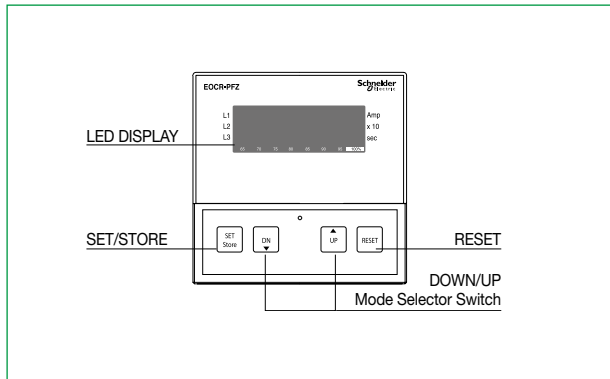
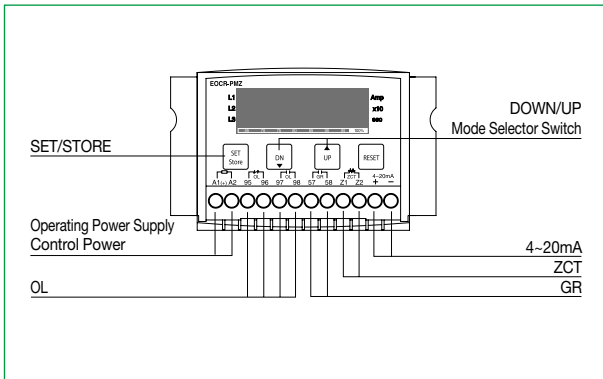


# EOCR-PMZ/PFZ

## EOCR-PMZ Built-in Panel



## EOCR-PFZ Embedded Pa-



## Main Features

- Current system function, which automatically displays 3-phase current and leakage current in circulation every 5 seconds
- Can be switched from auto circulation display mode to manual circulation mode with the touch of a button, allowing focused display on a certain element (one specific phase out of 3 phases or leakage current)
- Contains the over current/under current/earth fault/current signal output function in a single EOCR
- Wide range of use: 0.1~3600A - wide range: 0.5~60A; for 5 holes: 0.1~2.0A; with the use of an external CT: 1~3600A
- Easily identifiable characters and numbers displaying trip causes
- The last trip causes remembers up to the 3 most recent trip causes and the current at the time of the trips, and checks the operation even during the recovery of electricity after a power outage
- Includes a timer function for checking total operation time and to provide a reminder of maintenance tasks, such as bearing replacement
- Has a bar graph which helps the manager to set over current conveniently and to check the motor load factor
- Has a transducer function (4~20mA current signal output) for easy and focused management
- For over current operation characteristics, select from Definite, Inverse, and Thermal Inverse
- Earth fault (leakage) current detection: zero-phase current detection method
- For earth fault current operation characteristic, apply either Definite or Inverse
- Over Current Protection Characteristics
  - Thermal Memory Protection ("th"): When Inverse is applied, the cumulative calculation value of the heat generated during the motor's operation is remembered in order to be protected directly by the hot curve instead of the cold curve. (Automatically resets 20 minutes after the motor stop)
  - Non-thermal Memory Protection ("ln"): When Inverse is applied, it is protected by the cold curve if the motor has started, and by the hot curve during normal operation
- Removable EOCR allows its use in the terminal type or the hole type (removable terminal strip)

# EOCR-PMZ/PFZ

## Protection Function

| Protection Function  | Operation Condition Characteristics   | Operation Time   |                                  |
|----------------------|---|--|----------------------------------|
| <b>Over Current</b>  | Can select from Definite/Inverse/Thermal Inverse  | Operates based on the set ot   |                                  |
| <b>Under Current</b> | Operates in Definite (can be set from 0.2~30 sec)   | Operates based on the set ut   |                                  |
| <b>Phase Loss</b>    | Works in PL Mode, ON / oFF selectable   | Within 3 sec   |                                  |
| <b>Reverse Phase</b> | Works in RP Mode, ON / oFF selectable   | 0.1~0.3 sec  |                                  |
| <b>Unbalance</b>     | <ul style="list-style-type: none"> <li>Operates if the current deviation exceeds the set % against the max. phase current</li> <li><math>[(\text{Max. phase current} - \text{min. phase current}) / \text{max. phase current}] \times 100[\%]</math></li> </ul> | Within 8 sec   |                                  |
| <b>Locked Rotor</b>  | 1.5~5Times "oc"Setting/Definite operation characteristic  | Stall (during operation)   | oFF / 0.1~10 sec, Adjustable     |
|                      | oFF / 2~10Times"oc"Setting / Definite operation characteristic  | Lock (during start-up)   | Operates within 0.5 sec after dt |
| <b>Earth fault</b>   | <ul style="list-style-type: none"> <li>0.03~10A: Definite</li> <li>0.03~1A: Inverse</li> <li>oFF</li> </ul>   | Operates based on the set time (Et) (can select between Definite or Inverse) |                                  |

