

New

Record Plus™

Draw-out Circuit Breakers
Selective & Current Limiting



GE imagination at work

Record Plus™

Moulded Case Circuit Breakers Selective and Current Limiting

The Record Plus family of circuit breakers is a line of aesthetically and technically coordinated protection devices developed for use in low voltage distribution and control applications. The circuit breakers are available in four sizes, each of which is tailored to the individual requirements associated with its application.

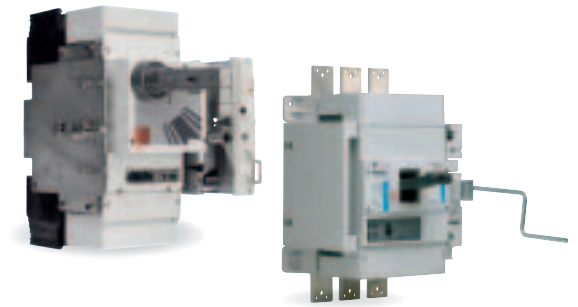
A line of three and four pole devices ranging from 3A to 1600A in four basic envelopes with fault interruption ratings of up to 150kA. A design offering a unique combination of current limitation and full selectivity.



Record Plus Draw-out types

Safe, easy to install and cost efficient

A simple, hand operated draw-out system is available for the breaker envelopes FE, FG and FK frame. The draw-out system enables Record Plus breakers with rating from 3A to 1600A to be configured as devices that can be fully insulated from the power supply and installation. Each device has three positions Inserted and Connected, Test and Isolated, and Withdrawn.

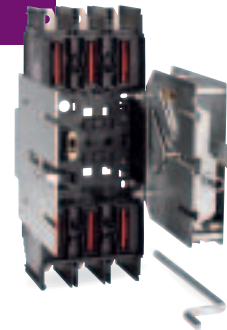


Draw-out system up to 630A

A design modelled on our ACB constructions and incorporating a standard plug in base encapsulated in a sturdy metal cradle. The devices have a protection degree of IP40 in Withdrawn or Inserted position and offer a major step forward in MCCB draw-out construction.

A system suitable for the 160, 250, 400 & 630A envelopes offering a host of features:

New

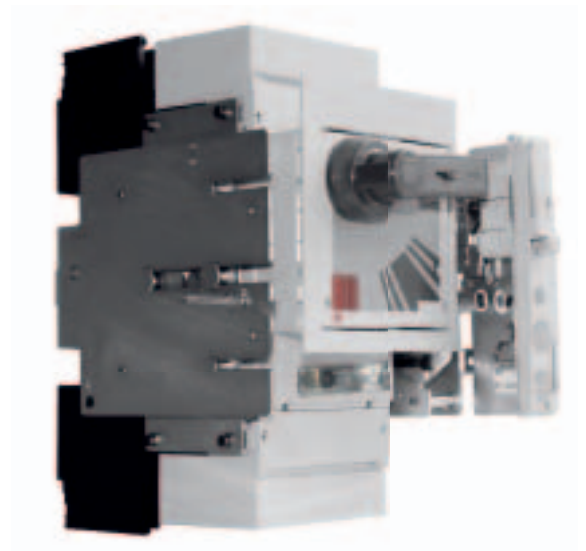


Integrated features

- Use behind door.
- Trip functionality on insertion and withdrawal.
- With MCCB style test position.
- Easily accessible earthing point.

Optional features

- Through door version allowing accessibility of all draw-out and/or breaker functions from the door front. This with the breaker operated by a toggle handle a rotary handle or a motor operator.
- An optional locking option for multiple padlocks and/or multiple key locks.
- Multiple carriage indication switches for each position
- ACB style test position.
- Quick and simple assembly & installation from readily available kits.



