Circuit Breakers

Arc-Fault and Ground-Fault Breakers

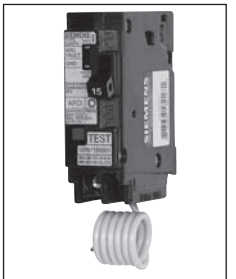
Arc-Fault Circuit Interrupters (AFCI)

AFCI's detect arcing faults (an unintentional arcing condition in a circuit) that standard circuit breakers are unable to detect. The device is intended to mitigate the effects of arcing faults by functioning to de-energize the circuit when an arc-fault is detected.

Combination Type AFCI

Detects all three possible types of arc fault: line-to-ground, line-to-neutral, and series.

Breaker Type	Ampere Rating	10,000 A IR Catalog Number	22,000 A IR Catalog Number
QAF/QAFH **1-Pole 120V AC**	15 20	**Q115AFC**① **Q120AFC**①	**Q115AFCH■**① **Q120AFCH■**①
QAF/QAFH **2-Pole 120/240V AC**	15 20	**Q215AFC**① **Q220AFC**①	**Q215AFCH■**① **Q220AFCH■**①

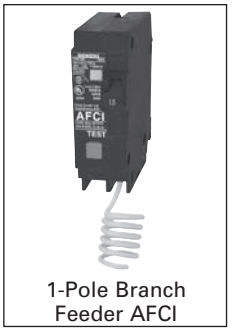

1-Pole Combination Type AFCI


2-Pole Combination Type AFCI

Branch-Feeder AFCI

Detects line-to-ground and line-to neutral arcs.

QAF/QAFH **1-Pole 120V AC**	15 20	**Q115AF**① **Q120AF**①	**Q115AFH■**① **Q120AFH■**①


1-Pole Branch Feeder AFCI

Ground-Fault Circuit Interrupters (GFCI)

Provides Class A (5mA) ground fault protection.
Intended for personnel protection.
De-energizes the circuit for all ungrounded conductors of the circuit.

QPF/QPHF **1-Pole 120V AC** **Plug-in**	15 20 25 30	**QF115**① **QF120**① **QF125■** **QF130**	**QF115H**① **QF120H■**① — **QF130H**
QPF/QPHF **2-Pole 120/240V AC** **Plug-in**	15 20 30 40 50 60	**QF215** **QF220** **QF230** **QF240** **QF250** **QF260**	**QF215H** **QF220H** **QF230H** **QF240H** **QF250H** **QF260H**


1-Pole GFCI


2-Pole GFCI

Ground Fault Equipment Protection (30mA)

Provides protection of equipment from damaging line-to-ground faults currents.
De-energizes the circuit for all ungrounded conductors of the circuit.

QE/QEH **1-Pole 120V AC** **Plug-in**	15 20 30	**QE115**① **QE120**① **QE130**	**QE115H**① **QE120H**① **QE130H**
QE/QEH **2-Pole 120/240V AC** **Plug-in**	15 20 30 40 50 60	**QE215** **QE220** **QE230** **QE240** **QE250** **QE260■**	**QE215H** **QE220H** **QE230H** **QE240H** **QE250H** **QE260H■**

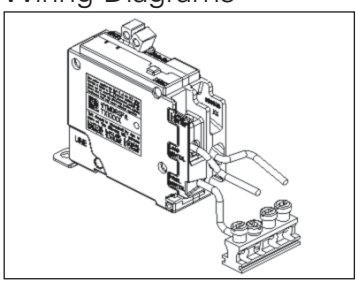

1-Pole Equipment Protection

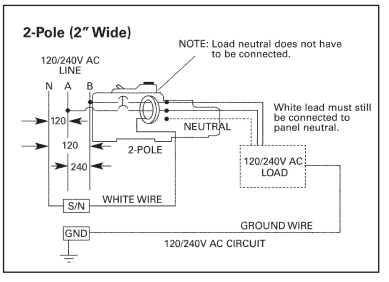

2-Pole Equipment Protection

QAF/QPF/QE Accessories

Description	Catalog Number
Padlocking Device 1-Pole	**ECPLD1**
Padlocking Device 2-Pole	**ECPLD2**
Handle Block	**ECBX231M**

Wiring Diagrams





■ Built to order. Allow 2–3 weeks for delivery.
① UL Listed as SWD (Switching Duty) Rated, suitable for 120V AC Fluorescent Lighting.