## Secondary Function

| Secondary Function               | Application   |                            | Operation Condition Characteristics  |
|----------------------------------|---|----------------------------|--|
| <b>Current Signal Output</b>     | 4~20mA  |                            | The role of transducer<br>※For current (4~20mA) output cable, a shield cable [2C-1.25mm <sup>2</sup> -CVV-SB Cable] must be used.                                |
| <b>Total Operation Time</b>      | Records the total operation time of the motor since its installation (Displays up to 99999 hours) |                            | After being set to 0 hours at the time of factory shipment, it cannot be modified afterwards<br>Time is accumulated only for the time the motor has operated     |
| <b>Operation Time</b>            | Set to oFF, 1~9900 hours (in min. unit of 1 hour)   |                            | Time is accumulated only for the time the motor has operated (setting provided)  |
| <b>Reset Function</b>            | H-r   | Manual Reset               | Reset with the Reset Button on the front side  |
|                                  | E-r   | Electrical Reset           | Reset by the control power cut   |
|                                  | A-r   | Auto Reset (0.3 sec reset) | 0.3 sec ~ 59 sec ~1 min ~ 20 min (setting available)<br>However, auto reset is not available for phase loss, reverse phase, earth fault, locked rotor, and stall |
| <b>Fault Cause Save Function</b> | Function to search recently operated info (including test mode operation)                         |                            | Can search up to 3 operations from the last operation (Last trip) even during operation  |
| <b>Fail Safe</b>                 | Self-diagnosis function based on operating power supply   |                            | Works in FS Mode, ON/oFF selectable  |

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## Specifications

|  |   |  |                            |
|--|---|--|----------------------------|
| <b>Current Setting</b>                 | Over Current (OC)                                     | Refer to the current setting range table   |                            |
|  | Under Current (UC)                                    | oFF/0.5~over current set value or below  |                            |
|  | Earth Fault Current (EC)                              | 0.03A-10A: Definite, 0.03~1A: Can select from Definite/Inverse, oFF  |                            |
| <b>Time Setting</b>                    | Start Delay Time (OT)                                 | oFF~200 sec  |                            |
|  | Over Current Operation Delay Time (OT)                | 0.2~30 sec (Definite) 1~30 (Inverse)   |                            |
|  | Under Current Operation Delay Time (UT)               | 0.5~30 sec (Definite), if "Uc" mode is oFF, "Ut" Mode automatically switches to oFF as well                                  |                            |
|  | Earth Fault Current Operation Delay Time (ET)         | Definite/Inverse: 0.05, 0.1~1~10 sec (0.1~1 sec: Changes in increments of 0.1 sec, 1~10 sec: Changes in increments of 1 sec) |                            |
|  | Earth Fault Operation Delay Time (ED) during start-up | oFF/1~10 sec, applied to Definite operation  |                            |
| <b>Error Tolerance</b>                 | Current   | 1<1A:±0.05A, 1≥1A:±5%  |                            |
|  | Time  | t≤3s:±0.2s, t>3s:±5%   |                            |
| <b>Operating Power Supply</b>          | 220   | AC/DC85V~250V, 50/60Hz   |                            |
| <b>Output Contact</b>                  | OL  | 2-SPST   | AC250V / 3A Resistive Load |
|  | OR  | 1-SPST   | AC250V / 3A Resistive Load |
| <b>Usage Environment</b>               | Temperature   | Storage  | -30~80°C                   |
|  |   | Operation  | -20~60°C                   |
| <b>Display Function</b>                | Humidity  | 30~85% RH (with no dew condensation)   |                            |
|  | 7-segment LED   | Displays 3-phase current, leakage current, cumulative operation time, trip cause   |                            |
| <b>Insulation Resistance</b>           | Bar graph   | Displays actual load factor  |                            |
|  | Between circuit and case                              | DC500V/10MΩ or more  |                            |
| <b>Insulation Withstanding Voltage</b> | Between circuit and case                              | 2KV, 50/60Hz for 1 min   |                            |
|  | Between contacts                                      | 1.0KV, 60Hz for 1 min  |                            |
|  | Between circuits                                      | 2.0KV, 60Hz for 1 min  |                            |
| <b>Installation Method</b>             | 35mm Din Rail or Panel                                |  |                            |
| <b>Electrostatic Discharge</b>         | IEC61000-4-2  | Level3: Air Discharge: ±8kV, Contact Discharge: ±6kV   |                            |
| <b>Radiated Discharge</b>              | IEC61000-4-3  | Level3: 10V/m, 80~1000MHz  |                            |
| <b>Conducted Disturbance</b>           | IEC61000-4-6  | Level3: 10V, 0.15~80MHz  |                            |
| <b>EFT/Burst</b>                       | IEC61000-4-4  | Level3: ±2kV, 1min   |                            |
| <b>Surge</b>                           | IEC61000-4-5  | Level3: 1.2×50μs, ±2kV(0°, 90°, 180°, 270°)  |                            |
| <b>1MHz Burst Disturbance</b>          | IEC61000-4-12   | Level3: 2.5kV, 1MHz  |                            |
| <b>Emission</b>                        | IEC60255-25   | Class A (Conducted & Radiated)   |                            |

