

TECHNICAL CATALOGUE

# SACE Emax 2

## Low voltage air circuit-breakers



# SACE Emax 2 automatic circuit breakers

Common data		
Rated service voltage Ue	[V]	690
Rated insulation voltage Ui	[V]	1000
Rated impulse withstand voltage Uimp	[kV]	12
Frequency	[Hz]	50 - 60
Number of poles		3- 4
Version		Fixed - Withdrawable
Suitable for isolation according to		IEC 60947-2



SACE Emax 2			E1.2		
Performance levels			B	C	N
Rated uninterrupted current Iu @ 40°C		[A]	630	630	250
		[A]	800	800	630
		[A]	1000	1000	800
		[A]	1250	1250	1000
		[A]	1600	1600	1250
		[A]			1600
		[A]			
Neutral pole current-carrying capacity for 4-pole CBs		[%Iu]	100	100	100
Rated ultimate short-circuit breaking capacity Icu	400-415 V	[kA]	42	50	66
	440 V	[kA]	42	50	66
	500-525 V	[kA]	42	42	50
	690 V	[kA]	42	42	50
Rated service short-circuit breaking capacity Ics		[%Icu]	100	100	100 <sup>1)</sup>
Rated short-time withstand current Icw	(1s)	[kA]	42	42	50
	(3s)	[kA]	24	24	30
Rated short-circuit making capacity (peak value) Icm	400-415 V	[kA]	88	105	145
	440 V	[kA]	88	105	145
	500-525 V	[kA]	88	88	105
	690 V	[kA]	88	88	105
Utilization category (according to IEC 60947-2)			B	B	B
Breaking	Breaking time for I < Icw	[ms]	40	40	40
	Breaking time for I > Icw	[ms]	25	25	25
Dimensions	H - Fixed/Withdrawable	[mm]	296/363.5	296/363.5	296/363.5
	D - Fixed/Withdrawable	[mm]	183/271	183/271	183/271
	W - Fixed 3p/4p/4p FS	[mm]	210/280		
	W - Withdrawable 3p/4p/4p FS	[mm]	278/348		
Weights (CB with trip unit and current sensor)	Fixed 3p/4p	kg	14/16		
	Withdrawable 3p/4p/4p FS including fixed part	kg	38/43		

1) Ics : 50kA for 400V...440V voltage; 2) Ics: 125kA for 400V...440V voltage; 3) E4.2H 3200A: 66 Icw (3s)

SACE Emax 2			E1.2		
Mechanical life with regular ordinary maintenance prescribed by the manufacturer		[Iu]	≤ 1000	1250	1600
		[No. cycles x 1000]	20	20	20
	Frequency	[Oper./Hour]	60	60	60
Electrical life with regular ordinary maintenance prescribed by the manufacturer	440 V	[No. cycles x 1000]	8	8	8
	690 V	[No. cycles x 1000]	8	6,5	6,5
	Frequency	[Oper./Hour]	30	30	30



E2.2				E4.2				E6.2			
B	N	S	H	N	S	H	V	H	V	X	
1600	800	250	800	3200	3200	3200	2000	4000	4000	4000	
2000	1000	800	1000	4000	4000	4000	2500	5000	5000	5000	
	1250	1000	1250				3200	6300	6300	6300	
	1600	1250	1600				4000				
	2000	1600	2000								
	2500	2000	2500								
		2500									
100	100	100	100	100	100	100	100	50-100	50-100	50-100	
42	66	85	100	66	85	100	150	100	150	150	
42	66	85	100	66	85	100	150	100	150	150	
42	66	66	85	66	66	85	100	100	130	130	
42	66	66	85	66	66	85	100	100	100	100	
100	100	100	100	100	100	100	100 <sup>2)</sup>	100	100	100	
42	66	66	85	66	66	85	100	100	100	120	
42	50	50	66	50	66	75 <sup>3)</sup>	75	100	100	100	
88	145	187	220	145	187	220	330	220	330	440	
88	145	187	220	145	187	220	330	220	330	440	
88	145	145	187	145	145	187	220	220	286	286	
88	145	145	187	145	145	187	220	220	220	264	
B	B	B	B	B	B	B	B	B	B	B	
40	40	40	40	40	40	40	40	40	40	40	
25	25	25	25	25	25	25	25	25	25	25	
371/425	371/425	371/425	371/425	371/425	371/425	371/425	371/425	371/425	371/425	371/425	
270/383	270/383	270/383	270/383	270/383	270/383	270/383	270/383	270/383	270/383	270/383	
276/366				384/510				762/888/1014			
317/407				425/551				803/929/1069			
41/53				56/70				109/125/140			
84/99				110/136				207/234/260			