Carriage Indication Contacts

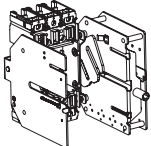
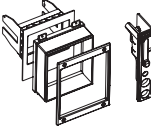
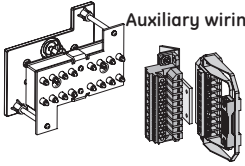
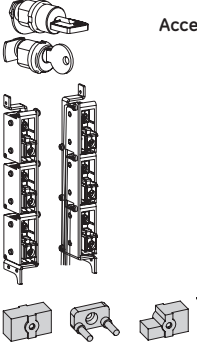


Two different sets are available one with 1 NO indication contact per position (total 3 NO contacts) and a second with 1 NO and 1 NC contact per position (total 3 NO + 3 NC contacts). These sets come as easy to fit and connect field mountable kits.

ACB style Test Position

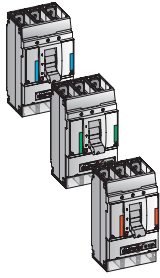
To enable the user to test the functionality of the installed accessories the draw-out system has a test position in which the mains supply is disconnected from the breaker. A 16 or 24 pole kit is available that can be used to connect and test the installed accessories in this position. The kit connects the installed auxiliaries in both the test and plugged-in positions and allows for a test position without any external plug(s) or socket(s).

Draw-out kits (overview of commonly used breakers, see next page)

Draw-out system		FE frame		FG frame	
		Cat. No.	Ref. No.	Cat. No.	Ref. No.
	Draw-out system suitable for 3 pole breaker Suitable for behind door applications	FEWB3	432538	FGWB3	432550
	Draw-out system suitable for 4 pole breaker Suitable for behind door applications	FEWB4	432544	FGWB4	432556
	Complete through door adaptation kit for draw-out system with padlocking and keylocking option. ⁽¹⁾ For breaker with toggle operator.	FEWT	432580	FGWT	432592
	Complete through door adaptation kit for draw-out system with padlocking and keylocking option. ⁽¹⁾ For breaker with motor operator.	FEWM	432583	FGWM	432595
	Complete through door adaptation kit for draw-out system with padlocking and keylocking option. ⁽¹⁾ For breaker with rotary handle (Type FENRC, FENRY, FGNC or FGTRY)	FEWN	432586	FGWN	432598
	Complete through door adaptation kit for draw-out system with padlocking and keylocking option. ⁽¹⁾ Breaker behind door.	FAWE	432619	FAWE	432619
	Draw-out auxiliary wiring kit complete 16 pole allowing test position	FEWA2	432589	FGWA2	432601
	Draw-out auxiliary wiring kit complete 24 pole allowing test position	-	-	FGWA3	432604
	Plug & socket 10 pole allowing 'artificial' test position (including wiring)	FAPPS	430827	FAPPS	430827
	Keylock in draw-out position Ronis 1104b ⁽²⁾	FA1BRWD	432613	FA1BRWD	432613
	Keylock in draw-out position Profalux ⁽²⁾	FA1BPWD	432616	FA1BPWD	432626
	Position indication contact set 3 NO	FAS30W	432607	FAS30W	432607
	Position indication contact set 3NO + 3NC	FAS33W	432610	FAS33W	432610
	Insertion prevention kit, prevents insertion of mobile part into base of a different rating	FAPIP	430825	FAPIP	430825

(1) Locks not supplied.

(2) Maximum of two locks, option only available with through door kits



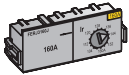
Breakers with Selective Electronic Trip Unit (SMR1) without Rating Plug

In (A)	FE160 type				In (A)	FE250 type				
	3 pole		4 pole ⁽¹⁾			3 pole		4 pole ⁽¹⁾		
	Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.	
50kA FEN	63	FEN36AA063JEF	435884	FEN46AA063JEF	435890	125	FEN36AA125KGF	431920	FEN46AA125KGF	431938
	125	FEN36AA125JGF	431698	FEN46AA125JGF	431787	160	FEN36AA160KJF	431706	FEN46AA160KJF	431793
	160	FEN36AA160JF	431703	FEN46AA160JF	431790	250	FEN36AA250KKF	431709	FEN46AA250KKF	431796
80kA FEH	63	FEH36AA063JEF	435860	FEH46AA063JEF	435866	125	FEH36AA125KGF	431116	FEH46AA125KGF	431824
	125	FEH36AA125JGF	431112	FEH46AA125JGF	431201	160	FEH36AA160KJF	431120	FEH46AA160KJF	431207
	160	FEH36AA160JF	431117	FEH46AA160JF	431204	250	FEH36AA250KKF	431123	FEH46AA250KKF	431210
150kA FEL	63	FEL36AA063JEF	435872	FEL46AA063JEF	435878	125	FEL36AA125KGF	431836	FEL46AA125KGF	431890
	125	FEL36AA125JGF	431405	FEL46AA125JGF	431494	160	FEL36AA160KJF	431413	FEL46AA160KJF	431500
	160	FEL36AA160JF	431410	FEL46AA160JF	431497	250	FEL36AA250KKF	431416	FEL46AA250KKF	431503