## Over Current Operation Time Characteristics Curve

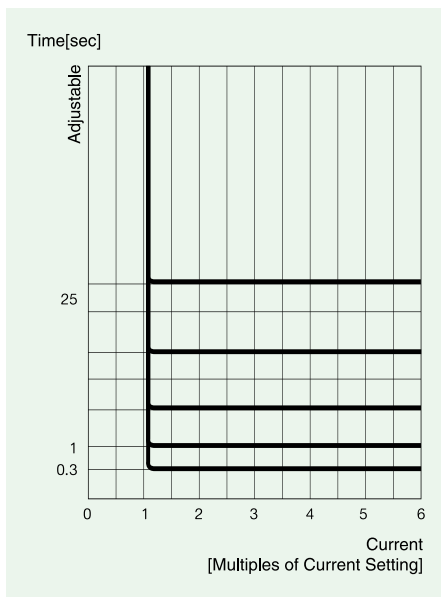


Table 1. Over Current Protection Definite Operation Characteristics Curve

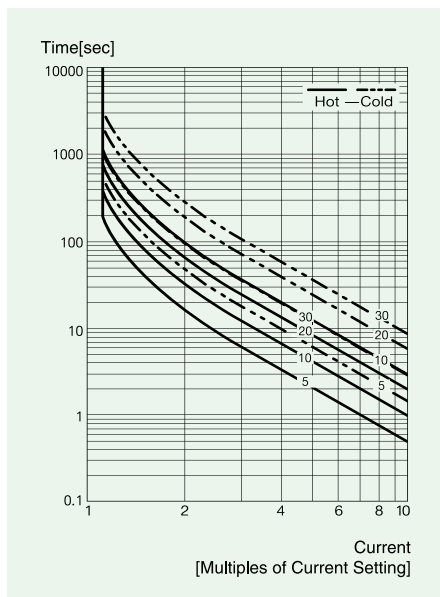


Table 2. Over Current Protection Inverse Operation Characteristics Curve (0.5-10A, external CT combination)

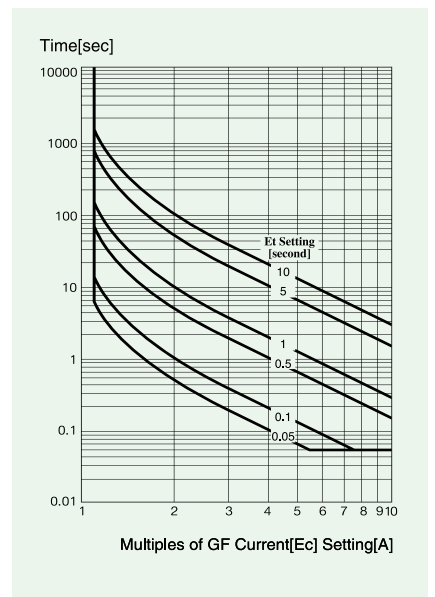


Table 3. Earth Fault Current Protection Inverse Operation Characteristics Curve (current range: 0.03-1A)

# EOCR-PMZ/PFZ

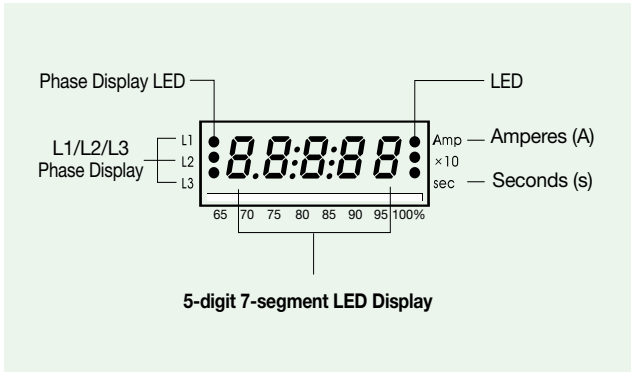
## Current Setting Range Table

| Setting Range | Number of CT Holes | External CT Current Transformer Ratio | CT Setting | Notes      |
|---------------|--------------------|---------------------------------------|------------|------------|
| 0.5~60A       | 1                  | No CT combination                     | oFF        | Wide range |
| 0.25~5.0A     | 2 holes            | No CT combination                     | 2t         |            |
| 0.1~2.0A      | 5 holes            | No CT combination                     | 5t         |            |
| 1~12A         | 1                  | 10:05                                 | 10         |            |
| 1.5~18A       | 1                  | 15:05                                 | 15         |            |
| 2.0~24A       | 1                  | 20:05                                 | 20         |            |
| 2.5~30A       | 1                  | 25:05:00                              | 25         |            |
| 3.0~36A       | 1                  | 30:05:00                              | 30         |            |
| 4.0~48A       | 1                  | 40:05:00                              | 40         |            |
| 5~60A         | 1                  | 50:05:00                              | 50         |            |
| 6~72A         | 1                  | 60:05:00                              | 60         |            |
| 7.5~90A       | 1                  | 75:05:00                              | 75         |            |
| 10~120A       | 1                  | 100:05:00                             | 100        |            |
| 12~144A       | 1                  | 120:05:00                             | 120        |            |
| 15~180A       | 1                  | 150:05:00                             | 150        |            |
| 20~240A       | 1                  | 200:05:00                             | 200        |            |
| 25~300A       | 1                  | 250:05:00                             | 250        |            |
| 30~360A       | 1                  | 300:05:00                             | 300        |            |
| 40~480A       | 1                  | 400:05:00                             | 400        |            |
| 50~600A       | 1                  | 500:05:00                             | 500        |            |
| 60~720A       | 1                  | 600:05:00                             | 600        |            |
| 75~900A       | 1                  | 750:05:00                             | 750        |            |
| 80~960A       | 1                  | 800:05:00                             | 800        |            |
| 100~1200A     | 1                  | 1000:05:00                            | 1000       |            |
| 120~1440A     | 1                  | 1200:05:00                            | 1200       |            |
| 150~1800A     | 1                  | 1500:05:00                            | 1500       |            |
| 200~2400A     | 1                  | 2000:05:00                            | 2000       |            |
| 250~3000A     | 1                  | 2500:05:00                            | 2500       |            |
| 300~3600A     | 1                  | 3000:05:00                            | 3000       |            |

