

## FULL-FUNCTION TEST KIT IDENTIFICATION

Figure 1: Full-function Test Kit and Case Contents



## Technical Specifications

Table 1: Full-function Test Kit Technical Specifications

| Parameters                                   |                        |                                                                    | Value                                                                 |
|----------------------------------------------|------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------|
| Fuse                                         | 120 Vac Applications   |                                                                    | 2 A, 250 Vac, Fast-blow<br>(Recommended Fuse: Bussman Part No. AGC-2) |
|                                              | 230 Vac Applications   |                                                                    | 1 A, 250 Vac, Fast-blow<br>(Recommended Fuse: Bussman Part No. AGC-1) |
| Nominal Operating Voltage                    |                        |                                                                    | 115 <del>120</del> 230 Vac                                            |
| Operating Voltage Range                      |                        |                                                                    | 120 <del>144</del> 253 Vac                                            |
| Operating Frequency                          |                        |                                                                    | 50 Hz<br>60 Hz                                                        |
| Operating Temperature                        |                        |                                                                    | -20 <del>50</del> °C                                                  |
| Storage Temperature                          |                        |                                                                    | -20 <del>60</del> °C                                                  |
| 24 Vdc Power                                 | Nominal Voltage        |                                                                    | 24 Vdc                                                                |
|                                              | Tolerance              |                                                                    | 22.8 <del>25</del> 2 Vdc                                              |
|                                              | Maximum Output Current |                                                                    | 100 mA                                                                |
| Trip Time Measurement                        | Accuracy               |                                                                    | ±5 mS                                                                 |
|                                              | Resolution             |                                                                    | 1 mS                                                                  |
|                                              | Range                  |                                                                    | 0 <del>3</del> 3000 sec.                                              |
| Fault Signal                                 | Voltage Source         | Accuracy (Percent Error in Amplitude + Percent Error in Frequency) | ±3%                                                                   |
|                                              |                        | Nominal Frequency                                                  | 60 Hz                                                                 |
|                                              |                        | Amplitude Range                                                    | 0.031 <del>2</del> 1.5 at 60 Hz Vrms                                  |
|                                              | Current Source         | Accuracy                                                           | ±3%                                                                   |
|                                              |                        | Amplitude Range                                                    | 0.020 <del>2</del> 3 Amperes dc                                       |
| Installation Category (Overvoltage Category) |                        |                                                                    | Category II                                                           |
| Maximum Power Rating                         |                        |                                                                    | 60 W                                                                  |

## Determining Trip Unit Compatibility

Table 2: Trip Unit Compatibility

| Trip Unit Family/Type |                                                      | Test Cable       | Test Functions |             |                      |              | Inhibit Functions    |                         |
|-----------------------|------------------------------------------------------|------------------|----------------|-------------|----------------------|--------------|----------------------|-------------------------|
|                       |                                                      |                  | Automatic Trip | Manual Trip | Mechanical Operation | ZSI Function | Ground-fault Inhibit | Thermal-imaging Inhibit |
| Non-communicating     | STR22ME, STR22GE, STR22SE, STR23SE, STR23SP, STR43ME | 2-Pin Test Cable |                |             |                      |              |                      |                         |
|                       | STR53UP, STR53UE                                     |                  |                |             |                      |              |                      |                         |
|                       | ET 1.0, ET 1.0M                                      | 7-Pin Test Cable |                |             |                      |              |                      |                         |
|                       | ET 1.0I                                              |                  |                |             |                      |              |                      |                         |
|                       | MICROLOGIC 2.0, 3.0, 5.0                             |                  |                |             |                      |              |                      |                         |
| Communicating         | MICROLOGIC 2.0A, 3.0A, 5.0A, 7.0A                    | 7-Pin Test Cable |                |             |                      |              |                      |                         |
|                       | MICROLOGIC 5.0P, 5.0H, 7.0P, 7.0H                    |                  |                |             |                      |              |                      |                         |
|                       | MICROLOGIC 6.0A, 6.0P, 6.0H                          |                  |                |             |                      |              |                      |                         |

## CONNECTIONS

### Connecting Power Cable

The power cord, test cables, keys and instruction bulletin are located in lid compartment of Full-function Test Kit case. Refer to Table 2 to determine which tests and functions are applicable then follow appropriate connection procedures below.

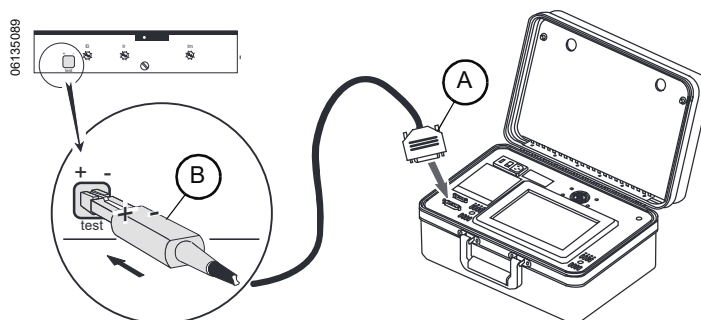
1. Connect socket end of power cord to power cord receptacle on Full-function Test Kit.
2. Plug other end of power cord into a grounded outlet.

NOTE: If Full-function Test Kit is used in a noisy environment, power cable ground connection must be connected to same potential as chassis of circuit breaker being tested.

### COMPACT® NS Circuit Breakers Equipped with STR Trip Units

1. Connect 10-pin test cable connector (A) to 10-pin port on Full-function Test Kit.
2. Connect 2-pin test cable connector (B) to test port on STR trip units. Make sure to observe correct polarity.

Figure 2: Connection to STR Trip Units



### MICROLOGIC® and ET Trip Units

#### CAUTION

##### HAZARD OF EQUIPMENT DAMAGE

Pins on 7-pin test cable connector (see Fig. 3) can bend or break if forced. Avoid using excess force when connecting to trip unit test port.

Failure to follow this instruction can result in equipment damage.

1. Connect 10-pin test cable connector (A) to 10-pin port on Full-function Test Kit.
2. Connect 7-pin test cable connector (B) to test port on MICROLOGIC trip units.
  - a. To plug in, push in 7-pin connector and turn clockwise.
  - b. To unplug, push in 7-pin connector and turn counterclockwise.

Figure 3: Connection to MICROLOGIC and ET Trip Units

