Reverse Fed Breakers

A breaker is typically powered by the feed that is connected to the terminals which is nearest the handle when it is in the “ON” position. The term “to reserve feed a circuit breaker” means the incoming power supply conductors for a circuit breaker are connected to the terminals on the “OFF” side of the breaker. Due to physical equipment arrangements in panelboards and switchboards, it may be desired to connect conductors in this manner. However, circuit breakers must be UL tested and Listed accordingly for this application. Therefore, it is imperative that the proper circuit breaker is selected and applied.

The main reason for the proper circuit breaker selection is safety. Although electrical equipment should not be worked on while any voltage is present, a reverse feed circuit breaker would have the bottom end of the circuit breaker live even when the circuit breaker is in the “OFF” or “TRIPPED” position. This would mean that a voltage potential would exist at the trip unit, the load terminals and the circuit breaker’s mechanism. Due to this fact, all frames intended for field installable trip units and internal accessories are marked “LINE” and “LOAD” and not permitted to be used in reverse feed applications.

A circuit breaker that IS acceptable to be reverse feed will have the following characteristics:

1. The circuit breaker will not have “LINE” and “LOAD” marked on the top and bottom ends of the circuit breaker.
2. Factory Sealed:
   • The circuit breaker’s cover will be sealed to the circuit breaker’s base. For a circuit breaker that has a primary and a secondary cover; the primary cover will be sealed to the base of the circuit breaker.
   • For a circuit breaker with a seal between the trip unit and the frame, the trip unit may not be changed in the field

Note: If any circuit breaker seal is broken, the warranty will be voided.

Attached is a list of circuit breakers, including versions with integral ground fault protection, that are UL Listed for reverse feed applications.
(A) The following circuit breaker types ARE suitable for reverse feed:
Thermal Magnetic Quicklag & Residential Breakers
BW, BWH, BWHH, CSR, CSH
CA, CAH, CC, CCH, CHH
EB, EHB
FB, HFB, FB TRI-PAC
JA
JB
LBB, DA
LAB
LC, HLC etc.
MC, HMC etc.; MDS
NC, HNC etc.
PC, PCC, PCCG, PCF, PCCF etc.
SPB
FCL, LCL
SPCB
GB, GHB, GC, GHC, GD, GD-K
EDB, EDS, ED, EDH, EDC
EH, EHD-K, FDB, FD, HFD, FDC, FD-K
FDE, HFDE, FDCE
JDB, HJDB, JDCB, JDB-K, HJDB-K
DK, DK-K
KDB, HKDB, KDCB, CKDB, CHKDB
KDB-K, HKDB-K
LDB, HLDB, LDCB, CLDB, CHLDB, CLDCB
LDB-K, HLDB-K
MLDB, HMDLB, CMDLB, CHMDLB
MLDB-K, HMDLB-K
ND, HND, NDC, NDU, CND, CHND, CNDC
ND-K, HND-K, NGS, NGH, NGC, NGU, NGK
RD, RDC, CRD, CRDC, RD-K, RD-N, RGH, RGC, RGK
E125, EGB, EGE, EGS, EGH, EGC
E125K, EK switches
J250, JGE, JGS, JGH, JGC, JGU, JGX sealed
breakers
J250K, JGK switches
L630, LGE, LGS, LGH, LGC, LGU, LGX sealed
breakers
L630K, LGK switches
Magnum DS, Magnum SB
Series NRX

(B) The following circuit breaker types ARE NOT suitable for reverse feed:
GFCI, GFEP
AFCI
BABRP, BABSP, BRRP, CLRP
GHBS, GBHS, GHQRSP
KA, HKA
KB, HKB
LA, HLA
LB, HLB
MA, HMA, MD
NB, HNB
PB
LA, NB, PB TRI-PAC’s
JD, HJD, JDC
KD, HKD, KDC, CKD, CHKD
LD, HLD, LDC
ML, HMDL
JGE, JGS, JGH, JGC, JGU, JGX frames with
interchangeable trip unit
LGE, LGS, LGH, LGC, LGU with interchangeable trip
unit
GMCP
HMCP, HMCPE
ELFD, ELHFD, ELFDC
ELKD, ELHKD, ELKDC
ELJD, ELHJD, ELJDC
GHBFEP, GHCGFEP

Reverse Feed Applications
Eaton’s Circuit Breakers