# EOCR-PMZ/PFZ

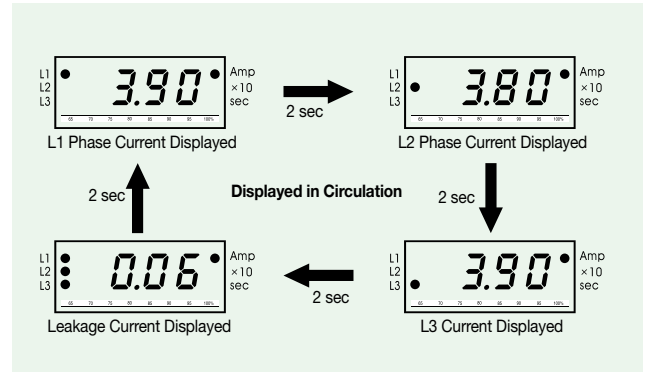
## Display Front View

LED Display (Bar Graph Type)










※ A digital 3-phase current system function that automatically displays the 3-phase operating current in circulation on the 5-digit 7-segment digital monitor installed on the front side of EOCR, together with the phase display, at 5-second intervals.

## 3-phase Digital Current System Function

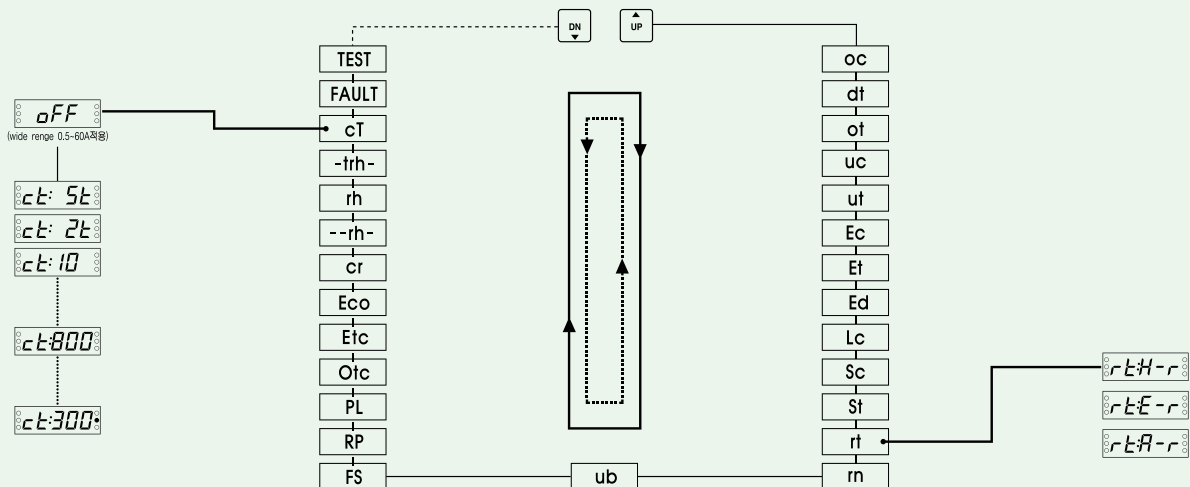


※ Press the SET (store) button once during operation to view manual circulation display instead of auto circulation display. Every time you press the SET (store) button in manual circulation mode, the display rotates in the order specified above, allowing you to lock on a certain element if necessary.

## Button Switch Functions and Setting Sequence

|  |   |   |
|--|---|---|
| <b>1. Mode</b>                             |     | Press the Up/Down switches to find a Mode to set.   |
| <b>2. Set</b>                              |    | Press the SET (store) button once, and the mode and value start to flicker.   |
| <b>3. Adjust</b>                           |   | Press the Up/Down switches to select the necessary value or characters.   |
| <b>4. Store</b>                            |    | Press the SET (store) button once, and the flickering will stop as the selected value or characters are stored.   |
| <b>5. Reset</b>                            |    | Once the setting is done, press the Reset button or leave it for 30 seconds to complete the setting.  |
| <p>※ <b>Manual Circulation Display</b></p> |   | <p>-When you press the SET (store) button during operation, the 3-phase current will be displayed in auto circulation mode instead of in manual circulation mode.</p> <p>-Once the original L1 phase is displayed, every time you press it, the phase will be displayed in circulation order of L2→L3→Leakage Current→L1 phase. Press Reset to return to auto circulation display status.</p> |

