## Technical Data: Phase Failure Relay ECPF03, 05, 08


#### Abstract

$\triangle$ Important Safety Notice It is the responsibility of the person installing the electrical equipment to ensure that the installation meets the requirements of the IET wiring regulations and is therefore 'fit for purpose'. Factors such as correct selection of components, cable sizing, protective devices and Earth bonding are all critical and should be checked prior to full testing and power-up. Any other regulations applicable to the equipment being installed such as the Machinery Directive and current health and safety legislation must also be adhered to. All connections (including factory made) must be checked for the correct tightness prior to commissioning of the electrical installation. All connections should be checked periodically to ensure correct tightness. DO NOT USE POWER TOOLS ON THESE PRODUCTS




| Data | ECPF03 | ECPF05 | ECPF08 |
| :---: | :---: | :---: | :---: |
| Function | Monitoring 3-phase voltage |  |  |
| Monitoring terminials | L1-L2-L3 |  |  |
| Supply terminals | L1-L2 |  |  |
| Voltage range | 220-230-240-380-400-415-440-460 (P-P) |  |  |
| Rated supply frequency | $45 \mathrm{~Hz}-65 \mathrm{~Hz}$ |  |  |
| Measuring range | 176V-552V |  |  |
| Threshold adjustment voltage | - | 2\%-20\% of Un selected |  |
| Adjustment of asymmetry threshold | - | 8\% |  |
| Hysteresis | 2\% |  |  |
| Phase failure value | 70\% of Un selected |  |  |
| Time delay | - | Adjustable 0.1s-10s,10\% | 2s |
| Measurement error | $\leq 1 \%$ |  |  |
| Run up delay at power up | 0.5 s time delay |  |  |
| Knob Setting Accuracy | - | 1\% of scale value |  |
| Supply Indication | Green LED |  |  |
| Output indication | Red LED |  |  |
| Reset time | 1000 ms |  |  |
| Output | $1 \times$ SPDT |  |  |
| Current rating | 10A / AC1 |  |  |
| Switching voltage | 250VAC / 24VDC |  |  |
| Min breaking capacity DC | 500 mW |  |  |
| Temperature coecient | $0.05 \% /{ }^{\circ} \mathrm{C}, \mathrm{at}=20^{\circ} \mathrm{C}\left(0.05 \%{ }^{\circ} \mathrm{F}, \mathrm{at}=68{ }^{\circ} \mathrm{F}\right)$ |  |  |
| Mechanical life | $1 \times 10^{7}$ |  |  |
| Electrical life (AC1) | $1 \times 10^{6}$ |  |  |
| Operating temperature | $-20^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ (-40 F to $\left.131{ }^{\circ} \mathrm{F}\right)$ |  |  |
| Storage temperature | $-35^{\circ} \mathrm{C}$ to $+75^{\circ} \mathrm{C}\left(-22^{\circ} \mathrm{F}\right.$ to $\left.158{ }^{\circ} \mathrm{F}\right)$ |  |  |
| Mounting/DIN rail | Din Rail EN/IEC 60715 |  |  |
| Protection degree | IP40 for front panel / IP20 Terminals |  |  |
| Operating position | Any |  |  |
| Overvoltage category | III. |  |  |
| Pollution degree | 2 |  |  |
| Max Cable Size ( $\mathrm{mm}^{2}$ ) | Solid wire max $1 \times 2.5$ or $2 \times 1.5 /$ with sleeve max $1 \times 2.5$ (AWG 12) |  |  |
| Dimensions | $90 \times 18 \times 64 \mathrm{~mm}$ |  |  |
| Weight | 64 g |  |  |
| Standards | IEC/EN 60255-6, IEC/EN61010-1 |  |  |

Phase failure and phase equence function diagram


- Asymmetry function diagram


Overvoltage and undervoltage function diagram


To:Overvoltage threshold tripping delay.
Tu:Undervoltage threshold tripping delay.
Ta:Asymmetry threshold tripping delay.
NOTE:

1. In case of phase fault at power supply terminals L1 and L2, the function LED would not make indication.
2. If the switch position is changed while he device is operating, all the LED's flash, but the product continues to operate normally with the voltage selected at the time of energisation precedubg the change of position. The LED's return to their normal state if the switch is returned to the original position selected prior to the last energisation.

