

Analog Protection Relays

- Phase
- Voltage



Digital Protection Relays

- Phase
- Voltage
- Current
- Frequency
- Earth Leakage



900VPR-2

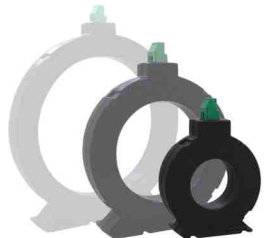


900ELR-2

| DESCRIPTION | Voltage Protection Relay | Earth Leakage Relay |
|------------------------------|---|---|
| Functions | <ul style="list-style-type: none"> Under / over voltage, under frequency, over frequency, asymmetry, phase failure and phase sequence monitoring in 3Ø system RMS value measurement Power ON delay, Trip time delay and Delay on release Adjustable switching hysteresis Two separate alarm relays | <ul style="list-style-type: none"> Leakage current monitoring in 1Ø and 3Ø systems RMS value measurement CBCT connection monitoring Power ON delay, response delay and delay on release Adjustable switching hysteresis Test and Reset via front / remote LCD display with backlight Two separate alarm relays with NC or NO operation selectable |
| Display | 3 digits Liquid Crystal Display | 3 digits Liquid Crystal Display with backlight |
| Electrical Connection | 3Ø-3 wire, 3Ø-4 wire | 1Ø-2 wire, 3Ø-3 wire, 3Ø-4 wire, |
| CT Setting | --- | --- |
| Trip Setting | Under / Over Voltage: 280 to 520V AC L-L (for 3Ø-3 wire system) 160 to 300V AC (for 3Ø-4 wire system) Under / Over Frequency: 45 – 65Hz Voltage Asymmetry: 5.0 – 99.9% | Leakage Current: 10mA - 30A Pre Alarm: 50 - 100% of leakage current setting |
| Trip Time Setting | Power ON Delay: 2 – 99.9sec Trip Time Delay: 0 – 99.9sec Delay on Release: 0 – 99.9sec Response Time: <200ms | Power ON Delay: 0.5 – 99.9sec Trip time delay: 0 – 99.9sec Delay ON Release: 0 – 99.9sec Response Time: < 30ms (if trip current ≥ 5 x set value) < 50ms (if trip current ≥ 1 x set value) |
| Hysteresis | Voltage: 1.0 – 99.0V, Frequency: 0.2 – 2Hz, Asymmetry: 2-20% | 5-40% of set value |
| Resolution | Voltage: 1V. Frequency: 0.1Hz | Current: 0.1, 1mA, 0.01A, 0.1A (Depends on trip setting) |
| Accuracy | Voltage: ±1% of set value, Frequency: ±0.3Hz, Time (Recovery Time, Trip delay, Power on delay) = ±5% of setting ± 200ms | Current: ±5% of Setting, Time delays = ±5% of setting + 100ms |
| Output Contact | 2 x 1C/O (SPDT) | 2 x 1C/O (SPDT) |
| Relay Rating | NO : 5A, 250V AC ; NC : 3A, 250V AC | NO : 5A, 250V AC; NC : 3A, 250V AC |
| Supply Voltage | Self Powered | 230V AC (factory set) / 110V AC / 12-24V DC; ±15% |
| Frequency | 45 - 65Hz | 45 - 65Hz |
| Power Consumption | 30VA max. | 3VA max |
| Order Code | 900VPR-2-280/520V | 900ELR-2-230V, 900ELR-2-110V, 900ELR-2-12/24V DC |
| Certification | CE | CE |
| Terminal Connection | | |

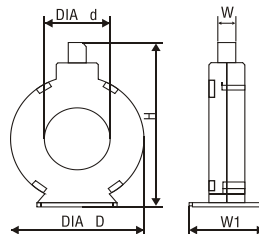
CBCT-35-1 / CBCT-70-1 / CBCT-120-1

CBCT FOR EARTH LEAKAGE RELAY



| CBCT TYPE | Dimensions (mm) | | | | |
|------------------|-----------------|-------|-----|---------|------|
| | D | d | H | W | W1 |
| 35 | 64 | 45 | 96 | 13 | 52.5 |
| 70 | 98 | 82 | 131 | 13 | 87 |
| 120 | 149 | 125 | 184 | 13 | 122 |
| STD. TOL. | 2 - 3 | 5 - 6 | — | 1.5 - 2 | — |

CT Type ZPC (Zero Phase Current)



| 900ELR-2 | |
|--------------|----------------|
| Order Code | Inner Diameter |
| CBCT - 35-1 | 35mm |
| CBCT - 70-1 | 70mm |
| CBCT - 120-1 | 120mm |



