

# Easily troubleshoot any AFCI circuit!



## Intelli-Arc™ Diagnostic Tool

[www.usa.siemens.com/intelliarc](http://www.usa.siemens.com/intelliarc)

**SIEMENS**

# Intelligent Arc Detection Technology

Arc Fault Circuit Interrupters (AFCIs) are an important technology available to electrical contractors as they work to build safe, efficient electrical distribution systems. Diagnosing the cause of AFCI trips can be confusing, but the new Intelli-Arc Diagnostic Tool and the unique trip indicators built into every Siemens AFCI are valuable analysis tools to help electricians pinpoint the fault that causes the breaker to trip.

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.

Improves troubleshooting accuracy

Reduces the number of visits to the problem site

Can be used with any circuit breaker regardless of brand.

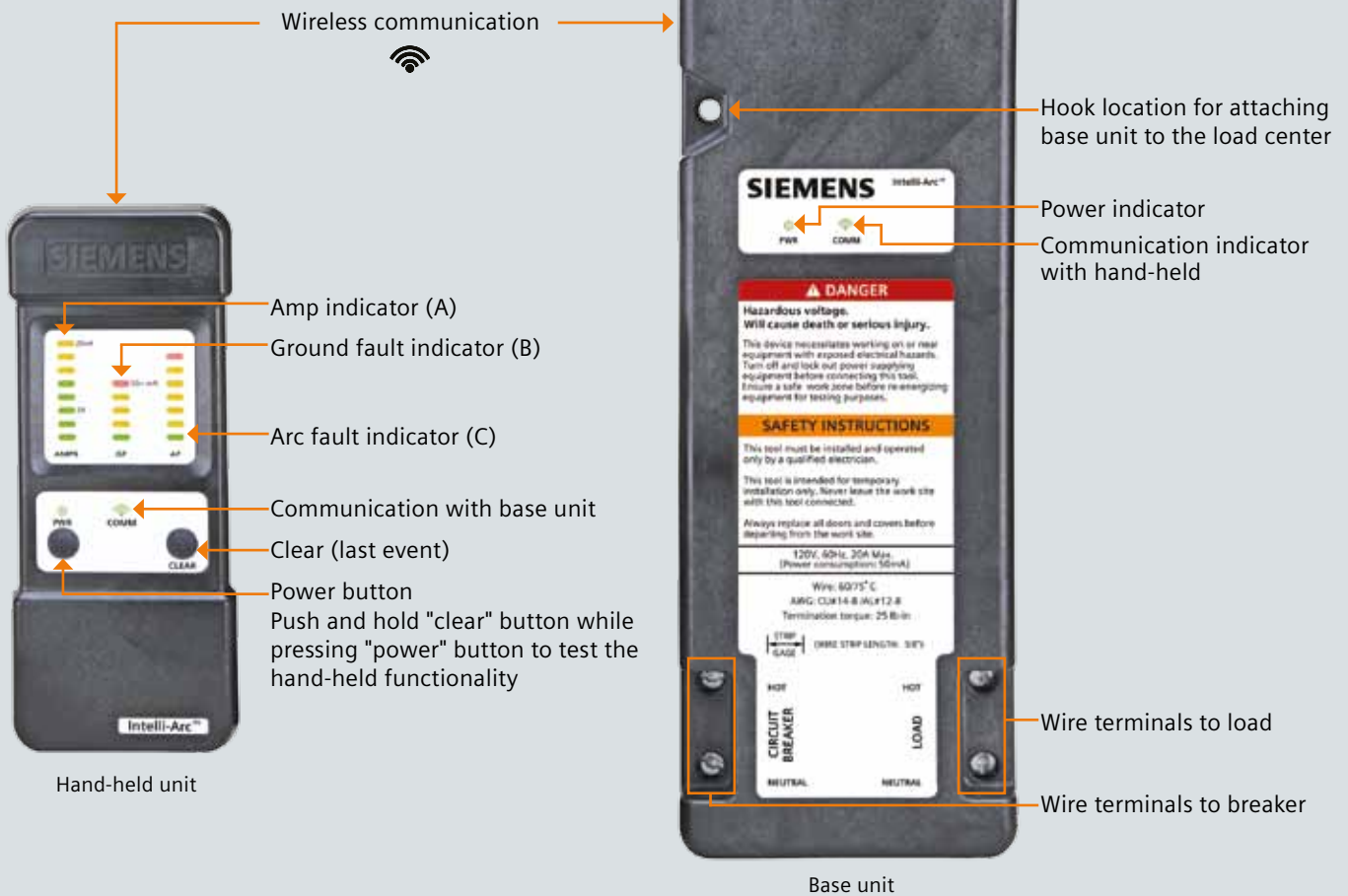
## Thoroughly tested

AFCIs help to ensure the safety of those who will live, work, or play in the buildings by protecting them from hidden faults that can smolder for hours before breaking into the open in spectacular form. Few building trades do as much to protect the American public as electrical contractors, and AFCIs are important tools in the electrician's safety arsenal.