One code covers: A standard fixed front connection breaker - Toggle elongator - Breaker finishing covers - Fixation hardware

$I_r = 0.64 - 1 \times I_n$

Adjustable Rating Plugs for Trip Units SMR1



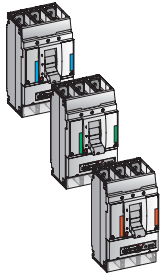
In (A)	3 pole 3 trips		4 pole 3 trips ⁽¹⁾		In (A)	3 pole 3 trips		4 pole 3 trips ⁽¹⁾			
	Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		
63A	40	FERJ3E0040	432180	FERJ43E0040	432216	125A	80	FERJ3G0080	432186	FERJ43G0080	432222
	63	FERJ3E0063	432183	FERJ43E0063	432219		125	FERJ3G0125	432192	FERJ43G0125	432228
	80	FERJ3G0080	432186	FERJ43G0080	432222		100	FERJ3J0100	432189	FERJ43J0100	432225
	125	FERJ3G0125	432192	FERJ43G0125	432228		160A	160	FERJ3J0160	432189	FERJ43J0160
125A	100	FERJ3J0100	432189	FERJ43J0100	432225	160A	160	FERJ3K0160	432204	FERJ43K0160	432240
	160	FERJ3J0160	432195	FERJ43J0160	432231		250	FERJ3K0250	432207	FERJ43K0250	432243
	4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips(N=50%) ⁽¹⁾		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips(N=50%) ⁽¹⁾				
	63A	40	FERJ4E0040	432282	FERJ45E0063		432249	125A	80	FERJ4G0080	432288
125A	63	FERJ4E0063	432285	FERJ45E0063	432249	160A	125	FERJ4G0125	432294	FERJ45G0125	432258
	80	FERJ4G0080	432288	FERJ45G0080	432252		100	FERJ4J0100	432291	FERJ45J0100	432255
	125	FERJ4G0125	432294	FERJ45G0125	432258		160	FERJ4J0160	432297	FERJ45J0160	432261
	100	FERJ4J0100	432291	FERJ45J0100	432255		250A	160	FERJ4K0160	432306	FERJ45K0160
160A	160	FERJ4J0160	432297	FERJ45J0160	432261	250A	250	FERJ4K0250	432309	FERJ45K0250	432273

$I_r = 0.4 - 1 \times I_n$

Switchable Rating Plugs for Trip Units SMR1



In (A)	3 pole 3 trips		4 pole 3 trips (1)		In (A)	3 pole 3 trips		4 pole 3 trips ⁽¹⁾			
	Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		
63A	63	FERS3E0063	432315	FERS43E0063	432333	125A	125	FERS3G0125	432318	FERS43G0125	432336
125A	125	FERS3G0125	432318	FERS43G0125	432336	160A	160	FERS3J0160	432321	FERS43J0160	432339
160A	160	FERS3J0160	432321	FERS43J0160	432339	250A	250	FERS3K0250	432327	FERS43K0250	432345
4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips (N=50%) ⁽¹⁾		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips (N=50%) ⁽¹⁾					
63A	63	FERS4E0063	432366	FERS45E0063	432348	125A	125	FERS4G0125	432369	FERS45G0125	432351
125A	125	FERS4G0125	432369	FERS45G0125	432351	160A	160	FERS4J0160	432372	FERS45J0160	432354
160A	160	FERS4J0160	432372	FERS45J0160	432354	250A	250	FERS4K0250	432378	FERS45K0250	432360