900CPR-1



900CPR-3

1Ø Current Protection Relay

- Under current, over current protection
- RMS value measurement
- 1Ø with inbuilt CT
- Power ON delay, Trip time delay and Delay on release
- Adjustable switching hysteresis
- One alarm relay with NC or NO operation selectable

3 digits Liquid Crystal Display

1Ø-2 wire

CT Primary: 1A/5A - 999A
CT Secondary: 1A / 5A (selectable)

Under Current: 0 – 999A
Over Current: 0.5A – 1.19kA

Power ON Delay: 0.5 – 99.9sec
Trip time delay: 0 – 99.9sec
Delay ON Release: 0 – 99.9sec
Response Time: < 100ms

Current: 0.1 – 99.9A (Depends on CT setting)

Current: 0.01, 0.1, 1A, 0.01kA (Depends on CT setting)

Current: ±1% of CT Setting ± 2 digits,
Time (Recovery Time, Trip delay, Power on delay) = ±5% of setting ± 200ms

1C/O (SPDT)

NO : 5A, 250V AC; NC : 3A, 250V AC

230V AC (factory set) / 110V AC; ±15%

45 - 65Hz

12VA max

900CPR-1-230V, 900CPR-1-110V

3Ø Current Protection Relay

- Under / Over current monitoring in 1Ø and 3Ø
- Current asymmetry protection (for 3Ø systems only)
- RMS value measurement
- Power ON delay, Trip time delay and Delay on release
- Adjustable switching hysteresis
- One alarm relay with NC or NO operation selectable

3 digits Liquid Crystal Display

1Ø-2 wire, 3Ø-3 wire, 3Ø-4 wire

CT Primary: 1A/5A - 999A
CT Secondary: 1A / 5A (selectable)

Under Current: 0 – 999A
Over Current: 0.5A - 1.19kA
Current Asymmetry: 5.0 – 99.9%

Power ON Delay: 0.5 – 99.9sec
Trip time delay: 0 – 99.9sec
Delay ON Release: 0 – 99.9sec
Response Time: < 200ms

Current: 0.1 – 99.9A (Depends on CT setting)

Current: 0.01, 0.1, 1A, 0.01kA (Depends on CT setting)

Current: ±1% of CT Setting ± 2 digits,
Time (Recovery Time, Trip delay, Power on delay) = ±5% of setting ± 200ms

1C/O (SPDT)

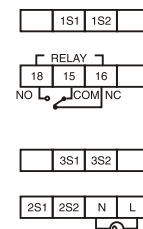
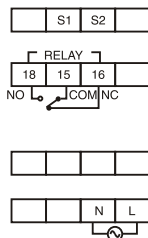
NO : 5A, 250V AC; NC : 3A, 250V AC

230V AC (factory set) / 110V AC; ±15%

45 - 65Hz

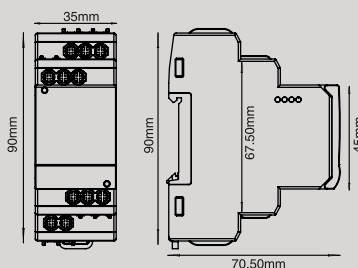
12VA max

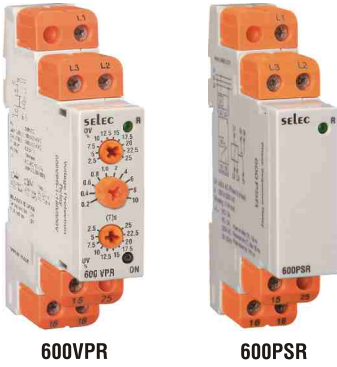
900CPR-3-230V, 900CPR-3-110V



DIMENSIONS

- 900ELR-2
- 900VPR-2
- 900CPR-1
- 900CPR-3





COMMON FEATURES:

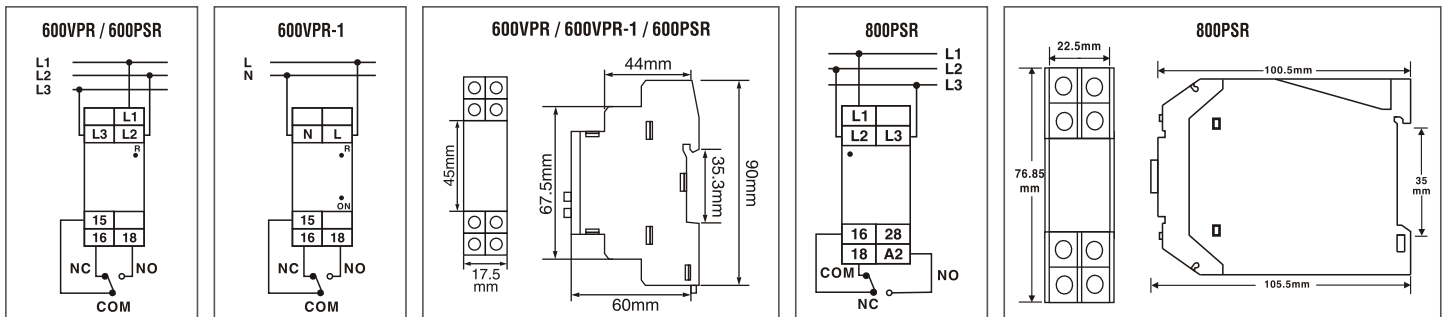
Mounting : DIN RAIL Mounting
Size: 17.5 (W) x 90(H) x 60(D)
Reset: Auto reset on removal of fault condition

