



Record Plus™

FB100 Molded Case Circuit Breaker

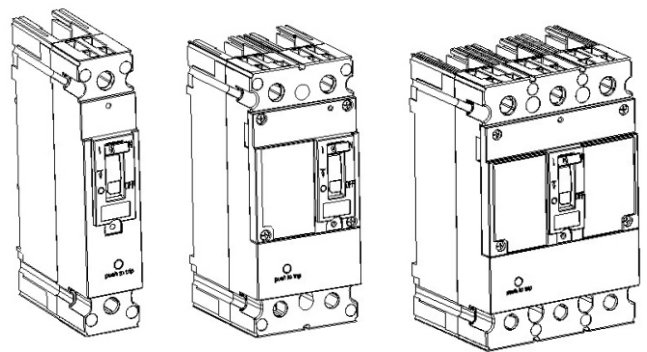
Congratulations and thank you for choosing the **Record Plus™** family of current limiting circuit breakers.

Record Plus™ circuit breakers are designed to provide overload and short circuit protection to electrical distribution and utilization equipment.

All units use integrated modular circuit breaker technology to allow flexibility in a broad range of applications.

All **Record Plus™** circuit breakers are listed by Underwriters Laboratories to UL489 standard and by the CSA Standard C22.2, No. 5.

Record Plus™ circuit breakers are designed and manufactured to exceed our global customers' high standards for performance, reliability and quality.



Record Plus™ FB100 1 Pole, 2 Pole & 3 Pole



Warning: DANGER of Electrical shock or injury. Ensure ALL electrical power supplies are "OFF" before installing or removing any devices. The breaker, trip unit or accessories, MUST ONLY be installed and serviced by QUALIFIED personnel, see NEMA publication Ab4.

Avertissement: Danger contre les risques d'électrocutions. S'assurer avant TOUTES manipulations du disjoncteur que les différentes sources d'alimentation sont en position «OFF». Les disjoncteurs, unités de protection ou accessoires doivent être installés par des personnes qualifiées et habilitées. Lire NEMA publication AB4.

Caution: This product is NOT suitable for use in equipment not specifically designed to accept it. Contact equipment manufacturer for possible equipment modifications.

Important: Cet appareil ne doit pas être employé dans un équipement non spécialement adapté à cet effet. Contactez le constructeur concernant les possibles modifications à apporter à l'équipement.

A. Unpack and inspect

Unpack the breaker or switch and inspect it for any shipping damage. Insure the breaker has the proper ampere, voltage and interrupting ratings for the application. Also check breaker operation, see Section D. Install any accessories (Section H) and terminal lugs (Section C) using supplied installation instructions. Check all accessories for proper voltage ratings, installation, wiring routing and operation. Attach appropriate labels to side of the breaker if internal accessories have been installed, see Figure 5.

B. Installation

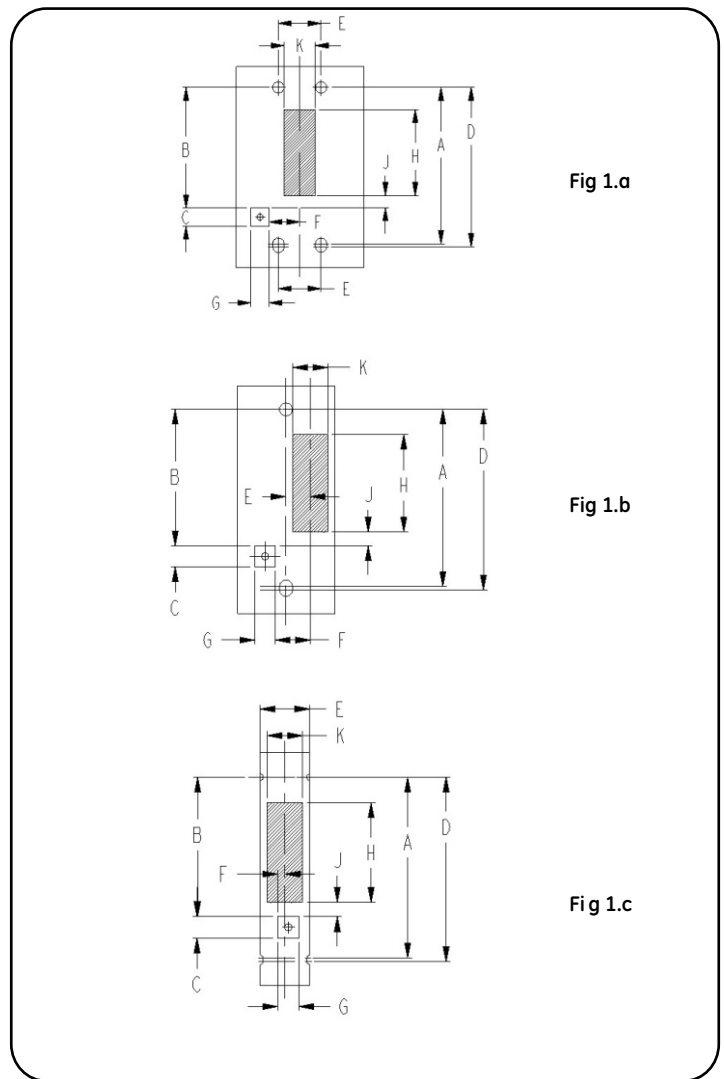
Using figs. 1.a, 1.b and 1.c drill and tap all mounting holes and make any necessary front panel escutcheon cut outs. Using the breaker hardware kit, which includes four screws and lock washers, mount the breaker. Mounting kits:

