MOLDED-CASE CIRCUIT BREAKERS
INSTRUCTION MANUAL

Types NF400-SEW, NF400-HEW, NF400-REW, NF400-UEW •
NF630-SEW, NF630-HEW, NF630-REW •
NF800-CEW, NF800-SEW, NF800-REW, NF800-UEW •
NF800-SEWL •
NF1000-SEW, NF1250-SEW, NF1600-SEW •
NF1200-UR

1. Before using
- Please peruse this instruction manual before using.
- Please handle this product by skilled or instructed person.

2. Caution for handlings
- Connect a suitable electric wire for the rated current to power source side and load side.
- In the case of single-phase two-wire system, connect the electric wire to the right and the left pole.
- In the case of three-phase four-wire system, connect the neutral wire to the neutral pole of circuit breaker.

3. Setting method of the operating characteristics

![Diagram of setting method]

- **Step adjustable:**
  - Current setting 1: Iₚₑₚₑ
  - STD pick up current Iₛₚₑ
  - STD time Tₛₚₑ
  - Pre-alarm pick up current Iₚₚₑ

- **Continuously adjustable:**
  - Current setting 2: Iᵢₑ
  - Instantaneous pick up current Iᵢₚₑ

**CAUTION** Before setting, turn off the upper circuit breaker, or turn off the circuit breaker to be set or trip the breaker, then make sure of no current conducting.

(1) Open the transparent cover.
(2) Set operating characteristics by turning the dials.
  - A slotted head screwdriver of 4.5mm width and 0.6mm thickness at the top is suitable for the setting.
  - Please operate the dials by the power less than 0.5N • m.
  - Please set the step adjustable dials by the scale.
  - Otherwise, characteristics setting device may be broken.

4. Testing method
Check operation with load current or using the breaker tester “Y-250” (option).
If the breaker tester “Y-250” is used, execute the test according to its manual.

(1) Apply AC current to the circuit breaker from three-phase or single-phase power supply.
   - In case of single-phase power supply, apply the current with any two poles in series.

![Testing method diagram]

(2) Check following items by each LED in front of circuit breaker.
   - OVER LED (red): LED lights among 105 to 125% of current setting.
   - PAL LED (yellow): In case of Pre-alarm pick up current Iᵢₚₑ=0.7Iₑ, LED blinks among 60 to 80% of current setting.
   - 70% LED (green): LED lights among 60 to 80% of current setting.

(3) LTD and pre-alarm operating time can be checked by load current equivalent to 200% of the current setting. If operating current of circuit breaker is measured just before this test, operating time is shorter. In this case, please measure again after circuit breaker is tripped.

![Testing result diagram]

The result is good if the operating time measured falls within the following range.

<table>
<thead>
<tr>
<th>Setting of LTD time TL</th>
<th>Pre-alarm operating time</th>
<th>LTD operating time</th>
</tr>
</thead>
<tbody>
<tr>
<td>TL=12s</td>
<td>4.8~7.2s</td>
<td>9.6~14.4s</td>
</tr>
<tr>
<td>TL=60s</td>
<td>24~36s</td>
<td>48~72s</td>
</tr>
<tr>
<td>TL=100s</td>
<td>40~60s</td>
<td>80~120s</td>
</tr>
<tr>
<td>TL=150s</td>
<td>60~90s</td>
<td>120~180s</td>
</tr>
</tbody>
</table>

Note 1) Current setting 2 Ir becomes effective when current setting 1 In is set at maximum.