LED Indication:

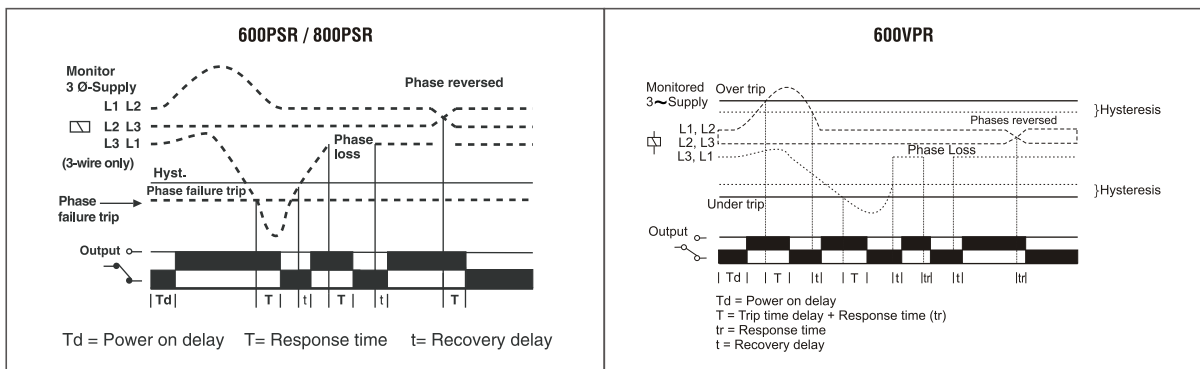
600PSR: Relay ON
600VPR: Power ON, Relay ON

| Description | Model | Modes | Time Ranges | Accuracy | OUTPUT CONTACTS | Supply Voltage | Order Code | Certification |
|--------------------------|----------|---|--|---|---|---|-------------------|---------------|
| Voltage Protection Relay | 600VPR | 600VPR-310/520: Under voltage trip: -2.5% to -25% of 415V AC Over voltage trip: +2.5% to +25% of 415V AC Phase Sequence : Yes | Trip time delay: 0.2 to 10 sec Power On Delay: 400 msec | Trip: ±0.5% of F.S. Time: ±5% of F.S | 1 C/O (SPDT) Rating: NO/5A, NC/3A, 250V AC | 3Ø/3W 600VPR-310/520: 310 to 520V AC(L-L) | 600VPR-310/520 | CE |
| | | 600VPR-170/290: Under voltage trip: -2.5% to -25% of 230V AC Over voltage trip: +2.5% to +25% of 230V AC Phase Sequence : Yes | | | | 170 to 290V AC(L-L) AC:(50/60Hz) | 600VPR-170/290-CU | CE, ULus |
| Voltage Protection Relay | 600VPR-1 | 600VPR-1-180/300: Under voltage trip: 180 to 234V AC Over voltage trip: 246 to 300V AC | Trip time delay: 0.2 to 10 sec Power On Delay: 200 msec | | | 1Ø/2W 600VPR-1-180/300 180 to 300V AC(L-N) | 600VPR-1-180/300 | CE |
| Phase Sequence Relay | 600PSR | 600PSR: Phase Sequence, Phase Missing, Phase Failure Trip: <154V AC (L-L), Phase imbalance: 30V fixed, Hysteresis: 6V | Response Time: 200 msec max. Power On Delay: 200 msec | Trip: ±10V | 1 C/O (SPDT) Rating: NO/5A, NC/3A, 250V AC | 3Ø/3W 600PSR: 154 to 500V AC(L-L) | 600PSR | CE |
| | 800PSR | 800PSR: Phase Sequence, Phase Missing, Phase Failure Trip: <70% of Nominal Voltage 280V AC, Phase imbalance: 30V fixed, Hysteresis: 6V | Response Time: 100 msec max. Power On Delay: 100 msec | | | 3Ø/3W 800PSR: 280 to 528V AC(L-L) | 800PSR | --- |

Terminal Connections & Dimensions



Timing Diagrams



For more information visit us at www.selec.com

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