E2.2				E4.2				E6.2			
< 1600	1600	2000	2500	< 2500	2500	3200	4000	4000	5000	6300	
25	25	25	20	20	20	20	15	12	12	12	
60	60	60	60	60	60	60	60	60	60	60	
15	12	10	8	10	8	7	5	4	3	2	
15	10	8	7	10	8	7	4	4	2	2	
30	30	30	30	20	20	20	20	10	10	10	

# Protection trip units for power distribution

## Ekip Touch

### Key:

1. Wide high-resolution colour touch-screen display
2. Power-on LED to indicate correct operation (watchdog)
3. Pre-alarm LED
4. Alarm LED
5. Home pushbutton to return to home page
6. Pushbutton for test and indicating cause of trip
7. Test and programming connector

Ekip Touch provides a complete series of protections and high accuracy measurements of all electrical parameters and can be integrated perfectly with the most common automation and supervision systems.

### Characteristics

The simple and intuitive interface enables the operator to access all the information and settings rapidly and easily by minimizing installation and commissioning time.

The unit is available in the versions:

- Ekip Touch LI
- Ekip Touch LSI
- Ekip Touch LSIG

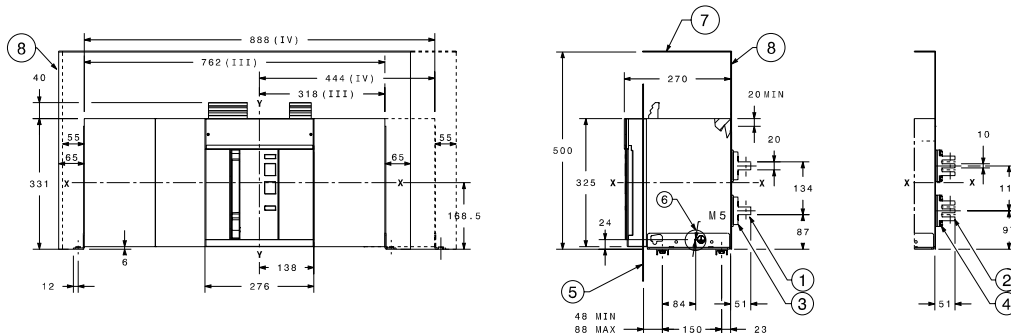


# Fixed circuit-breaker - E6.2

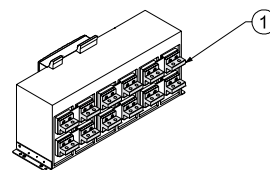
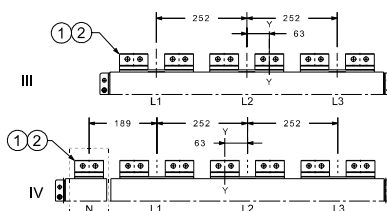
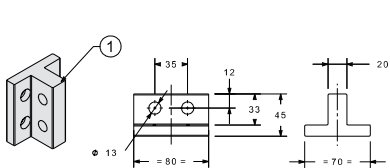
Horizontal rear terminals – HR