SEMSK1 #10-32 x 2-7/8in

Torque mounting screw to 20 lb-in.

For breaker orientation see Figure 2.

Dimension for drill pattern & escutcheon Fig. 1.a (3 pole)					
A	127.3mm	5.00 in	F	25.0mm	0.98 in
B	98.1mm	3.86 in	G	15.0mm	0.59 in
C	15.0mm	0.59 in	H	70.0mm	2.76 in
D	129.7mm	5.11 in	J	10.0mm	0.39 in
E	34.9mm	1.38 in	K	25.4mm	1.00 in
Dimension for drill pattern & escutcheon Fig. 1.b (2 pole)					
A	127.3mm	5.00 in	F	25.0mm	0.98 in
B	98.1mm	3.86 in	G	15.0mm	0.59 in
C	15.0mm	0.59 in	H	70.0mm	2.76 in
D	129.7mm	5.11 in	J	10.0mm	0.39 in
E	17.5mm	0.69 in	K	25.4mm	1.00 in
Dimension for drill pattern & escutcheon Fig. 1.c (1 pole)					
A	127.3mm	5.00 in	F	5.1mm	0.20 in
B	98.1mm	3.86 in	G	15.0mm	0.59 in
C	15.0mm	0.59 in	H	70.0mm	2.76 in
D	129.7mm	5.11 in	J	10.0mm	0.39 in
E	34.9mm	1.38 in	K	25.4mm	1.00 in



Mounting holes and escutcheon (hatched area) details

Note: Opening C by G is only required for access to Push-to-trip button

C. Wire Terminal Connections

Note: When using aluminum wire, use a joint compound recommended by the wire manufacturer.

Important: Dans les cas d'emploi de cable aluminu, utilisez le lubrifiant recommande by par le fabricant.

Check to make sure all terminals are torqued to the proper value. (8.84 lb-in = 1 Nm)

15 - 20A Saddle clamp kit FCALK12

Cu/Al wire, strip length- 0.40 - 0.45 in (10 - 11mm)

#14 -10 AWG Torque to 35 lb-in (4Nm)

30 - 60A Lug kit FCALK13 (FCOLK13 CU lug body)

Cu/Al wire, strip length- 0.40 - 0.45 in (10 - 11mm)

#10 AWG Torque to 35 lb-in (4Nm)

#8 AWG Torque to 40 lb-in (4.5Nm)

#6, & 4 AWG Torque to 45 lb-in (5Nm)

70 -100A Lug Kit FCALK14 (FCOLK14 CU lug body)

Cu/Al wire, strip length- 0.40 - 0.45 in (10 - 11mm)

#4 AWG Torque to 45 lb-in (5NM)

3 - #1/0 AWG Torque to 50 lb-in (5.7Nm)

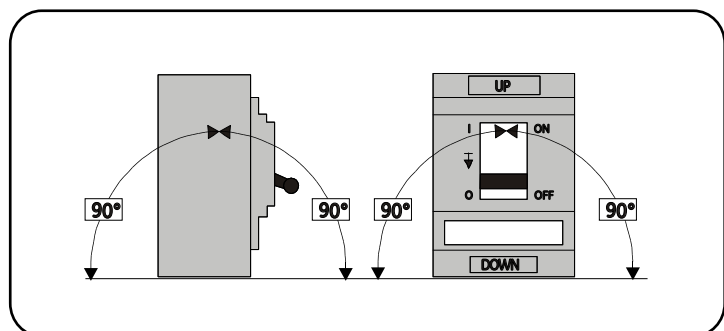


Fig 2. Circuit breaker orientation

D. Circuit breaker operation

The breaker contact status is indicated by the handle position, and the positions are marked on either side of the handle escutcheon, clearly showing the status of the breaker contacts. ON and/or I indicate breaker is ON and OFF and/or O indicate breaker is OFF.