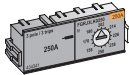
Breakers with Selective Electronic Trip Unit (SMR1) without Rating Plug

In (A)	FG400 type				In (A)	FG630 type					
	3 pole		4 pole ⁽¹⁾			3 pole		4 pole ⁽¹⁾			
	Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		
50kA FGN	250	FGN36AA250LKF	434248	FGN46AA250LKF	434253	50kA FGN	500	FGN36AA500NNF	434812	FGN46AA500NNF	434866
	400	FGN36AA400LLF	431455	FGN46AA400LLF	431536		630	FGN36AA630NNF	431461	FGN46AA630NNF	431539
80kA FGH	250	FGH36AA250LKF	434232	FGH46AA250LKF	434237	80kA FGH	500	FGH36AA500NNF	434600	FGH46AA500NNF	434630
	400	FGH36AA400LLF	431032	FGH46AA400LLF	431106		630	FGH36AA630NNF	431038	FGH46AA630NNF	431132
150kA FGL	250	FGL36AA250LKF	434240	FGL46AA250LKF	434245	150kA FGL	500	FGL36AA500NNF	434645	FGL46AA500NNF	434770
	400	FGL36AA400LLF	431246	FGL46AA400LLF	431330		630	FGL36AA630NNF	431249	FGL46AA630NNF	431333

One code covers: A standard fixed front connection breaker - Toggle elongator - Breaker finishing covers - Fixation hardware

$I_r = 0.64 - 1 \times I_n$

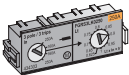
Adjustable Rating Plugs for Trip Units SMR1



In (A)	3 pole 3 trips		4 pole 3 trips(1)		In (A)	3 pole 3 trips		4 pole 3 trips(1)				
	Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.			
250A	160	FGRJ3LK0160	434337	FGRJ43LK0160	434345	500A	400	FGRJ3NN0400	433154	FGRJ43NN0400	433166	
	250	FGRJ3LK0250	434341	FGRJ43LK0250	434349		500	FGRJ3NN0500	435337	FGRJ43NN0500	435349	
	250	FGRJ3LK0250	435343	FGRJ43LK0250	435356		630A	630	FGRJ3NN0630	433157	FGRJ43NN0630	433169
	400	FGRJ3LL0400	433151	FGRJ43LL0400	433163		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips(N=50%) ⁽¹⁾			
400A	4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips(N=50%) ⁽¹⁾		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips(N=50%) ⁽¹⁾					
	250A	160	FGRJ4LK0160	434361	FGRJ45LK0160	434353	500A	400	FGRJ4NN0400	433190	FGRJ45NN0400	433178
	250	FGRJ4LK0250	434365	FGRJ45LK0250	434357	500		FGRJ4NN0500	435391	FGRJ45NN0500	435364	
	400A	250	FGRJ4LL0250	435397	FGRJ45LL0250	435367		630A	630	FGRJ4NN0630	433193	FGRJ45NN0630
400	FGRJ4LL0400	433187	FGRJ45LL0400	433175	4 pole 4 trips ⁽¹⁾			4 pole 3.5 trips(N=50%) ⁽¹⁾				