With a 160 year history of engineering and innovation, Siemens strives to develop products that provide increased levels of safety. The Intelli-Arc Diagnostic Tool is another example in which Siemens is using advanced technology to ensure form, fit, and function for customers.



## Features



### 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.

## FAQ's

### What is Intelli-Arc?

Intelli-Arc is a diagnostic tool for arc fault technology. It is intended to aid a contractor in assessing why an AFCI breaker is tripping. It is not a replacement for good troubleshooting techniques.

### Haven't I seen AFCI testers on the market already?

Intelli-Arc is not a tester and does not "test" an AFCI. There are a number of devices marketed as "AFCI Testers" on the market today. Siemens recommends testing the AFCI by using the push to test button only. AFCI technology constantly evolves to keep up with changing technology in homes today. As a result an "AFCI tester" may not provide proper response in regards to AFCI function.

### Why is this device needed?

Nuisance tripping can be frustrating and time consuming to diagnose. Siemens believes its important for contractors to be able to quickly narrow down potential causes of an undesired trip of an AFCI.

### What is the range of the hand-held?

Many factors interfere with the wireless range, such as the number of walls and floors. The hand-held can transmit up to 250 feet with no barriers between it and the base unit.

### Why are there ground fault and amp indicators on the hand-held?

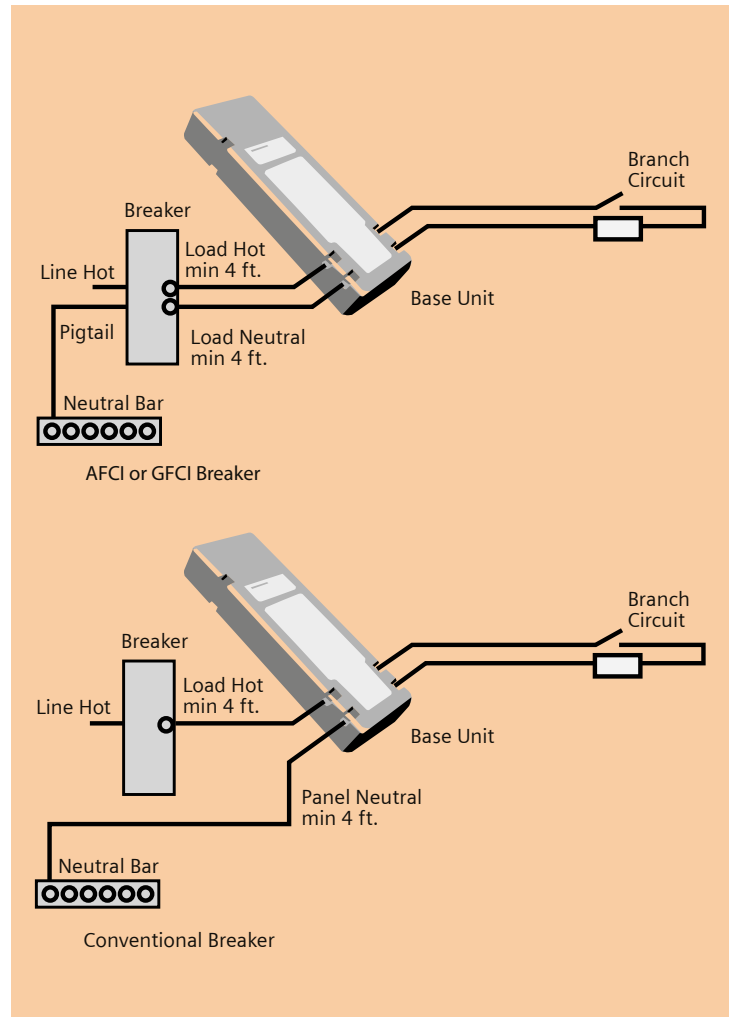
Ground fault is a common cause of nuisance tripping. The hand-held displays a ground fault and amperage indication so the user can take this into account when diagnosing a circuit.

### Catalog number: IDT5000

Consists of:

- Hand-held unit
- Base unit
- Plastic carrying case
- 4' solid #12 CU wire leads
- Instruction manual

## Wiring Schematics



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