The breaker tripped position is indicated by the symbol



To close the breaker from the OFF position move the handle to the ON position. To close the breaker from the trip position, first move the handle fully to the OFF (reset) position then to the ON position. See Figure 4. A **Push-To-Trip** button is provided for convenience of testing the mechanical trip operation of the breaker, see Figure 3. The **Push-To-Trip** should be tested annually.

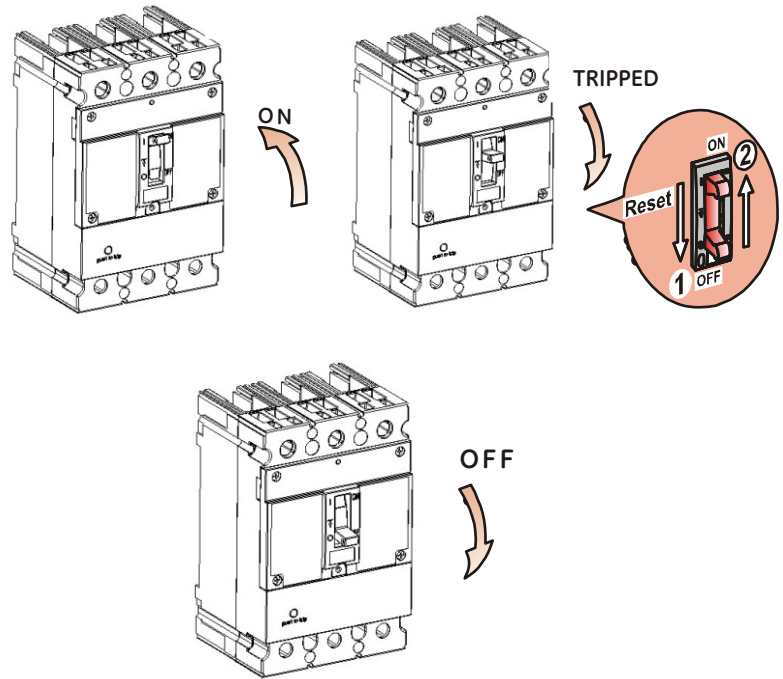


Fig 4. Mechanical Operation of the Circuit Breaker

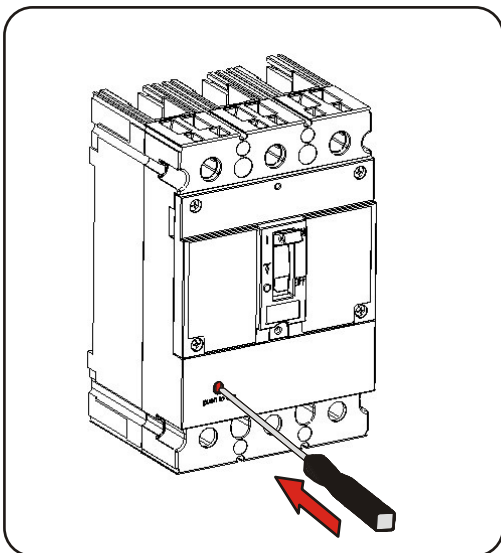


Fig 3. Circuit Breaker Push-To-trip

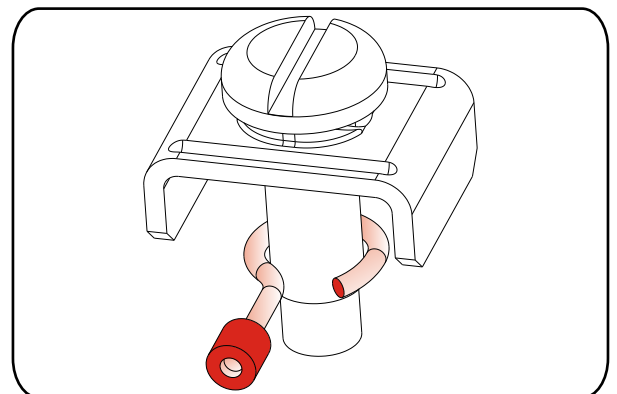


Fig 5. Terminate wire as shown
(For FBL type circuit breakers)

Fig 3. Note

Push to trip operation is same on all the three versions of the breaker (1pole, 2pole & 3 pole)
L'action "Pousser pour déclencher" est identique pour les trois versions de disjoncteurs (1pole, 2 poles, 3 poles)

Fig 4. Note

Mechanical operation is same on all the three versions of the breaker (1pole, 2 pole & 3 pole)
L'action mécanique "ouvrir / fermer" est identique pour les trois versions de disjoncteurs (1pole, 2 poles, 3 poles)

Fig 5. Note

Terminate wire - FBL type

Raccordement des conducteurs pour le type FBL.