E6.2 H/V/X 4000-5000A

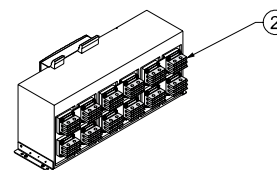
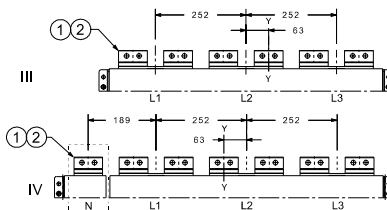
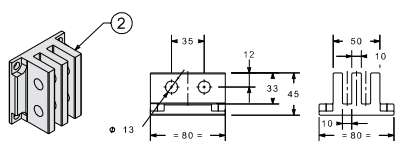
E6.2 H/V/X 4000-6300A



E6.2 H/V/X 4000-5000A



E6.2 H/V/X 4000-6300A

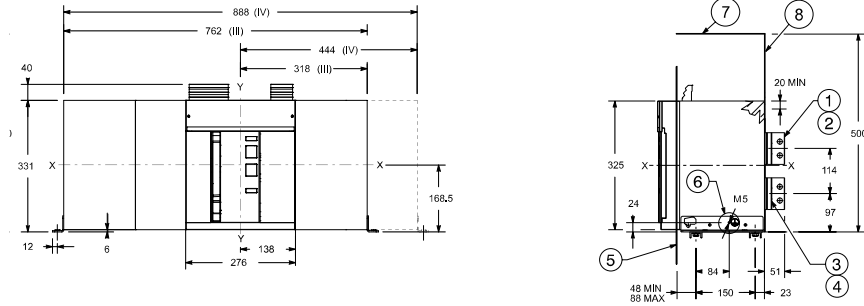


Key

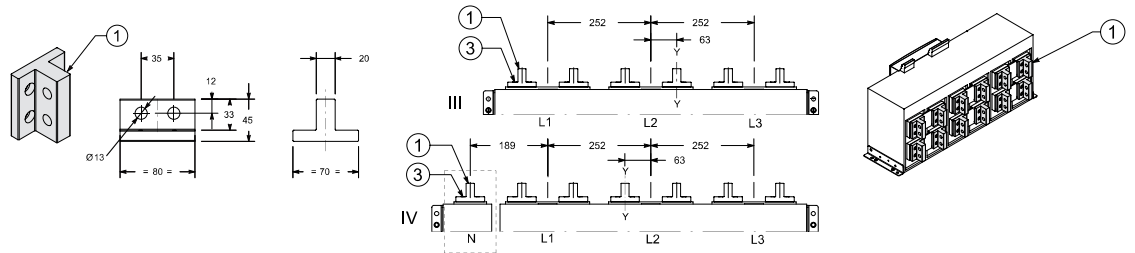
- 1 Horizontal terminals 5000A
- 2 Horizontal terminals 6300A
- 3 Tightening torque 5000A 20Nm
- 4 Tightening torque 6300A 20Nm
- 5 Door position - Ref. page 7/2
- 6 Earthing device - Ref. page 7/3
- 7 Metallic sheet
- 8 Insulating sheet or insulated metallic sheet

