



The **Viper Recloser Control (VRC)** is a versatile control package for the Viper line of solid dielectric reclosers. The VRC provides a customizable control package tailored to fit the needs of any recloser application.

The VRC is designed with reliability and versatility in mind. With the VRC, G&W can offer the Viper-ST and the Viper-LT packaged together with the SEL-351R3 Falcon, the SEL-751A, or with virtually any other relay.

#### DESCRIPTION

The VRC concept integrates the G&W driving electronics and an Intelligent Electronic Device (relay) into a single enclosure. Accessories such as communication or security devices can be added to the package. See page 2 for details on options and accessories.

▲ VRC shown with polycarbonate enclosure and SEL-351R3 (Falcon) relay

#### **F**EATURES

**Reliability** – Every Viper Recloser Control is system tested with its Viper Recloser to the IEEE C37.60 / IEC 62271-111 standards before leaving the factory.

**Lightweight and Economical** – The VRC has been optimized to be a lightweight and economical control package.

**Temperature Range** – The Viper Recloser Control has been tested to operate in temperatures from -40°C to +65°C.

#### **A**PPLICATIONS

The VRC can be used for typical reclosing applications and provides protection, automation and control capabilities. The VRC adapts to the customer's application and capabilities of the Viper recloser chosen. The VRC with Viper recloser can be used in overhead, padmount and substation applications.

#### SAFETY

The integral Hot Line Tag feature provides unparalleled operator safety. This feature prevents any local or remote closing and auto-reclosing to take place via the control. Depending on the relay chosen, a pushbutton or toggle switch on the control panel is programmed to enable/ disable Hot Line Tagging.

#### SECURITY

Optional security devices can be installed on the VRC to prevent vandalism. A door alarm and security sleeves are available. See page 2 for more details.

#### **C**USTOMIZE

The Viper Recloser Control can be customized to fit a wide range of applications and budgets. See pages 2 and 3 for information on how to create a customized catalog number with a selection of available options and accessories. The relay part number (MOT) needs to be created in addition to the VRC catalog number.

#### CONFIGURATIONS

The versatility of the Viper Recloser Control allows for options in the main components of the control. Use the worksheet on the next page to create a catalog number with your choice of options.

#### Relay

A selection of relays can be integrated in the VRC depending on the needs of the application. The SEL-351R3 (Falcon), SEL-351R4, SEL-751A, and the GE-DGRC are currently the relays available. Contact your local G&W representative for relay options that will best suit your needs.



#### Enclosure

The VRC is available with two enclosure options. The polycarbonate enclosure is compact, lightweight, and economical. It comes with a padlockable four-point latched door and two lifting eyes for easy handling and installation. The painted steel enclosure is a more rugged design which allows added room for additional accessories. It comes with a steel one-point latch handle with provisions for padlocking and two lifting eyes for easy handling and installation. Each enclosure is IP55 protection rated (NEMA 3 equivalent).

#### ACCESSORIES

#### Door Alarm

A door alarm can be installed on the VRC to remotely alert the operator that the enclosure door has been opened. This accessory requires an extra input on the relay. A door alarm is the second line of defense after a padlocked cabinet door. This security feature assists in better response time in the field. It also serves as a reminder in case the door has not been closed properly after service.

#### **Security Sleeves**

Security sleeves can be installed on all connectorized cable(s) to provide extra security and protection. The security sleeves prevent unauthorized persons from unplugging the cables.



#### **Convenience Outlet\***

A convenience outlet can be supplied in the enclosure, and can be used to power a laptop or other low current drawing devices.

#### Anti-Condensation Heater\*

For a higher level of reliability in high condensation environments, a cabinet heater can be provided, along with an optional thermostat.

#### Voltage Sensing from the Viper\*

Voltage sensing inputs can be provided for use with undervoltage/overvoltage features, as well as frequency variations. Voltage sensing is also utilized for automatic network reconfiguration applications (FDIR). Contact G&W for more details.

#### **Radio or Modem**

A wide variety of radios and modems can be supplied with the VRC, or user installed in the field. Contact G&W for more details.

#### Satellite Synchronized Clock\*

An SEL-2401 satellite synchronized clock is available in the painted steel VRC enclosure.

#### PT / VT Cables Entrances

The PT/VT cable entrance can be supplied either as hardwired, a 3-pin interface (for a single PT application) or an 8-pin interface (for two or more PTs).

#### AC Transfer Switch (requires two PTs)

An AC transfer switch can be provided to perform

automatic throw over. Should the primary source be lost, the transfer switch will automatically switch to the alternate power supply.



#### VIPER RECLOSER COMPATIBILITY

The VRC has been type tested to applicable sections of the IEEE C37.60 and IEC 62271-111 standards with the Viper-ST and Viper-LT.



▲ Bottom of VRC enclosure shown with grounding lug, 32 pin control connection, and 120 VAC cable entrance with strain relief fitting.