$I_r = 0.4 - 1 \times I_n$

Switchable Rating Plugs for Trip Units SMR1

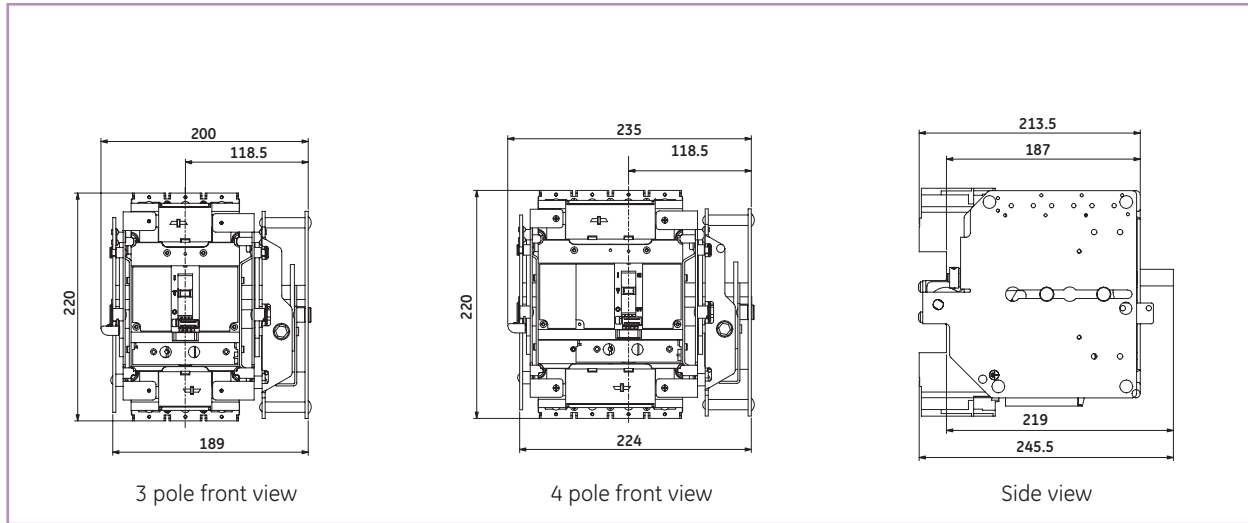


In (A)	3 pole 3 trips		4 pole 3 trips ⁽¹⁾		In (A)	3 pole 3 trips		4 pole 3 trips ⁽¹⁾			
	Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		Cat. Nr.	Ref. No.	Cat. Nr.	Ref. No.		
250A	250	FGRS3LK0250	434303	FGRS43LK0250	434307	500A	500	FGRS3N0500	434512	FGRS43N0500	434521
400A	400	FGRS3LL0400	435435	FGRS43LL0400	434516		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips(N=50%) ⁽¹⁾		
250A	250	FGRS4LK0250	434315	FGRS45LK0250	434311	500A	500	FGRS4N0500	434542	FGRS45N0500	434530
400A	400	FGRS4LL0400	434537	FGRS45LL0400	434525		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips(N=50%) ⁽¹⁾		

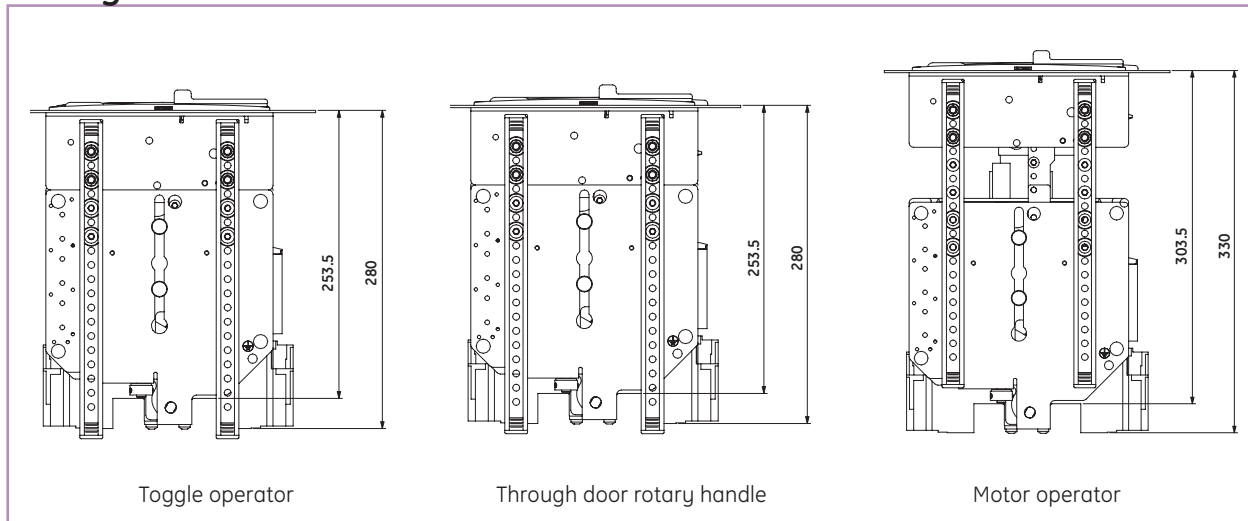
(1) Neutral on the left. If neutral on the right is needed, please contact us.