Vertical rear terminals – VR

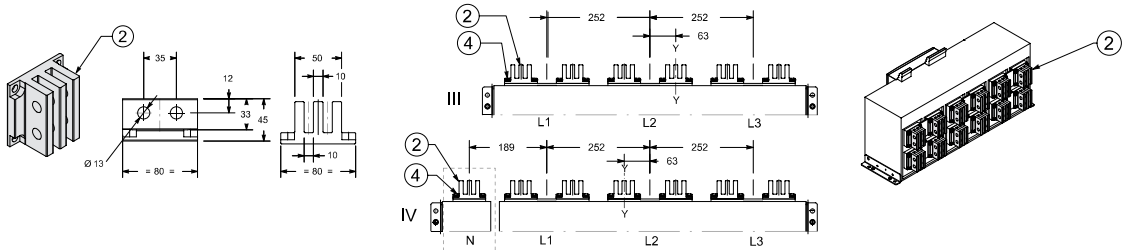
**E6.2 H/V/X 4000...6300A**



**E6.2 H/V/X 4000-5000A**



**E6.2 H/V/X 4000-6300A**



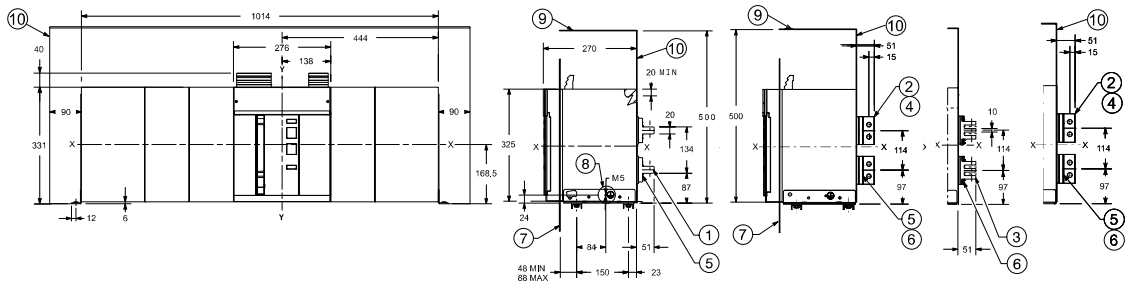
- Key
- 1 Vertical terminals 5000A
  - 2 Vertical terminals 6300A
  - 3 Tightening torque 5000A 20Nm
  - 4 Tightening torque 6300A 20Nm
  - 5 Door position - Ref. page 7/2
  - 6 Earthing device - Ref. page 7/3
  - 7 Metallic sheet
  - 8 Insulating sheet or insulated metallic sheet

# Fixed circuit-breaker - E6.2

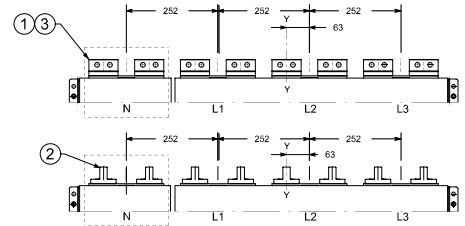
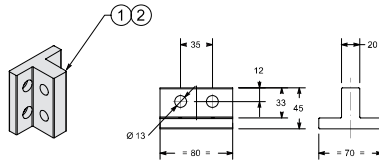
Orientable rear terminals - HR/VR full size

**E6.2 H/V/X 4000-5000A**

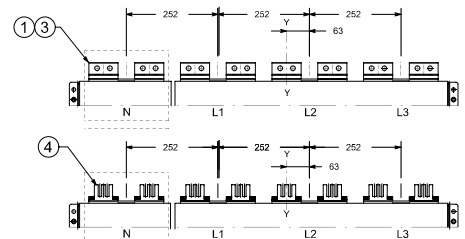
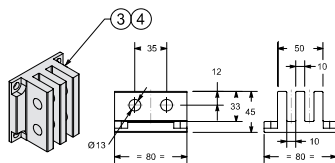
**E6.2 H/V/X  
4000-6300A**



