

- Under voltage, over voltage, under frequency, over frequency, asymmetry, phase failure and phase sequence monitoring in 3 \emptyset system
- RMS measurement
- Power ON delay, Trip time delay and Delay on release
- LED Indication: Relay ON, Power ON
- Adjustable switching hysteresis
- Two separate alarm relays
- Din-Rail Mount



Voltage Phase Monitor

SPECIFICATIONS

ENVIRONMENTAL SPECIFICATION

| | |
|----------------|------------------------------------|
| DISPLAY | Liquid Crystal Display 3 Digits |
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INPUT SPECIFICATIONS

FUNCTIONS

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|---------------------|--|
| MEASUREMENTS | Voltage (V_{L-N} , F_{L-L}), Frequency, Phase Asymmetry, Phase Failure, Phase Sequence |
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|---------------------|--|
| TIME SETTING | Power ON delay, Trip time delay and Delay on release |
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|--------------------------|------|
| ALARM INDICATIONS | Trip |
|--------------------------|------|

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|-----------------|------------|
| LATCHING | Selectable |
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|--------------|-------------------|
| RESET | Auto/Manual reset |
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| ELECTRICAL CONNECTION | 3 \emptyset -3 wire, 3 \emptyset -4 wire |
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|-----------------------|--------------|
| SUPPLY VOLTAGE | Self powered |
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|------------------------|--|
| OPERATING RANGE | 280 to 600V AC (L-L) 160 to 300V AC (L-N) |
|------------------------|--|

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|------------------|-----------|
| VA RATING | 30VA max. |
|------------------|-----------|

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|------------------|-----------|
| FREQUENCY | 45 - 65Hz |
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|------------------------------------|--|
| MEASURING RANGE (RMS Value) | 280 to 600V AC (L-L)*[for 3 \emptyset -3 wire] 160 to 300V AC (L-N)*[for 3 \emptyset -4 wire] |
|------------------------------------|--|

TRIP SETTINGS

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|----------------------|--|
| UNDER VOLTAGE | 280 to 600V AC (L-L) [for 3 \emptyset -3 wire] 160 to 300V AC (L-N) [for 3 \emptyset -4 wire] |
|----------------------|--|

| | |
|---------------------|--|
| OVER VOLTAGE | 280 to 600V AC (L-L) [for 3 \emptyset -3 wire] 160 to 300V AC (L-N) [for 3 \emptyset -4 wire] |
|---------------------|--|

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|------------------------|-----------|
| UNDER FREQUENCY | 45 - 65Hz |
|------------------------|-----------|

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|-----------------------|-----------|
| OVER FREQUENCY | 45 - 65Hz |
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|----------------------|-----|
| PHASE FAILURE | Yes |
|----------------------|-----|

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|-----------------------|-----|
| PHASE SEQUENCE | Yes |
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|------------------------|-------------|
| PHASE ASYMMETRY | 5.0 - 99.9% |
|------------------------|-------------|

* For 3 \emptyset -3W, at least 2 phase must be present

* For 3 \emptyset -4W, at least 1 phase must be present

TRIP TIME SETTINGS

| | |
|-----------------------|--------------|
| POWER ON DELAY | 2 - 99.9 Sec |
|-----------------------|--------------|

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|------------------------|--------------|
| TRIP TIME DELAY | 0 - 99.9 Sec |
|------------------------|--------------|

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|-------------------------|--------------|
| DELAY ON RELEASE | 0 - 99.9 Sec |
|-------------------------|--------------|

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|----------------------|--------|
| RESPONSE TIME | <200ms |
|----------------------|--------|

HYSTERESIS

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|----------------|------------|
| VOLTAGE | 1.0- 99.9V |
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|------------------|-----------|
| FREQUENCY | 0.2 - 2Hz |
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| ASYMMETRY | 2 - 20% |
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RESOLUTION

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|----------------|----|
| VOLTAGE | 1V |
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| FREQUENCY | 0.1Hz |
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ACCURACY

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|----------------|-----------|
| VOLTAGE | $\pm 1\%$ |
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|------------------|--------------------|
| FREQUENCY | $\pm 0.3\text{Hz}$ |
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| TIME (Recovery Time, Trip Delay, Power ON Delay) | $\pm 5\%$ of setting + 200ms |
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OUTPUT SPECIFICATIONS