### • Setting sequence



## Function Setting Sequence and Setting Menu

| Sequence | Function and Setting Range                               | Display | Description  | Notes  | Default |
|----------|--|---------|--|--|---------|
| 1        | Over Current Setting                                     |         | <ul style="list-style-type: none"> <li>Can be used without any restrictions when using at 60A or less.</li> <li>Must be used in combination with an external CT when using at 60A or higher, and must be set in the following order:                             <ol style="list-style-type: none"> <li>Set the OC to 5A or less.</li> <li>Set the primary current value of the external CT in the CT Mode.</li> <li>Return to OC Mode and set the desired over current value.</li> </ol> </li> </ul>  | Current Setting Range Table (see p.134)  | 10      |
| 2        | Start Delay Time Setting                                 |         | A function to stop the operation of start-up over current, under current, lock, and stall functions. Must be set accurately. Phase loss and reverse phase function normally during the set time period.  | oFF (function ignored: when using Inverse) can be set from 1~200 sec   | 10      |
| 3        | Over Current Operation Time                              |         | <p>When using Definite: The relay operation time is set during the over current state.</p> <p>When using Inverse: Set after resolving the current-time characteristic curve.</p>   | Can be set from 0.2~30 sec<br>Can be set from 1~30 Class   | 5       |
| 4        | Under Current  |         | <ul style="list-style-type: none"> <li>Sets the desired under current (light load current) value.</li> <li>This function is ignored when set to oFF.</li> </ul>  | Only a value less than the set overload current value can be set.  | oFF     |
| 5        | Under Current Operation Time                             |         | <p>Sets the operation time of the relay for the set under current (light load).</p> <p>※ This is for the Definite operation.</p>   | Can be set from 0.5~30 sec   | oFF     |
| 6        | Earth Fault Over Current Setting                         |         | Indicates that earth fault over current is set to 0.5A. Once the earth fault current flow exceeds the set value, it operates after the Et (earth fault operation delay time) setting time is over. Definite operation: 0.03~10A, Inverse operation: 0.03~1A  | Setting range 0.5~10A/oFF  | 10      |
| 7        | Earth Fault Operation Time                               |         | Sets the time it takes for the relay to trip due to an earth fault when the earth fault current exceeding the earth fault current set value (Ec) is detected.  | Definite/Inverse 0.05, 0.1~1~10 sec  | 1       |
| 8        | Earth Fault Operation Delay Time Setting During Start-up |         | <ul style="list-style-type: none"> <li>Indicates that the start-up earth fault delay time is set to 4 sec, and operates 4 seconds after the earth fault current exceeding the set value begins to run.</li> <li>Valid only if the Definite operation characteristic has been applied.</li> </ul>   | 1~10 sec/oFF   | 1       |
| 9        | Lock Current Setting                                     |         | A function to prevent the non-startable state caused by locked rotor, which will not be tripped during operation (after D-Time). Set to a multiple of the over current set value, and trips within 0.5 sec after dt.   | 2~10 times the over current setting/oFF  | 10      |
| 10       | Stall Current Setting                                    |         | <ul style="list-style-type: none"> <li>Set to 1.5~5 times the over current set value to protect against a decrease in speed or locked rotor caused by overload during operation.</li> <li>Not tripped during operation (while D-Time is in progress).</li> </ul>   |  | 5       |
| 11       | Stall Operation Time Setting                             |         | <ul style="list-style-type: none"> <li>If Sc is set to oFF, St automatically switches to oFF.</li> <li>Operates with the setting of 0.1 sec for shock protection</li> </ul>  | 0.1~10 sec/oFF   | 5       |
| 12       | Reset Method   |         | <p>Sets the reset method and auto reset time after the relay is tripped. In this MODE, press the SET/store once, and then press the Up/Down button to show H-r, E-r, and A-r.</p> <p> (Hand Reset): Resets using the Reset button on the front side of the relay</p> <p> (Electrical Reset): Resets by blocking the operating power supply to the relay</p> <p> (Auto Reset): If this Mode is set (Store), it will auto reset 0.2 sec after the trip. If you keep pressing the Up button without pressing the store SW., 0.3 (sec)~20n (meaning 20 min) is displayed, and when your desired auto reset time appears, press Store to set it. If you want to switch to electrical reset () or manual reset () , press Set once and press Up/Down SW. until the auto reset time is set to 0.3. Repeat the process of pressing it once until you find the mode you want, and set it by following the appropriate setting method.</p> | The auto reset time setting can be set from 0.3 sec~0.9 sec~1 sec~10 sec~50~1n (min)~ 10n (min) and 20n (min)<br>※ 3-phase current and trip cause are displayed in circulation after auto reset. | H-r     |
| 13       | Restart Limit  |         | <ul style="list-style-type: none"> <li>Only applies to Auto Reset.</li> <li>When the thermal protection mode is applied, it is automatically displayed as oFF.</li> <li>If tripped up to the limit of the set count within 30 minutes, an additional restart is prevented.</li> <li>The count of restart limit setting is voided by Hr (Hand Reset or Manual Reset).</li> </ul>  | oFF/3~10 restarts  | oFF     |
| 14       | Current Unbalance  |         | Detects 10% of the unbalance current against the max. phase current.   | 5~50%/oFF  | 50      |
| 15       | Fail Safe (NVR) Function                                 |         | Cannot be set while operating.   | ON, oFF  | oFF     |
| 16       | Phase Loss Function Select                               |         | Does not auto reset when tripped (even if you selected auto reset)   | ON, oFF  | ON      |