E. Troubleshooting

Ensure that breaker is installed correctly and all terminal connections are torqued per instructions.

If the breaker fails to close check:

1. For overload and short circuit on the system.
2. Handle position - TRIPPED - reset by moving handle fully to OFF position and then to the ON position, see Figure 4.
3. Undervoltage trip is supplied with rated voltage.
4. Shunt trip is de-energized and no trip signal exists
5. Breaker trip unit settings are properly adjusted.

If technical assistance is required contact your local GE Consumer & Industrial sales office. In the US call GE Post Sales Customer Service, 1-888-437-3765.

F. Maintenance

Generally no maintenance is required but it is recommended that the breaker be cleaned and inspected on an annual basis.

Warning: Danger of electrical shock or injury. Turn off power supplies ahead of equipment before attempting to service.

Important:: Danger d'électrocution. Couper l'alimentation avant d'effectuer toute action d'entretien.

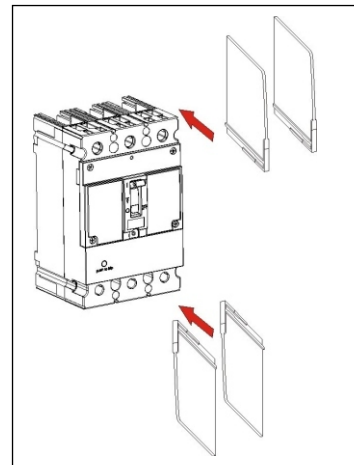
Operate the breaker push to test button and toggle the handle several times, testing the mechanical operation of the device. If there are any signs of damage or if the mechanism is sluggish or sticky, replace the breaker. For abnormal or heavy duty conditions refer to NEMA publication AB4 and for recommended maintenance practices NFPA70B.

G. Storage

Store in a dry, dust free, environment protected from corrosion. Long term storage should be in the original shipping carton. Temperature range -40°C to +80°C.

H. Accessories

For full details of the accessories and their application, contact your local GE Consumer & Industrial representatives. When installing accessories read the accompanying accessory installation instruction and follow carefully all cautions and warnings.



Optional inter-phase Barriers

Installation instruction references:
DEH40324 – Auxiliary switch & bell alarms.
DEH40363 – Undervoltage release & shunt trip modules
DEH40532 – Terminal lugs.

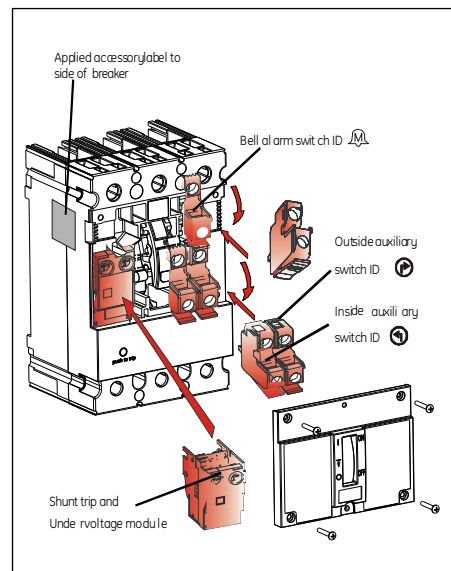


Fig 6. Typical Accessories. See Buylog® for Details
Note: For a 2 pole breaker there are no auxiliary switch & bell alarm switch; For a 1 pole there are no accessories; Installation of an accessory in a 2 pole breaker is the same as a 3 pole breaker.

These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise that are not covered sufficiently for the purchaser's purposes, the matter should be referred to the GE Company. The breaker is a sealed unit, which contains no user serviceable parts, tampering with seal will void warranty.



GE Consumer & Industrial

General Electric Company
41 Woodford Ave. Plainville CT 06062
www.GEindustrial.com
2005 General Electric Company

DEH41073 R03