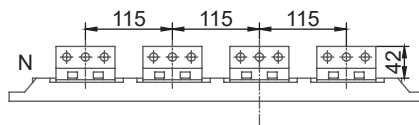
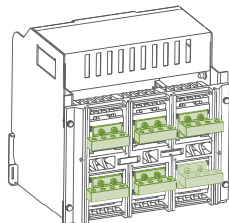
Technical Data Ex9A32

Air Circuit Breakers up to 3200 A

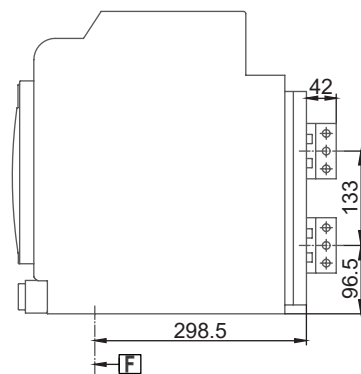
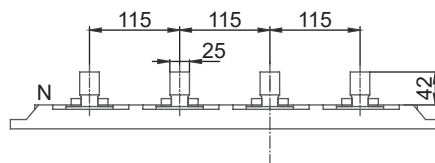
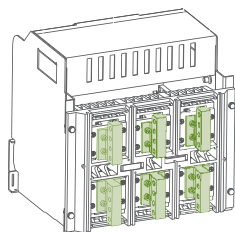
Power connectors dimensions 1600 — 2500 A (Withdrawable)

Horizontal connection

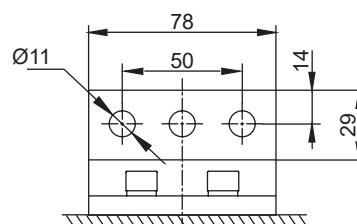
mm



Vertical connection



Horizontal / Vertical Power connector



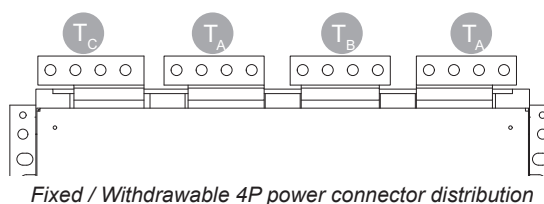
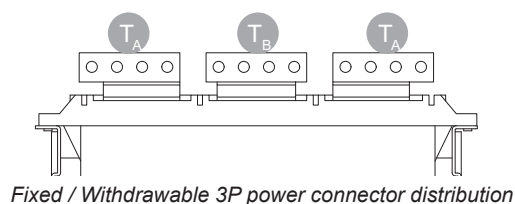
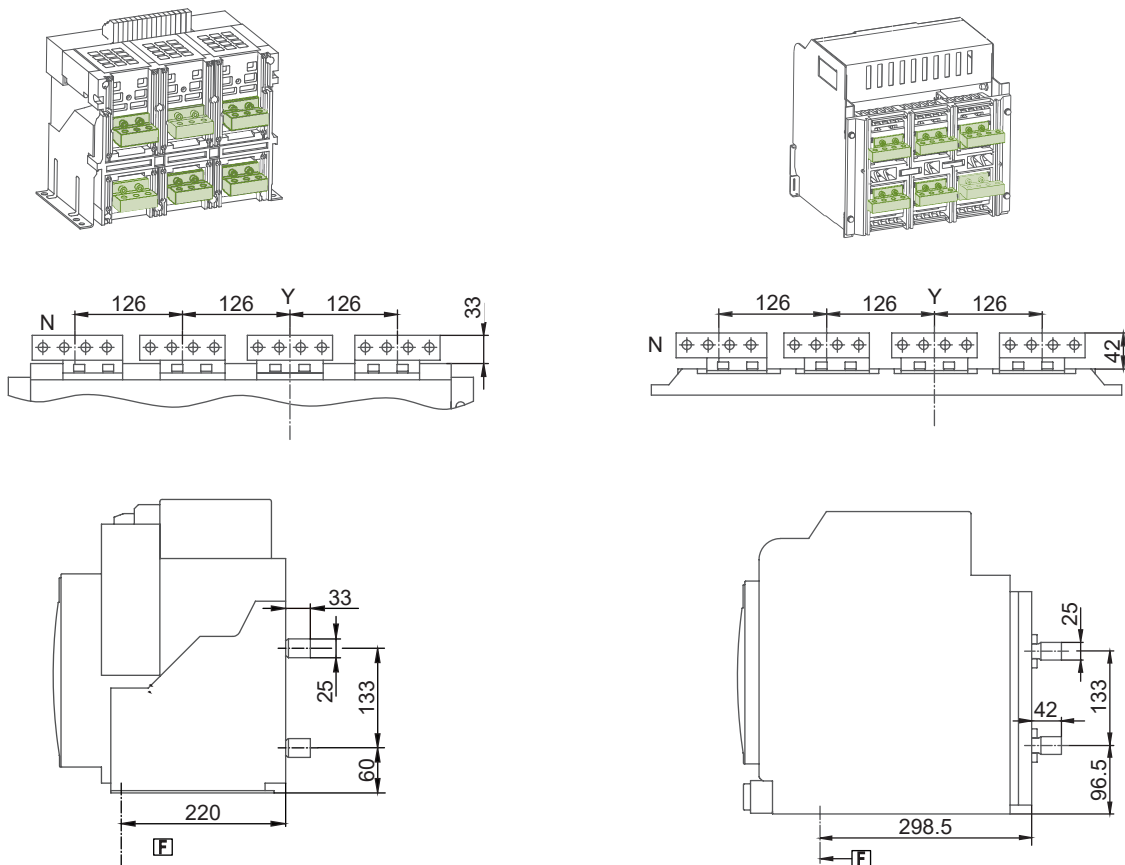
Technical Data Ex9A32