## Function Setting Sequence and Settings Menu

| Sequence | Function and Setting Range  | Display | Description  | Notes   | Default                    |
|----------|---|---------|--|---|----------------------------|
| 17       | RPR (Reverse Phase Relay) Function  |         | Does not auto reset when tripped (even if you selected auto reset)   | ON, oFF   | ON                         |
| 18       | Over Current Protection Operation Time Characteristics (select among Definite/Inverse/Thermal Inverse protection) |         | <ul style="list-style-type: none"> <li>Definite (dE) / Inverse (Inv) / Thermal Inverse (td)</li> <li>Inverse (Inv)/Thermal Inverse (th): Operated according to the inverse time characteristic curve.</li> <li>Thermal Inverse (th): Automatically enters initialization 20 min after the motor stops</li> </ul>   | dE (definite), In (Inverse) th (thermal Memory Inverse)   | dE                         |
| 19       | Earth Fault Protection Operation Time Characteristics (select between Definite/Inverse)                           |         | Inverse (Inv): Refer to the characteristic curve   | dE (definite), In (Inverse)   | dE                         |
| 20       | Earth Fault Output Contact Select   |         | Open contact in the normally de-energized state<br>57-1 1-58 GR  | • Cannot be set while operating.  | Select contact a or b<br>a |
| 21       | 4~20mA Current Upper Limit Setting  |         | <ul style="list-style-type: none"> <li>Displayed as 4mA at 0.5A or less</li> <li>Outputs 20mA if the set current runs.</li> </ul>  | Wide Range application:<br>0.5~60A/oFF CT<br>Combination type:<br>(0.5~6A) × CT ratio/oFF                                   | oFF                        |
| 22       | Set Operation Time Display  |         | In some situations, when this mode is entered --rh- and 0030.6 (cumulative operation time out of the set operation time: 0.6 indicates 60×0.6=36 min) are alternatively shown 15 times per second, and the display switches to the current display. After the set operation time, the current of L1, L2, and L3 is automatically displayed for 5 seconds during normal operation and then a warning is given by displaying the operation alternating every 1 second. To Reset, set the above 'rh' setting to rh:oFF and set the operation time again. After the set time, the 3-phase current and elapsed time are displayed in circulation. Cannot be changed to oFF while operating. | Can be reset in rh MODE. Set rh to rh:oFF and then set to the required operation time again.                                | 0                          |
| 23       | Operation Time Setting  |         | <ul style="list-style-type: none"> <li>The time can be set as desired with operation time setting MODE.</li> <li>During the setting, the LED of X10 on the right side of the time display is illuminated, allowing the setting to be changed in 1-hour units.</li> <li>The operation time cumulative display is accumulated only during motor operation.</li> </ul>  | Off, can be set from 1~9990 hours (reset possible)  | oFF                        |
| 24       | Total Operation Time  |         | When current of 0.2A or higher flows after installing the relay, the total operation time is accumulated for the integration of up to 65500 hours. If you enter this mode during operation, -trh- and 303.3 are alternatively displayed 15 times every 1 second, and the display switches to the current display.<br>※303.3=303 hours 18 min (0.3×60 min)  | This operation time cannot be Reset.  | 0                          |
| 25       | CT Current Transformer Ratio Setting  |         | Sets the primary current of the CT if an external CT is being used. That is, if the current transformer ratio is 200:5, it is set to 200.  | Cannot be set during operation.   | oFF                        |
| 26       | Trip Cause Check  |         | <ul style="list-style-type: none"> <li>When tripped by a certain cause while using the relay, the cause is stored to check later as needed. In this mode, by pressing the SET button, the 3 most recent trip causes are displayed in the order of Last-2nd-3rd, and the trip causes as well as the current of each phase can be checked.</li> <li>When set to Auto Reset, the current circulation display during operation will be shown in the order of L1→L2→L3→ Last Trip Cause → Leakage Current (Earth Fault) → L1, during which the last trip cause is displayed for only 1 sec.</li> </ul>  | Stores the trip causes even during the recovery of electricity after power outage.  |                            |
| 27       | Test  |         | This mode is to check if the relay itself is in a normal state and if the sequence has been normally configured after installing the relay. 3 seconds after you enter this mode, a countdown will begin for the set of (OC operation time), the state of EOCR will be changed to a trip state and End will be shown on the display window. This trip is also stored in the Fault Mode. That is, if you look for the last operation state again in Fault, End will be displayed.  | Pressing Reset SW will return it to normal.<br>※ You may not enter this mode during operation in order to prevent tripping. |                            |

※Precautions: Over Current (oc) value will not be set to the same value as the under current setting (uc) or less, whereas the under current setting cannot be the same as the over current setting or higher.

### 1. Earth Fault Current Setting Range for Each Characteristic

| Operation Time Characteristic | Definite (DEF) | Inverse (INV) |
|-------------------------------|----------------|---------------|
| Earth Fault Current Range     | 0.03~10A       | 0.03~1A       |

### 2. Setting sequence to use 0.03~1A for Definite

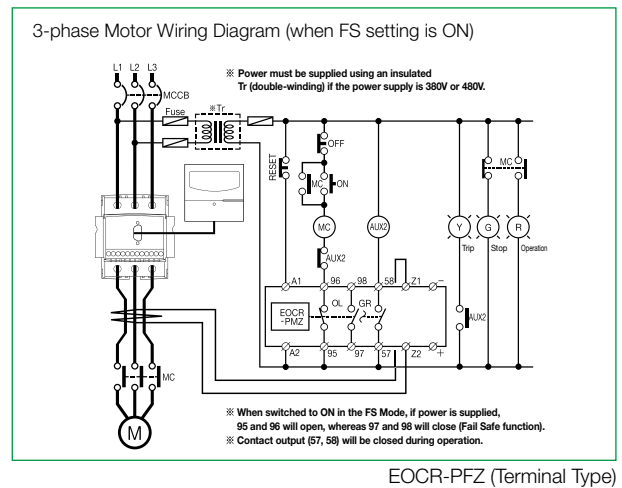
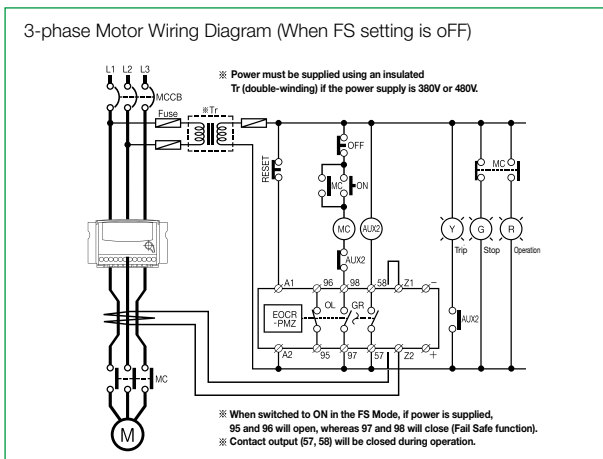
- Selecting In in Etc Mode will automatically set the range to 0.03~1A.
- To set to Definite in a), In must be changed to dE again in Etc Mode.