Dimensional drawings

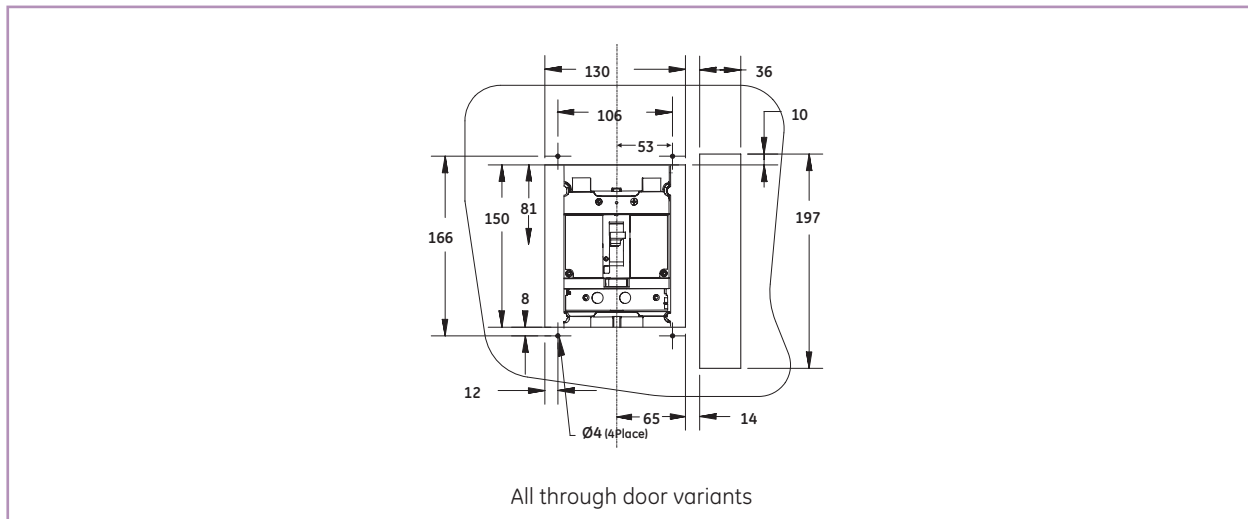
FE frame



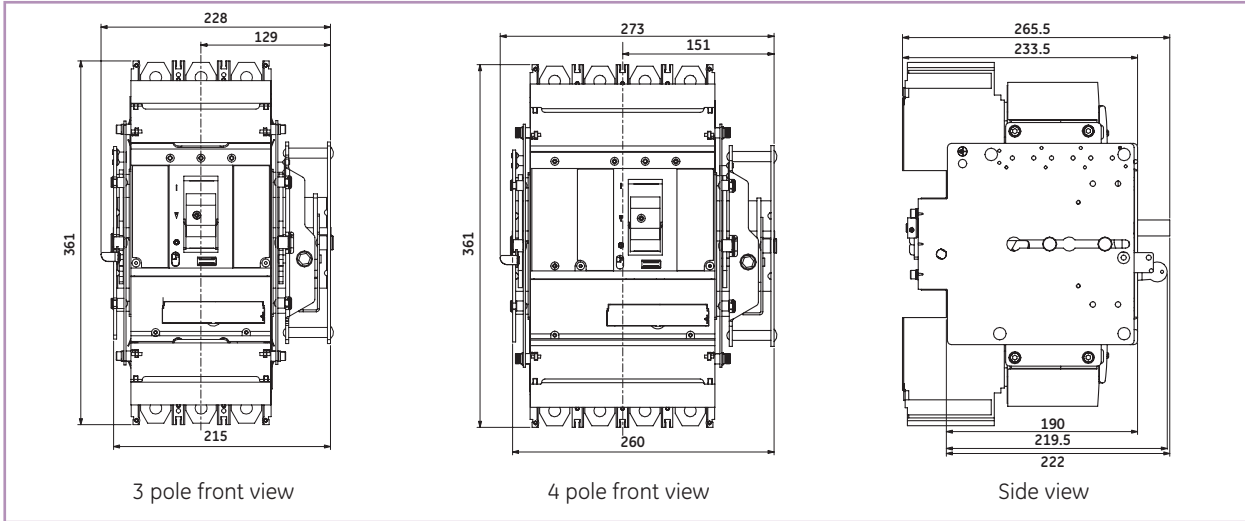
Through door side views



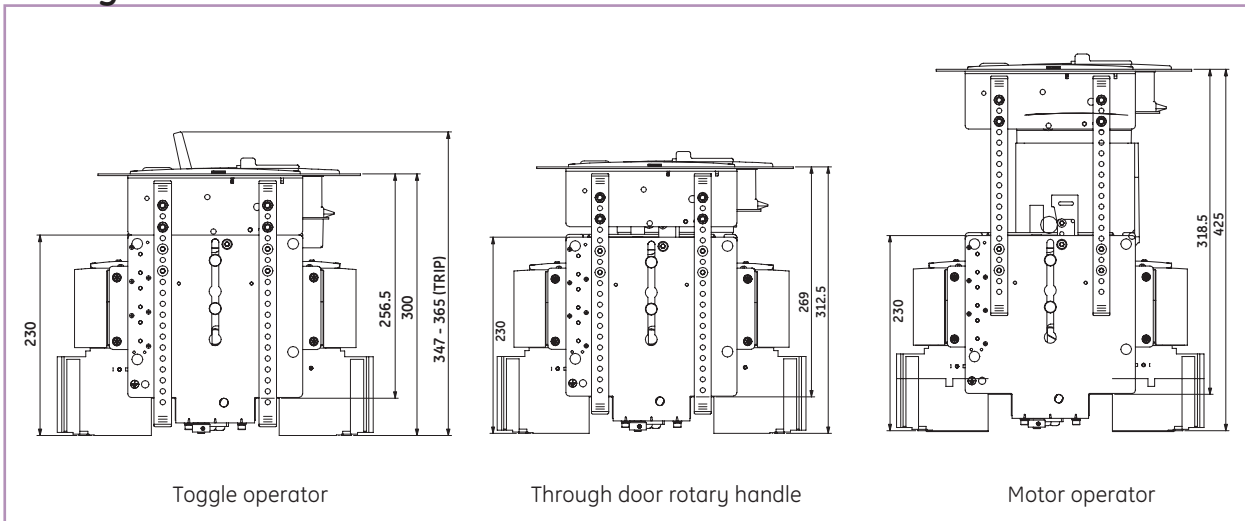
Door cut out



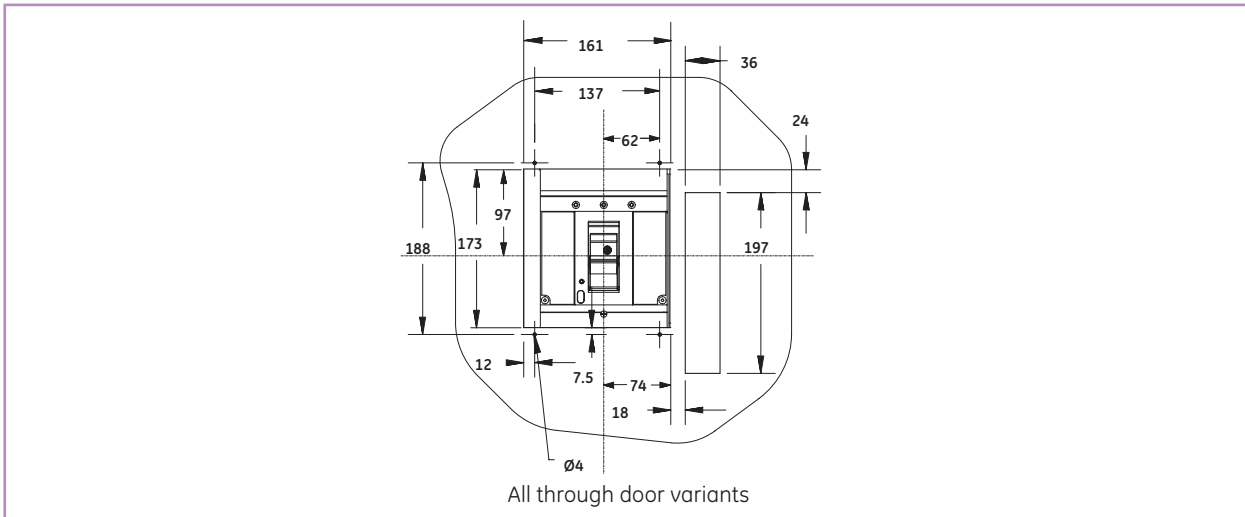
FG frame



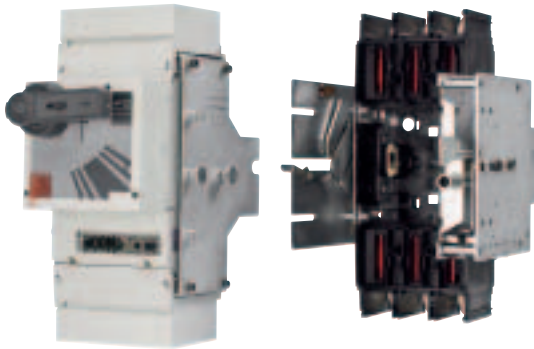
Through door side views



Door cut out



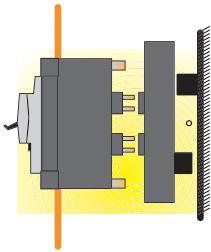
Standard Draw-out Device



The draw-out system makes use of the standard plug in base and offers a **unique safety feature** that ensures the breaker is tripped before it is withdrawn and prevents re-insertion in ON position.

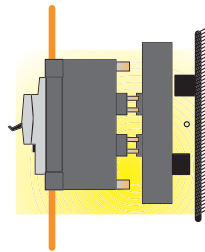
The device utilises the same front access terminals as the fixed breaker and accepts the same optional connections lugs and extenders.

The standard device is supplied with a racking handle that after insertion into the racking aperture allows the user to choose one of three positions:



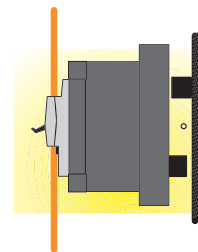
Withdrawn