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| NO. OF RELAYS | 2 |
|----------------------|---|

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| TYPE OF OUTPUT (Relay 1) (Relay 2) | 45 - 65Hz SPDT SPDT |
|---|---------------------------|

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| RELAY RATING | N/O: 5A @ 250V AC N/C: 3A @ 250V AC |
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LED INDICATION

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|----------------------|--------------------------------------|
| LED 1 (Green) | Power ON |
| LED 2 (Red) | Relay 1 (Continuously ON after trip) |
| LED 3 (Red) | Relay 2 (Continuously ON after trip) |

ENVIRONMENTAL SPECIFICATION

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|----------------------------------|---|
| AMBIENT TEMP. | Operating Temp: 0°C to 50°C Storage Temp: -20°C to +70°C |
| HUMIDITY (Non-condensing) | 95% RH |
| POLLUTION DEGREE | IP50 Faceplate IP30 Housing IP20 Terminals |

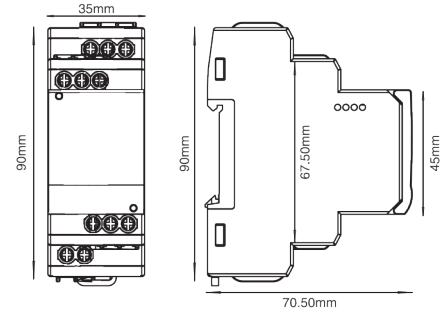
MECHANICAL SPECIFICATIONS

| | |
|--|-------------------------|
| NO. OF PUSH BUTTON | 3 |
| SIZE | 35mm width |
| MOUNTING | Din Rail Mount |
| WEIGHT | 135 g |
| CONDUCTOR CROSS SECTION (SOLID) | 1 x (0.5 to 4) Sq. mm |
| CONDUCTOR CROSS SECTION (SLEEVED) | 2 x (0.5 to 1.5) Sq. m |
| (STANDARD) | 1 x (0.5 TO 2.5) Sq. mm |
| SCREW TIGHTENING TORQUE | 0.5 N-M |

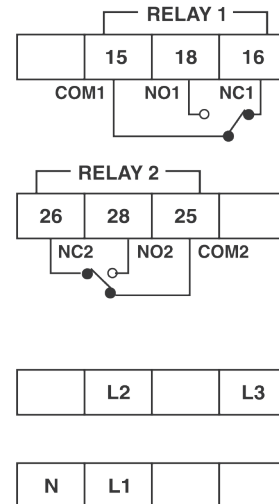
EMC

| | |
|--|--|
| ELECTRICAL COMPATIBILITY | IEC 61326-1 |
| ESD IMMUNITY IEC 61000-4-2 | Level 3 |
| SURGE IMMUNITY IEC 61000-4-5 | ±2 kV common mode ±1 kV differential mode |
| RADIATED SUSCEPTIBILITY IEC 61000-4-3 | Level 3, 80 - 1000 MHz |
| CONDUCTED SUSCEPTIBILITY IEC 61000-4-6 | LEVEL 2 |
| VOLTAGE DIPS & INTERRUPTION IEC 6100-4-11 | Dips: 0% residual voltage / 1 cycle (Crit B.) 40% residual voltage / 10 cycles 50 Hz / 12 cycles 60 Hz (Crit C) 70% residual voltage / 25 cycles 50 Hz . 30 cycles 60 Hz (Crit C) Interruptions: 0% residual voltage / 250 cycles 50 Hz / 300 cycles 60 Hz (Crit C) |
| CONDUCTED EMISSIONS | CISPR-11 & IEC 61000-6-3 |
| RADIATED EMISSIONS | CISPR-22 |
| ELECTRICAL FAST TRANSIENT: IEC 6100-4-4 | Level 3 |

DIMENSIONS



TERMINAL CONNECTIONS



ORDERING INFORMATION

| PART NUMBER | OPERATING RANGE |
|-------------|-----------------|
| DPR350C | 300-600V AC |