Circuit Breakers

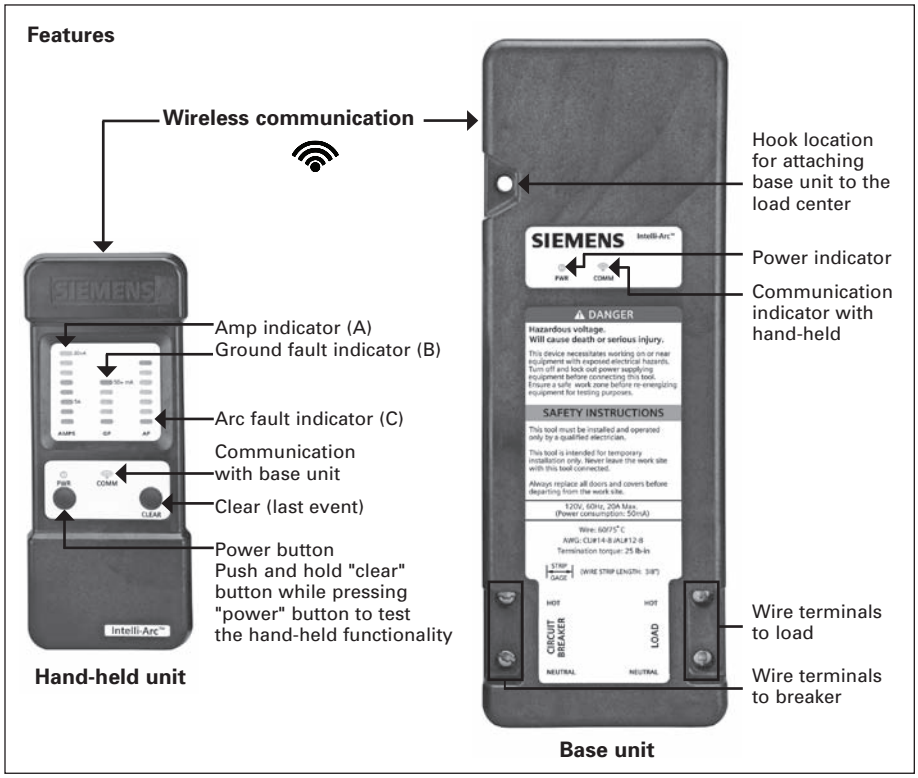
Intelli-Arc Diagnostic Tool

Intelli-Arc Diagnostic Tool Part Number: **IDT5000**

Currently AFCI protection devices only monitor and protect branch circuits in the home against arc faults. Although the LEDs on the Siemens Combination Type AFCIs can help to point an electrician in the right direction for troubleshooting, these AFCIs do not help to pinpoint the portion of the branch circuit that contained the fault. Arc faults are often intermittent which can make troubleshooting the branch circuit very difficult. In these cases, it is important to determine whether the fault condition exists in the permanent wiring, in connected equipment, or in a power cord.

The Siemens Intelli-Arc Diagnostic Tool helps to accurately diagnose the circuit in which a fault has occurred. When used in conjunction with good troubleshooting techniques, this tool allows the electrical contractor to determine and locate the root cause or source of the fault. The Intelli-Arc Diagnostic Tool presents information as to the type and magnitude of fault. Since the fault may not cause an AFCI to trip for various reasons, i.e. duration too short, current level too low, the tool provides an indication showing how close an event is to causing an AFCI to trip.

The goal of the diagnostic tool is to speed the troubleshooting process for the electrical contractor. The device drastically improves the accuracy of the troubleshooting process. This, in turn, will significantly reduce the number of visits to the problem site. Every intent of this device is directed as saving the electrical contractor time for each branch circuit that must be evaluated. The Intelli-Arc Diagnostic Tool can be used with any circuit breaker regardless of brand.



LED troubleshooting indications

Three sets of LED indicators are provided on the hand-held device for use in troubleshooting branch circuit issues. These three indications give information regarding current ("AMPS"), ground fault level ("GF"), and arc fault level ("AF").

A.Current ("AMPS")

1. The full scale current for this LED indication is 20+A
2. LED indicators do not increase by uniform intervals.
3. The 5A point is marked on hand-held device for reference.

B.Ground Fault ("GF")

1. The full scale current for this LED indication is 50+ mA.
2. LED indicators do not increase by uniform levels.

C.Arc Fault ("AF")

1. This LED indication does not display in reference to current level but rather in severity of events, with a full scale reading (red LED) representing an event that is very likely to cause an AFCI device to trip.
2. Partial readings (yellow LEDs) should be evaluated. Combined independent events may cause an AFCI to trip.
3. Transitional events, i.e. turning on an appliance, are likely to register as some low level on the arc fault scale.
4. The action taken that produces the highest level of indication should be thoroughly evaluated for any issues that may be present.