# EOCR-PMZ/PFZ

## Trip Cause Display and Check Method

| Operation Display (trip indication) |                    |   |   |
|-------------------------------------|--------------------|---|---|
| Trip Cause                          | Trip Cause Display | Description   |   |
| Over Current                        |                    | Operates upon detecting over current at L1(R) phase during operation.   | <br>Once tripped, the current for each phase can be checked by pressing the UP/DN switches. |
| Under Current                       |                    | Operates upon detecting under current at L2(s) phase during operation.  |   |
| Stall Trip During Startup           |                    | Operates upon detecting stall current during startup.   |   |
| Jam Trip During Operation           |                    | Tripped by jam caused by heavy load during operation, or by shock caused by mechanical shock load.                |   |
| Reverse Phase                       |                    | Tripped due to reverse phase.   |   |
| Unbalance                           |                    | Operates upon detecting unbalance current that matches the specified setting (%) based on the max. phase current. |   |
| Phase Loss                          |                    | Tripped due to phase loss.  |   |
| Earth Fault                         |                    | Operates upon detecting earth fault current.  |   |

## Example Wiring Diagram ※ Installation on the secondary inverter is recommended when using with an inverter or VSD.



※ EOCR must be wired as follows:

- Terminals and electric wires must be connected in full contact when wired.
- Operating power supply must be properly connected and supplied to the terminal. It is recommended to check the wiring diagram before wiring, as EOCR burnout or system short-circuit may occur if it is incorrectly wired to the output terminal.

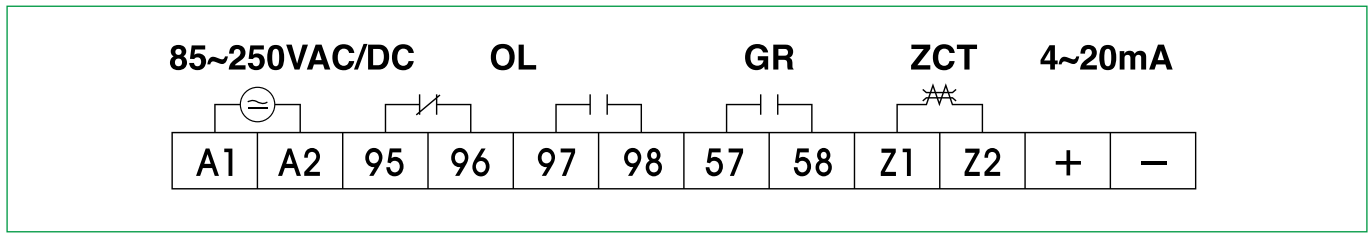
※ ZCT terminal must be used without a ground connection.

※ When using Star-Delta Starter (Y-Δ starter), ZCT must be installed on the upper part of the main MC body and below the Main CB.

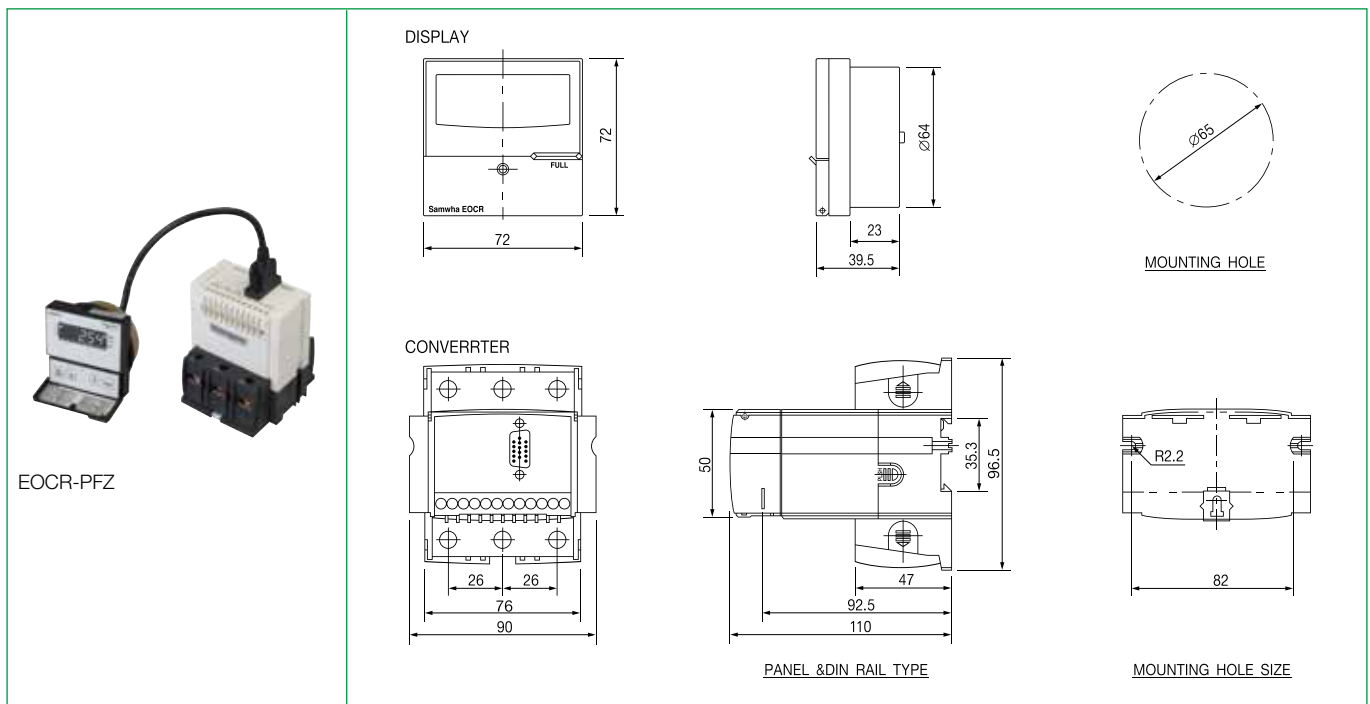
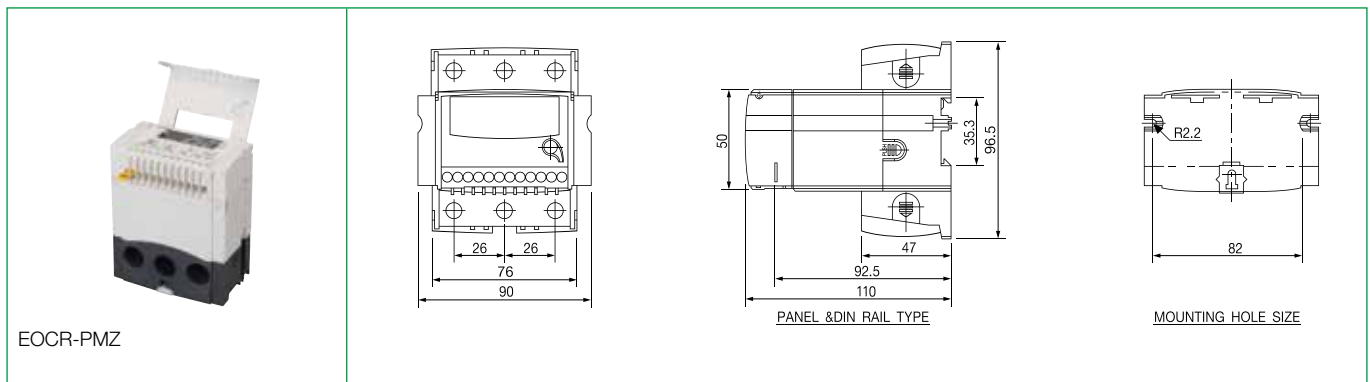


