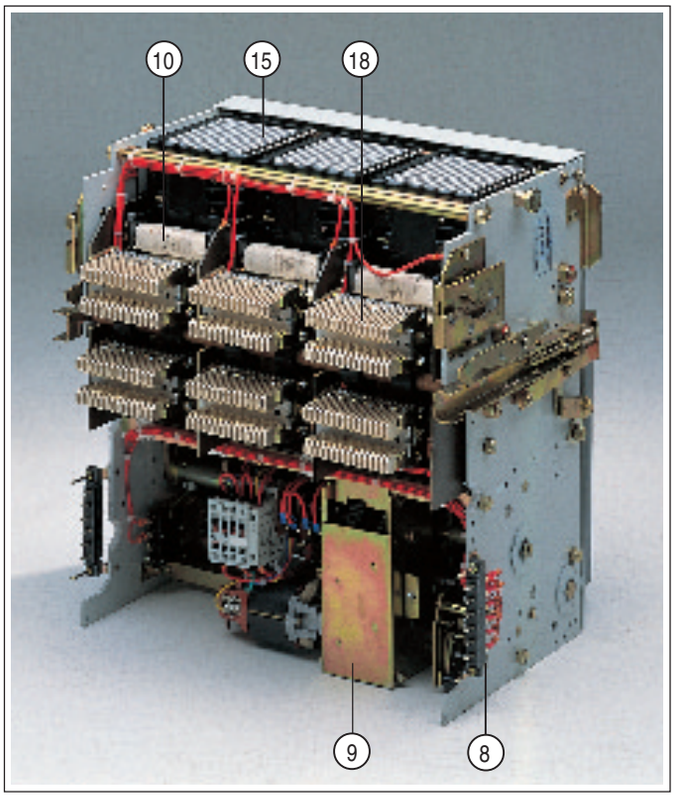
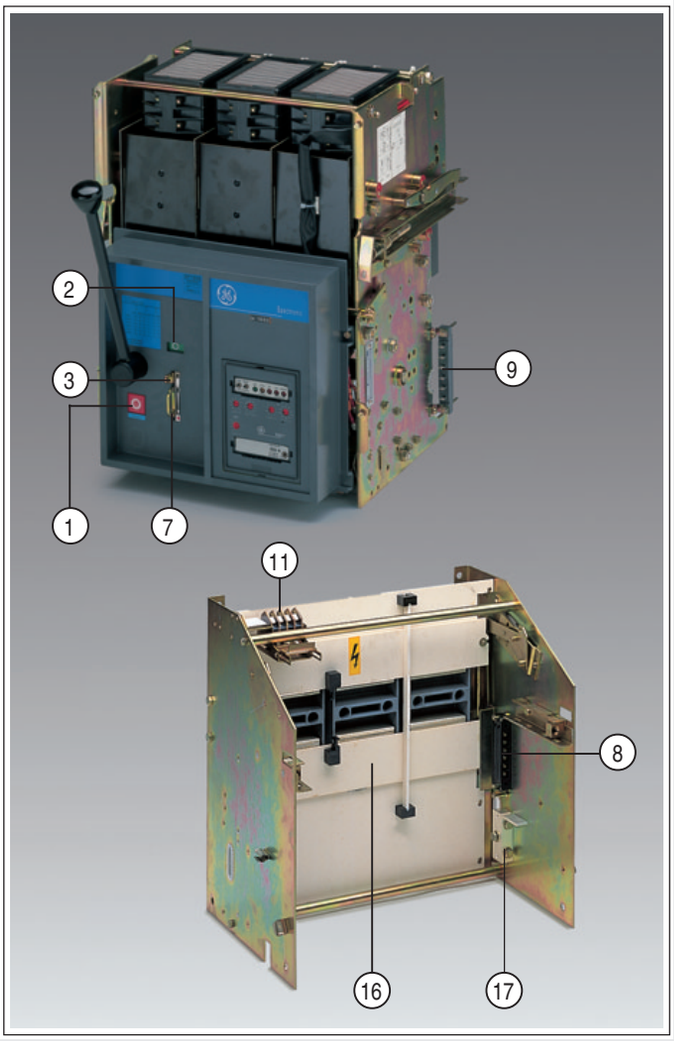
Withdrawable circuit breaker





Description

The circuit breaker is mounted on a cradle fitted with slides allowing two positions: “inserted” and “withdrawn-isolated”.

The insertion and withdrawal operations are performed by a screw-nut system, operated by two removable cranks.

Automatic tripping of the breaker on withdrawal is ensured by a safety device at the insertion of the cranks.

For panel mounting, a seal and a cover, permit IP3x protection with the door closed.

The circuit breaker may be withdrawn either with the door closed or open.

Installation

- Fixing to the vertical uprights by rear surface or on a horizontal surface by adding L pieces on side faces.
- Main connections (see table on page D.27).
- The auxiliary circuits disconnect automatically and simultaneously with the main circuit.
- Connections to the auxiliary circuits are made laterally with clips(maximum 24 terminals)
- Standard unit equipped with 12 terminals.