**E6.2 H/V/X 4000-5000A**



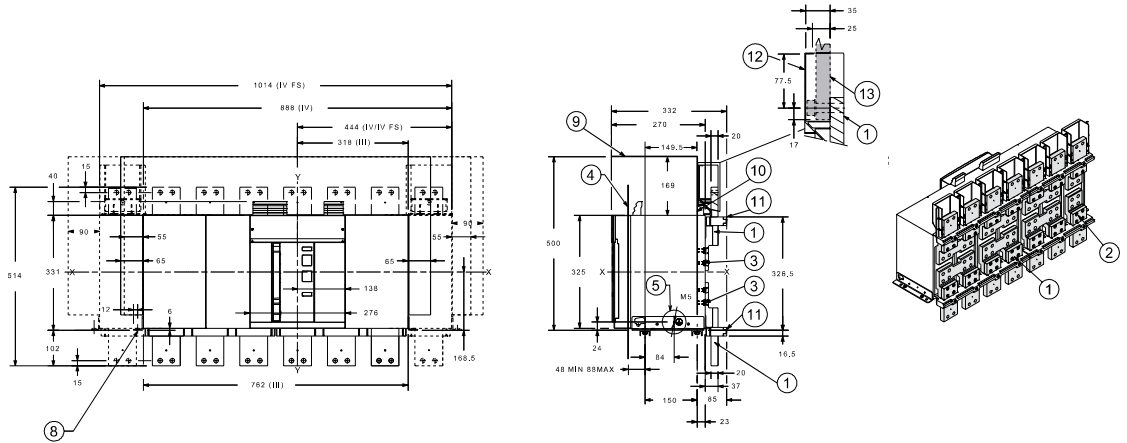
**E6.2 H/V/X 4000-6300A**



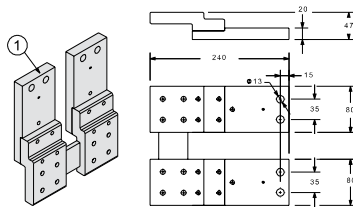
**Key**

- 1 Horizontal terminals 5000A
- 2 Vertical terminals 5000A
- 3 Horizontal terminals 6300A
- 4 Vertical terminals 6300A
- 5 Tightening torque 5000A 20Nm
- 6 Tightening torque 6300A 20Nm
- 7 Door position - Ref. page 7/2
- 8 Earthing device - Ref. page 7/3
- 9 Metallic sheet
- 10 Insulating sheet or insulated metallic sheet

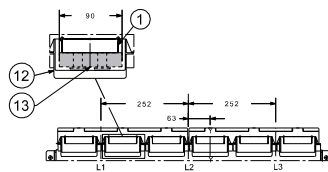
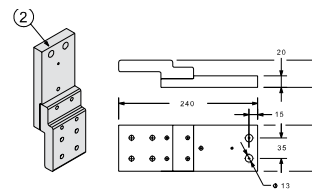
### Front terminals – F



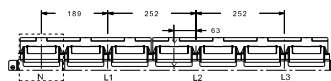
#### Upper front terminals



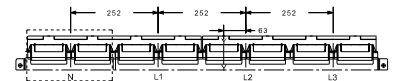
#### Lower front terminal



**3-pole**



**4-pole**



**4-pole full size**

Key

- 1 Upper front terminals
- 2 Lower front terminals
- 3 Tightening torque 8.6Nm
- 4 Door position - Ref. page 7/2
- 5 Earthing device - Ref. page 7/3
- 8 External fixing point. Recommended screws M10x25 high class
- 9 Metallic sheet
- 10 Insulating sheet or insulated metallic sheet
- 11 Crossbeam front terminals
- 12 Plastic protection
- 13 Customer busbar and screws (not provided)

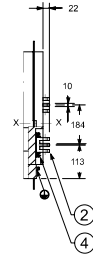
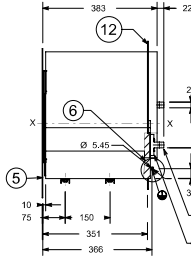
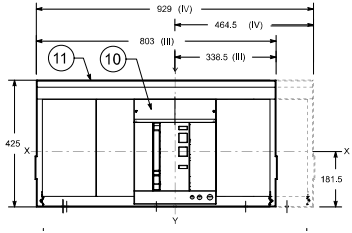


# Withdrawable circuit-breaker - E6.2

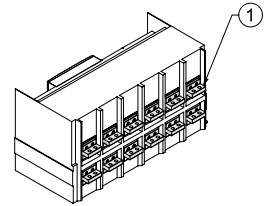
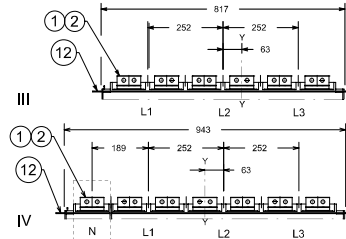
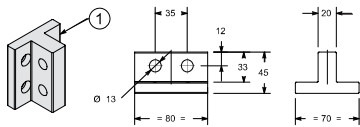
Horizontal rear terminals – HR