# Ordering Information

Fill in the spaces using the tables below to build your G&W catalog number:

#### VRC 3 9 1 2 4 5 10 6 8 11 12 (13) 15 16 14

Recloser

Description

32 pin control

interface

Description

Polycarbonate

Painted Steel

**Connection Type** 

**Enclosure Type** 

Code

1

Code

Ρ

Μ

2

4

#### STANDARD COMPONENTS

| 1 Driving Electronics                 |      |  |
|---------------------------------------|------|--|
| Description                           | Code |  |
| Originally a 14 pin<br>design (351Rs) | 1    |  |
| 3-phase ganged<br>relays (751A)       | 3    |  |

| 3 Relay Type          |      |  |
|-----------------------|------|--|
| Description           | Code |  |
| SEL-351R3<br>(Falcon) | 1    |  |
| SEL-751A              | 2    |  |
| SEL-351R4             | 3    |  |
| DGCR                  | 4    |  |

#### **CABINET OPTIONS**

| 5 Door Alarm              |      |  |
|---------------------------|------|--|
| Description               | Code |  |
| No Door Alarm<br>Required | 0    |  |
| Door switch               | 1    |  |

| 7 Convenience Outlet*              |      |  |
|------------------------------------|------|--|
| Description                        | Code |  |
| No Outlet Required                 | 0    |  |
| 60Hz GFCI North<br>American Outlet | 1    |  |
| Universal outlet<br>with GFCI      | 2    |  |
| 50 HZ outlet,<br>mention type      | 3    |  |

| 6 Security Sleeves                        |      |  |
|---|------|--|
| Description                               | Code |  |
| No Sleeves                                | 0    |  |
| Sleeves on all<br>connectorized<br>cables | 1    |  |

|     | Anti-Condensation |
|-----|-------------------|
| (8) | Heater*           |

| <u> </u>                              |      |
|---------------------------------------|------|
| Description                           | Code |
| No Heater<br>Required                 | 0    |
| Permanent Space<br>Heater             | 1    |
| Thermostatically<br>Controlled Heater | 2    |
|                                       |      |

### \* These options are only available with the painted steel enclosure.

\*\* The relay might need additional VS input(s) from PT's as well if requested.

#### **ELECTRONIC ACCESSORIES**

| 9 Voltage Sensing from the Viper**  |      | 10 |
|-------------------------------------|------|----|
| Description                         | Code |    |
| No Voltage Sensing<br>Required      | 0    | En |
| Voltage<br>Amplification Circuit    | 1    |    |
| LEA VS (available with DGCR only)   | 2    |    |
| 11 Radio or Mo                      | No   |    |
| Description                         | Code |    |
| No Radio Required                   | 0    | 13 |
| Provisions Only                     | 1    |    |
| Factory Installed<br>Radio or Modem | 2    |    |
|                                     |      |    |

| Description                        | Coue      |  |
|------------------------------------|-----------|--|
| None                               | 0         |  |
| Enabled/Provided                   | 1         |  |
| 12 Satellite<br>Synchronized Clock |           |  |
|                                    |           |  |
| Description                        | Code      |  |
| Description<br>No Clock Required   | Code<br>0 |  |
|                                    |           |  |

Code

0

1

Hot Line Tag

crintio

# Transceiver Power Supply Features

# DescriptionCodeNo Battery<br/>Required0Standard Battery1

#### AC Transfer Switch (use with 2 PTs)

| <u> </u>            |      |
|---------------------|------|
| Description         | Code |
| No AC Transfer      | 0    |
| Switch Required     | _    |
| Adjustable throw    | 2    |
| over on low voltage | 2    |

#### PT / VT 15 Cables Entrance Description Coo

Description

None

| Description                                 | Code |
|---|------|
| No AC Cable                                 | 0    |
| Hard Wired                                  | 1    |
| 2-Pin Interface (1 PT)                      | 2    |
| 3-Pin Interface<br>(1 PT)                   | 3    |
| 8-Pin<br>connectorized<br>interface (2 PTs) | 4    |

#### EXAMPLES

SEL-351R3 with Polycarbonate Enclosure: VRC-111-P-01000101110

SEL-751A with Metallic Enclosure: VRC-312-M-11121210132

# G&W offers a complete line of **solid dielectric reclosers** including:

#### **Viper-LT Three Phase Reclosers**

- To 27kV, 800A, up to 16kA interrupting
- Overhead & substation designs
- Compact design
- Compatible with Viper Recloser Control (VRC) or SEL-651R

#### **Viper-ST Triple Option Reclosers**

- To 38kV, 800A, 12.5kA interrupting
- Overhead, substation and padmount
- Smart Grid/Lazer ready solutions
- Flexible frame designs
- Integrated 6 voltage sensors available
- Compatible with Viper Recloser Control (VRC) or SEL-651R

#### **Viper-S Three Phase Reclosers**

- To 38kV, 800A, 12.5kA interrupting
- Overhead, padmount, & substation designs
- Mechanically ganged design
- Smart Grid / Lazer<sup>®</sup> solutions
- Integrated 6 voltage sensors available
- Compatible with SEL- 351R4

#### **Viper-SP Single Phase Reclosers**

- To 38kV, 800A, 12.5kA interrupting
- Overhead, padmount, & substation designs
- Smart Grid / Lazer<sup>®</sup> solutions
- Flexible module mounting
- Maintenance free design
- Compatible with SEL-351RS (Kestrel)











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