Power supply orientation

Up to 415V, connections are made either to the upper or lower terminal clamps. Above 415V, connect to the upper terminals.

Characteristics

Circuit Breakers

			SP 800	SP 1000	SP 1250	SP 1600	SP 2000	SP 2500
Rated insulation voltage Ui		(V)	1000	1000	1000	1000	1000	1000
Rated impulse voltage Uimp		(kV)	8	8	8	8	8	8
Rated maximum nominal voltage Ue		(V)	690	690	690	690	690	690
Rated thermal current Ith	40°C	(A)	800	1000	1250	1600	2000	2500
	50°C	(A)	800	1000	1250	1600	2000	2500
	60°C	(A)	800	1000	1250	1500	1900	2350
Rated ultimate short-circuit breaking capacity Icu								
Alternating current 50/60Hz	240/415V	(kA)	55	55	55	55	60	60
	500V	(kA)	35	35	35	35	35	35
	690V(1)	(kA)	40	40	40	40	40	40
Rated service short-circuit breaking capacity Ics								
Alternating current 50/60Hz	240/415V	(kA)	50	50	50	50	55	55
	500V	(kA)	35	35	35	35	35	35
	690V(1)	(kA)	40	40	40	40	40	40
Rated peak short-circuit making capacity (max) Icm		(kA peak)	120	120	120	120	130	130
Rated short time withstand current Icw: 1 sec.								
	415V	(kA eff.)	50	50	50	50	55	55
	500V	(kA eff.)	35	35	35	35	35	35
Utilization category			B	B	B	B	B	B
Number of poles			3-4	3-4	3-4	3-4	3-4	3-4
Suitable for isolation (visible breaking indication)			•	•	•	•	•	•
Endurance (number of operating cycles)								
Mechanical (total)		# operating cycles	10000	10000	10000	10000	10000	10000
Electrical (at 415V)(2)		# operating cycles	10000	10000	10000	10000	5000	3500
Mean time between maintenances		# operating cycles	1500	1500	1500	1500	1500	1500
Power dissipation (withdrawable, 3 poles)		(W)	150	200	300	400	450	500
4th pole conventional thermal current		(A)	800	1000	1250	1600	1250(3)	1250(3)
Pollution degree			3	3	3	3	3	3
Dimensions in mm (fixed version)								
3 poles	Height	(mm)	462	462	462	462	462	462
	Width	(mm)	370	370	370	370	464	464
	Depth	(mm)	273.5	273.5	273.5	273.5	273.5	273.5
4 poles	Height	(mm)	462	462	462	462	462	462
	Width	(mm)	458	458	458	458	52	562
	Depth	(mm)	273.5	273.5	273.5	273.5	273.5	273.5

(1) On request.
(3) Neutral reduced to the left.

(2) To guarantee this number of operations, it is necessary to check the spark arrestors and the arc chutes as shown in the table above (Replace them when necessary) This can be done easily on site

Switches

		SP 800	SP 1000	SP 1250	SP 1600	SP 2000	SP 2500
Rated thermal current at 40°C Ith	(A)	800	1000	1250	1600	2000	2500
Rated peak short-circuit making current Icm	(kA peak)	120	120	120	120	130	130
Rated short time withstand current Icw: 1 sec.							
415V	(kA eff.)	50	50	50	50	55	55
500V	(kA eff.)	35	35	35	35	35	35
Dimensions in mm (fixed circuit breaker): See circuit breaker table above							

RV 23: Protection unit for SP400 to SP2500

Description

The RV 23 unit meets the requirements of the IEC 947.2 standard.

This unit is powered by the current transformers and performs all the necessary three or four pole overcurrent protections.

The RV 23 is designed for :

- 3 pole or 4 pole protection: 3P/3P+N
- 3 pole with half neutral protection: 3P+N50%
- 3 pole or 4 pole ground fault protection

Note

In RV03 unit there are no LT delay setting and GF protection

Standard protection

- Overload protection (LT)
- Short-circuit protection (ST-I)
- Ground fault protection (GF)

Setting ranges

		Setting points
LT	(x In)	0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 1
LTD	(s)	5 - 15 - 40 delay at 6 Ir
ST	(x In)	2 - 3 - 4 - 6 - 8 - 10
Time delay	(ms)	50 - 100 - 200 - 300- 500
I	(x In)	2 - 3 - 5 - 8 - 10 - OFF
GF	(x In)	0.25 - 0.3 - 0.4 - 0.5 - 0.6 - 0.7
Time delay	(ms)	200 - 300 - 400

Ir = k x In

Front face options

The RV unit may supplied with following modules.

Optional distinct fault signalling (LT, ST-I, GF)

This option displays locally by LED and dry contacts the origin of the fault.

Optional Load monitoring

threshold setting :(0. 5 - 0.6 - 0.7 - 0.8 - 0.9 - 10) x Ir

Optional Ammeter

A digital ammeter permanently displays the maximum current value.

The current of other phases is available locally.

Internal Options

Auxiiary power supply

24V DC - 15W or 24V AC - 15 VA RV front face options