E6.2 H/V 4000-5000A

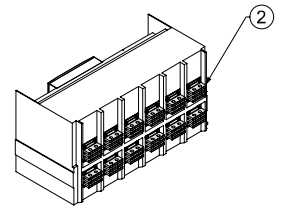
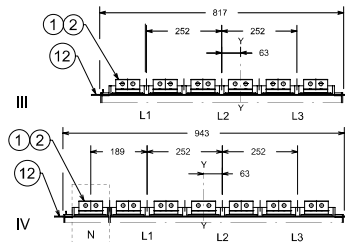
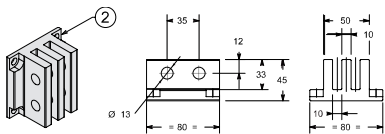
E6.2 H/V 6300A  
E6.2 X 4000...6300A



E6.2 H/V 4000-5000A



E6.2 H/V 6300A  
E6.2 X 4000...6300A



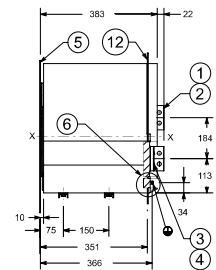
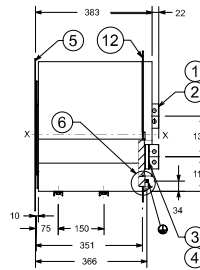
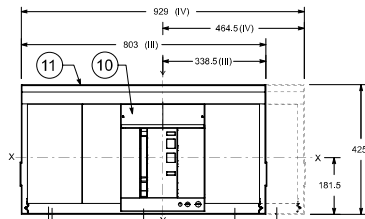
Key

- 1 Horizontal terminals 4000-5000A
- 2 Horizontal terminals 6300A
- 3 Tightening torque 4000-5000A 20Nm
- 4 Tightening torque 6300A 20Nm
- 5 Door position - Ref. page 7/20
- 6 Earthing device
- 10 Mobile part
- 11 Fixed part
- 12 Segregation (where envisaged)

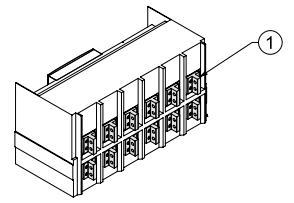
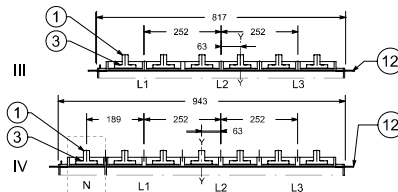
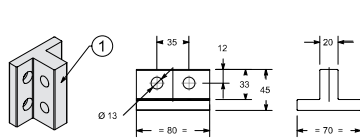
Vertical rear terminals – VR

**E6.2 H/V 4000-5000A**

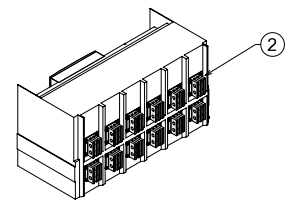
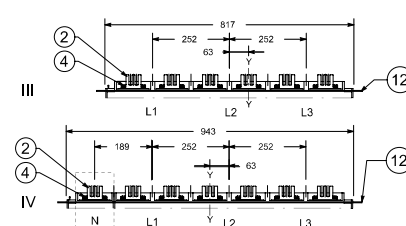
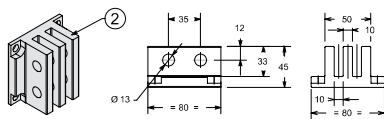
**E6.2 H/V 6300A**  
**E6.2 X 4000...6300A**