Air Circuit Breakers up to 3200 A

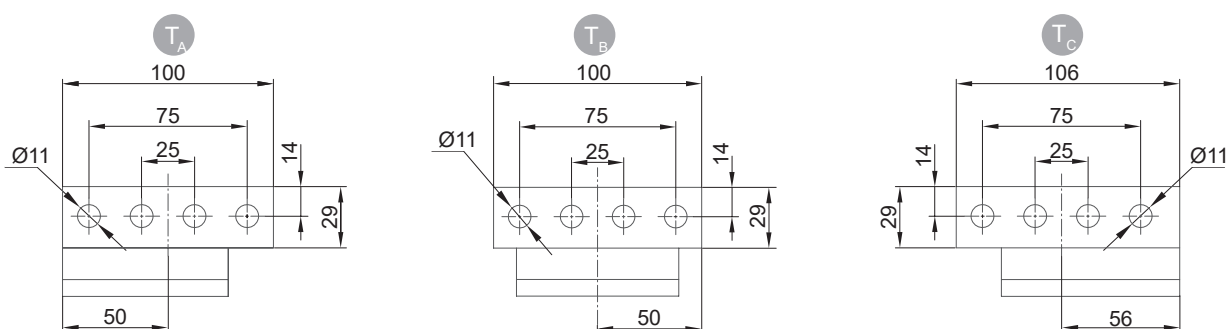
Power connectors dimensions 2500 — 3200 A (Horizontal)