Mains and auxiliary wiring **disconnected** breaker can be removed from chassis.



Test & Isolated

Mains wiring **disconnected**
Auxiliary wiring **connected**
MCCB test position possible with plug and socket connector for auxiliaries.



Inserted & Connected

Mains and auxiliary wiring **connected**
IP40 protection degree.

Optional through Door Execution

The Record Plus standard draw-out system is designed for use behind door. Optionally a set of kits are available for through door access and operation. Three kits are available each adding a draw-out eueheneon to the system that can be used for racking handle storage and contains a system allowing the

device to be locked in withdrawn or test position by padlocks or two key locks (Ronis 1104B type). Depending on the operators that the user has chosen each of the three kits has a different application.⁽¹⁾



Kit F_WT

For use with breakers operated by toggle handle.
Both breaker and draw-out functionality is accessible.
Pad and key locks option available.



Kit F_WN

For use with breakers operated by rotary handle.
Both breaker and draw-out functionality is accessible.
Pad and key locks option available.



Kit F_WM

For use with breakers operated by motor operator.
Both breaker and draw-out functionality is accessible.
Pad and key locks option available.

(1) A fourth type allowing through door draw-out functionality access ONLY is also available.

GE Consumer & Industrial Power Protection

Power Protection (formerly GE Power Controls), a division of GE Consumer & Industrial, is a first class European supplier of low-voltage products including wiring devices, residential and industrial electrical distribution components, automation products, enclosures and switchboards. Demand for the company's products comes from, wholesalers, installers, panel-board builders, contractors, OEMs and utilities worldwide.


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GE imagination at work