**E6.2 H/V 4000-5000A**



**E6.2 H/V 6300A**  
**E6.2 X 4000...6300A**



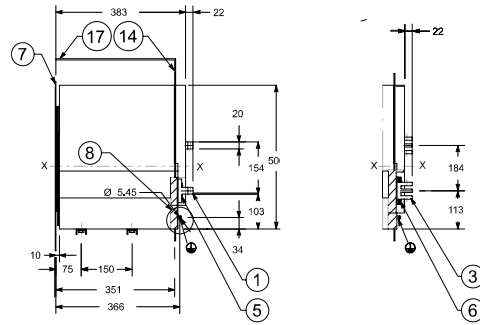
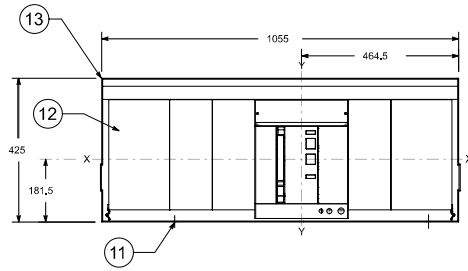
- Key
- 1 Vertical terminals 4000-5000A
  - 2 Vertical terminals 6300A
  - 3 Tightening torque 4000-5000A 20Nm
  - 4 Tightening torque 6300A 20Nm
  - 5 Door position - Ref. page 7/20
  - 6 Earthing device
  - 10 Mobile part
  - 11 Fixed part
  - 12 Segregation (where envisaged)

# Withdrawable circuit-breaker - E6.2

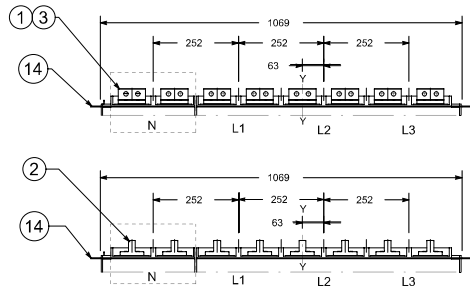
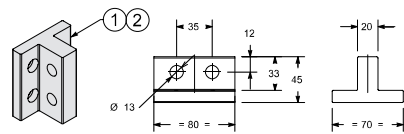
Rear orientable terminals - HR/VR full size

E6.2 H/V 4000...5000A

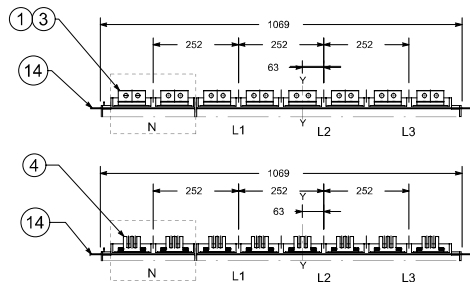
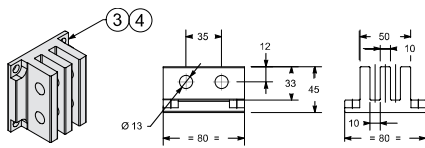
E6.2 H/V 6300A  
E6.2 X 4000...6300A



