Type SRW
Reverse Power Relay

APPLICATION

The SRW is a single phase, solid state, directionally controlled reverse power relay, used primarily to protect ac generators against motoring. The directional unit has a factory preset maximum sensitivity characteristic of 30° (i.e., 1\(A\) leading \(V_{ac}\) by 30°). The relay can be adjusted for any desired maximum sensitivity angle between 0 and 90°. The SRW may also be used to sense lagging power factor load flow in an abnormal direction.

The SRW establishes a new degree of sensitivity, providing a minimum current pickup sensitivity of 1 mA and an adjustable range of 1 to 40 mA. The trip delay timer is adjustable between 2 and 21.5 seconds in 0.5 Sec. steps, with an optional style of 6-60 seconds time delay. All the setting are made from the front of the relay using a thumb wheel switch and six-position dip switch.

The SRW may be applied on 48, 125 or 250 Vdc utilizing link selection on the power supply printed circuit board.

FEATURES

Minimum current sensitivity of 1 mA provides greater level of protection, especially on low-loss machines. (Adjustable range of 1 to 40 mA)

Selectable dc supply voltage (48, 125 and 250 Vdc), minimizes style numbers and simplifies user selection

Setting procedure is simplified by digital settings made from the front of the relay

FT case construction provides unsurpassed in-service test and isolation capability

Trip indication is based on actual trip current flow

Designed to meet harsh substation and generation plant environments

Adjustable trip delay timer provides accurate, repeatable trip times

Low ct burden requirements

Magnetic target retains trip indication on loss of dc battery voltage

Front-mounted manual target reset

CHARACTERISTICS

Dimensions

7\(\frac{1}{4}\)" H x 6\(\frac{1}{8}\)" W x 7\(\frac{3}{8}\)" D

Standard FT11 case/refer to DB 41-080 for details.

Shipping Weight

10.0 Lbs.

Power Supply

48, 125 or 250 Vdc, Link Selectable

Frequency

50 or 60 Hz (separate styles)

Outputs

2 N.O. Contacts for trip or alarm

Indications

Magnetic target-indicates actual trip current flow
Figure 2. External Schematic of the SRW Relay to Prevent Reverse Magnetization When Utility Tie is Removed from the Local System

Dc power on-yellow light emitting diode
Reverse power flow above pickup setting red light emitting diode

**Standards**
- ANSI C37.90
- IEC 255 series

**Pickup Current Sensitivity**
1, 2.5, 5.0, 10, 20, 30, 40 mA

**Ac operating Voltage**
30-110% of the normal rating (120 or 240 volts)

**Maximum Sensitivity Angle**
Current leading voltage by +30 degrees

**Accuracy**
±5 degrees from 1 mA to 50 amperes

**Ac Cutoff Voltage**
30% (approx.)

**Continuous ac Voltage Rating**
150%

**Continuous ac Current Rating**
10 Amperes

**Reverse Power, Solid State, Definite Timing** (Device Number:32)

<table>
<thead>
<tr>
<th>Type</th>
<th>Power Supply Voltage</th>
<th>Output</th>
<th>Indication</th>
<th>Current Range</th>
<th>Time Delay</th>
<th>Rated Voltage</th>
<th>Diagram</th>
<th>Style Number</th>
<th>Case Size</th>
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<tbody>
<tr>
<td>SRW-5</td>
<td>48/125/250 Vdc</td>
<td>spst-cc</td>
<td>1-LED (power)</td>
<td>1-40mA</td>
<td>2-21.5 sec</td>
<td>120 Vac</td>
<td>9645A75</td>
<td>1353D13A07</td>
<td>FT-11</td>
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<td></td>
<td></td>
<td>spst-cc</td>
<td>1-LED (pickup)</td>
<td></td>
<td>2-53 sec</td>
<td>120 Vac</td>
<td></td>
<td>1353D13A09</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1-magnetic</td>
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<td>2-21.5</td>
<td>240Vac</td>
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<td>1353D13A11</td>
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<td></td>
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<td></td>
<td>(fail safe trip)</td>
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<td>0.2-2.0 sec</td>
<td>120Vac</td>
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<td>1353D13A12</td>
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</table>

- 50-Hertz relays and auxiliaries can be supplied at same price. Order “Similar to Style number........., except 50 Hertz”.

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