



April 1998
Supersedes DB 271S
dated July 1991
Mailed to: E, D, C/41-200B

Device Number: 32

Type SRW Reverse Power Relay



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

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.

CHARACTERISTICS

Dimensions

$7\frac{1}{4}"$ H x $6\frac{3}{8}"$ W x $7\frac{21}{32}"$ 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

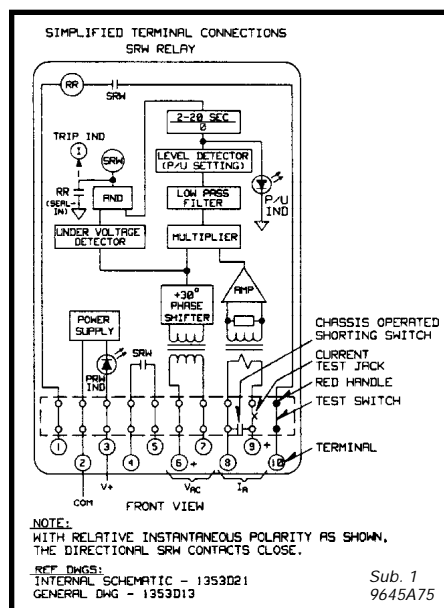


Figure 1. Simplified Terminal Connections

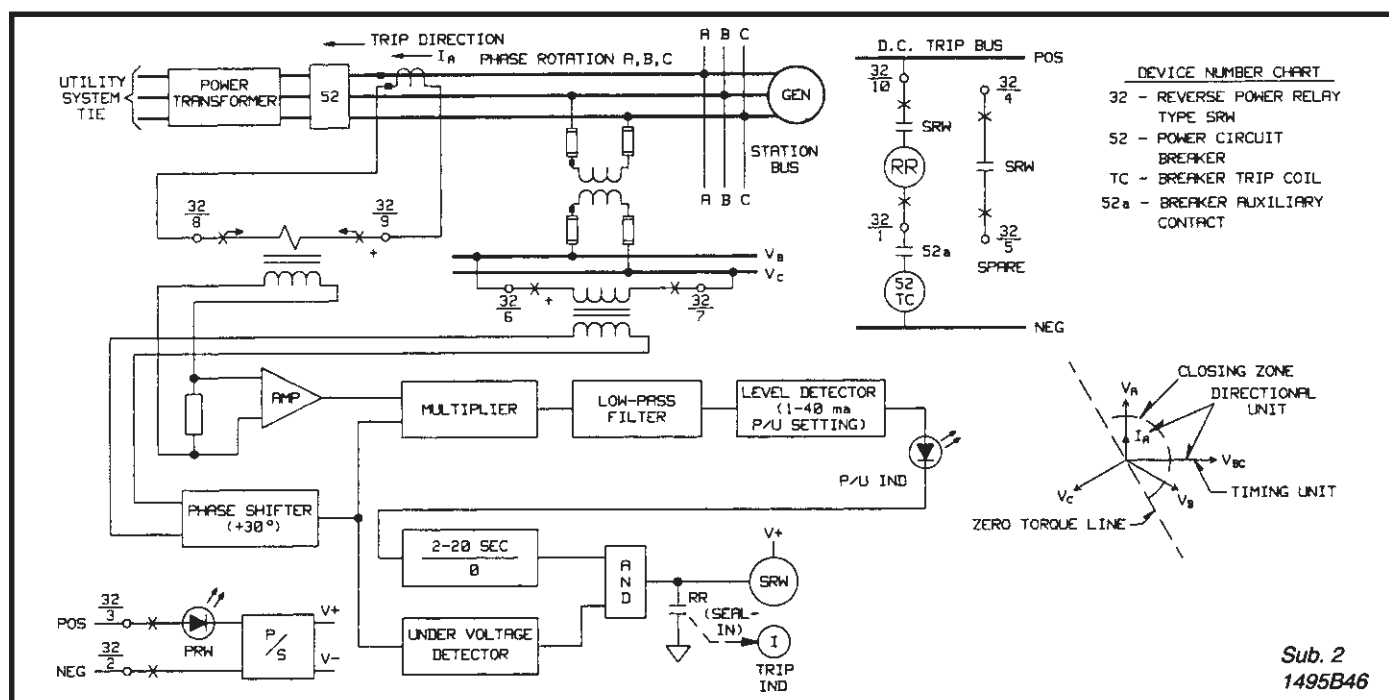


Figure 2. External Schematic of the SRW Relay to Prevent Reverse Magnetization When Utility Tie is Removed from the Local System

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

Timer

Adjustable from 2 to 21.5 seconds with an accuracy of ±5%

Contact Rating

Making 30 amps at 250 Vdc for 1 sec.

Breaking 0.25 amps at 250 Vdc.

Environmental Temperature Range

Operate -20°C to +55°C

Storage -40°C to +70°C

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

Type	Power Supply Voltage	Output Trip	Alarm	Indication	Current Range	Time Delay	Rated Voltage	Connection Diagram	Style Number	Case Size
SRW ^①	48/125/250 Vdc	spst-cc	spst-cc	1-LED (power) 1-LED (pickup) 1-magnetic (fail safe trip)	1-40mA	2-21.5 sec 2-53 sec 2-21.5 0.2-2.0 sec	120 Vac 120Vac 240Vac 120Vac	9645A75	1353D13A07 1353D13A09 1353D13A11 1353D13A12	FT-11
With in-Rush Filter Module										

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

ABB Power T&D Company Inc.

Power Automation and Protection Division
4300 Coral Ridge Drive
Coral Springs, FL 33065
800 523-2620



ABB Power T&D Company Inc.

Power Automation and Protection Division
7036 Snowdrift Road, Suite 2
Allentown, PA 18106
800 634-6005