E6.2 H/V 4000-5000A

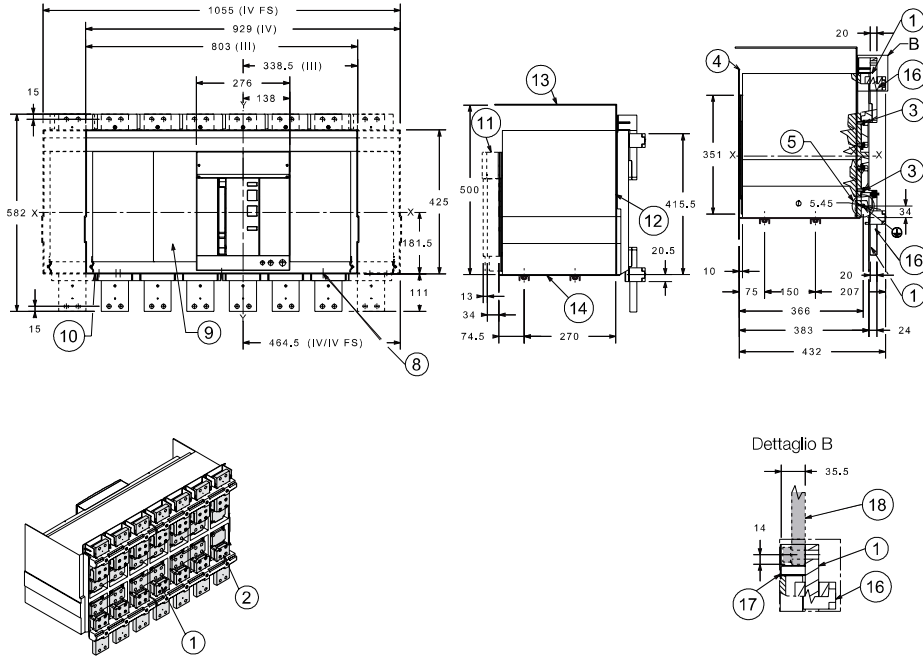


E6.2 H/V 6300A  
E6.2 X 4000...6300A



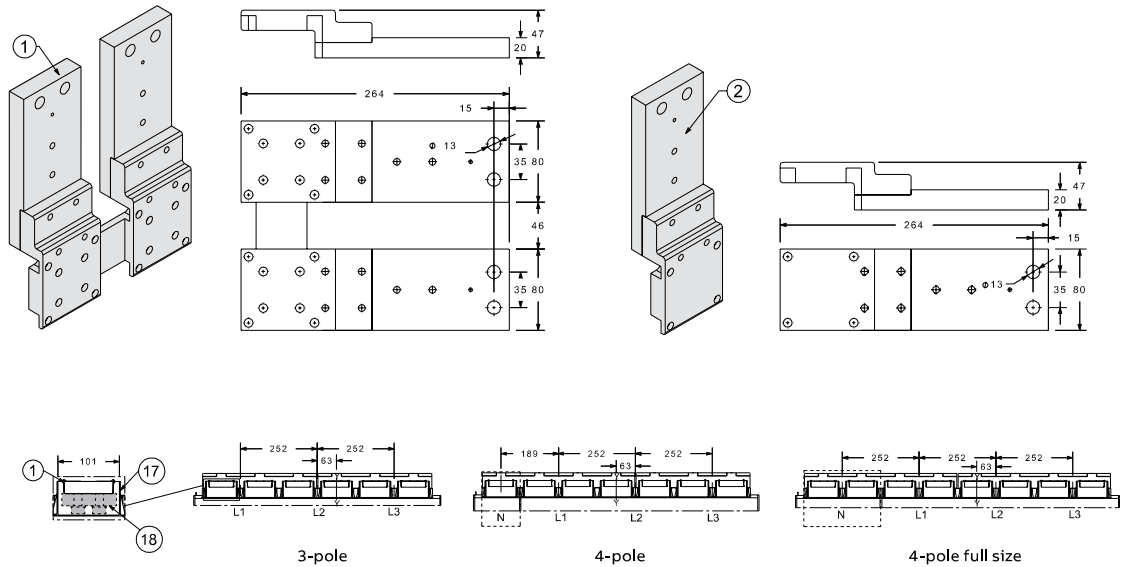
- Key
- 1 Horizontal terminals 4000-5000A
  - 2 Vertical terminals 4000-5000A
  - 3 Horizontal terminals 6300A
  - 4 Vertical terminals 6300A
  - 5 Tightening torque 4000-5000A 20Nm
  - 6 Tightening torque 6300A 20Nm
  - 7 Door position - Ref. page 7/20
  - 8 Earthing device
  - 12 Mobile part
  - 13 Fixed part
  - 14 Segregation (where envisaged)
  - 17 Metallic sheet

## Front terminals – F



### Upper front terminals

### Lower front terminal



- Key
- 1 Upper front terminals
  - 2 Lower front terminals
  - 3 Tightening torque 8,6Nm
  - 4 Door position - Ref. page 7/20
  - 5 Earthing device
  - 8 External fixing point Recommended screws M10x25 high class
  - 9 Moving part
  - 10 Fixed part
  - 11 Connected, test, disconnected distances
  - 12 Insulating sheet or insulated metallic sheet
  - 13 Roof insulation or insulated metal
  - 14 Fixing plate
  - 15 Crossbeam front terminal
  - 16 Plastic protection
  - 17 Customer busbar and screws (not provided)