Horizontal connection Fixed / Withdrawable

mm



Horizontal power connector Fixed / Withdrawable



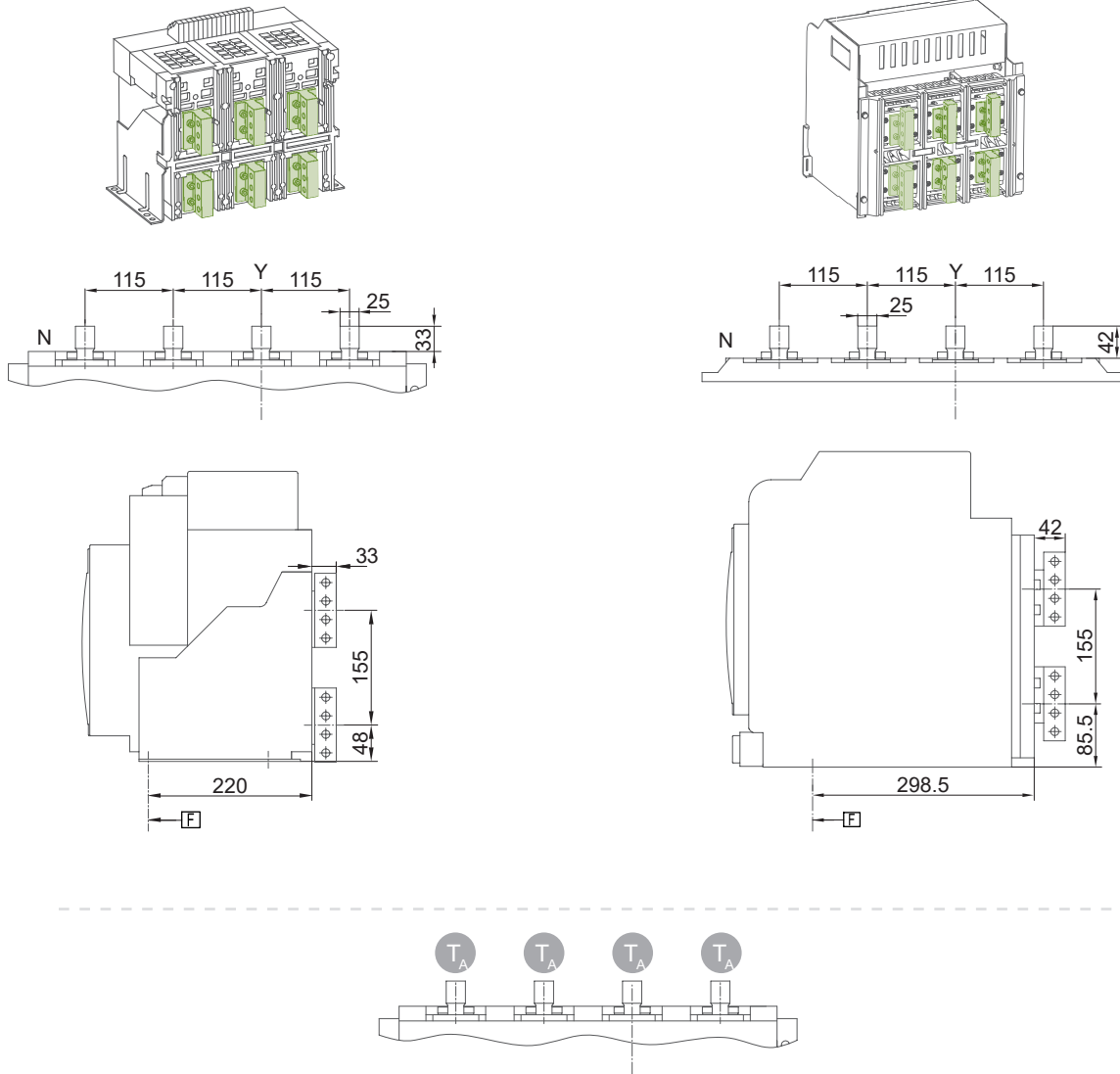
Technical Data Ex9A32

Air Circuit Breakers up to 3200 A

Power connectors dimensions 2500 — 3200 A (Vertical)

Vertical connection Fixed / Withdrawable

mm



Fixed / Withdrawable 3P / 4P power connector distribution

Horizontal power connector Fixed / Withdrawable