# EOCR-PMZ/PFZ

## I/O Terminal Configuration





## Dimensions Diagram



# EOCR-PMZ/PFZ

## Ordering Specifications

| Reference  |         | Current Range [A] | Output contact | Operating Power Supply |                | Converter | Notes    |                |
|--|---------|-------------------|----------------|------------------------|----------------|-----------|----------|----------------|
|  |         |                   |                | Voltage [V]            | Frequency [Hz] |           |          |                |
| <br>EOCR-PMZ  | EOCRPMZ | -WRDBW            | Wide Range     | b-a                    | DC/AC 24V      | -         | Window   |                |
|  |         | -H1DBW            | 100:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -HHDBW            | 150:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -H2DBW            | 200:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -H3DBW            | 300:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -H4DBW            | 400:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -WRDZ7W           | Wide Range     | b-a                    | DC/AC 85~250V  | 50/60     | Window   | -              |
|  |         | -H1DZ7W           | 100:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |
|  |         | -HHDZ7W           | 150:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |
|  |         | -H2DZ7W           | 200:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |
| <br>EOCR-PFZ | EOCRPFZ | -WRDBT            | Wide Range     | b-a                    | DC/AC 24V      | -         | Terminal |                |
|  |         | -WRDZ7T           | Wide Range     | b-a                    | DC/AC 85~250V  | 50/60     | Terminal | -              |
|  |         | -WRDBW            | Wide Range     | b-a                    | DC/AC 24V      | -         | Window   |                |
|  |         | -H1DBW            | 100:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -HHDBW            | 150:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -H2DBW            | 200:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -H3DBW            | 300:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -H4DBW            | 400:05:00      | b-a                    | DC/AC 24V      | -         | Window   | CT Combination |
|  |         | -WRDZ7W           | Wide Range     | b-a                    | DC/AC 85~250V  | 50/60     | Window   | -              |
|  |         | -H1DZ7W           | 100:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |
|  |         | -HHDZ7W           | 150:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |
|  |         | -H2DZ7W           | 200:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |
|  |         | -H3DZ7W           | 300:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |
|  |         | -H4DZ7W           | 400:05:00      | b-a                    | DC/AC 85~250V  | 50/60     | Window   | CT Combination |

| Accessory 1 |              |          |            |
|-------------|--------------|----------|------------|
| Model       | Reference    | PIN Type | Length (M) |
| Cable       | CABLE-15-00H | 15PIN    | 0.5        |
|             | CABLE-15-001 | 15PIN    | 1          |
|             | CABLE-15-01H | 15PIN    | 1.5        |
|             | CABLE-15-002 | 15PIN    | 2          |
|             | CABLE-15-003 | 15PIN    | 3          |
|             | ⋮            | ⋮        | ⋮          |
|             | CABLE-15-010 | 15PIN    | 10         |

| Accessory 2 |           |                    |
|-------------|-----------|--------------------|
| Model       | Reference | Hole Diameter (mm) |
| ZCT         | ZCT-035   | 35                 |
|             | ZCT-080   | 80                 |
|             | ZCT-120   | 120                |