

Specifications

Conditions of Sale

STANDARD: The seller's standard conditions of sale set forth in Price Sheet 150 apply.

SPECIAL TO THIS PRODUCT:

INCLUSIONS: Vista Underground Distribution Switchgear with loadbreak switches rated 40 kA symmetrical are designed for switching of 600-ampere main feeders. These elbow-connected components are enclosed in a sulfur hexafluoride (SF₆)-insulated, welded-steel tank completely protected from the environment.

The three-position (CLOSED-OPEN-GROUNDED) load-interrupter switches are manually operated and provide three-pole live switching of 600-ampere three-phase circuits. These switches also provide a visible gap when open and internal grounding for all three phases—without exposure to medium voltage or the need to manipulate elbows.

Large windows provide a clear view of the open gap, ground position, and ground bus, allowing the operator to easily confirm the positions of the load-interrupter switches. Each unit is furnished with a manual handle to charge the operating mechanisms and to open, close, or ground the load-interrupter switches. The operating mechanisms operate independently of the speed of the manual handle and are designed to prevent inadvertent operation from the **Closed** position directly to the **Grounded** position, and vice versa. Operating shafts are padlockable in any position and can also be padlocked to prevent operation to the Grounded position.

Terminals are equipped with 900-ampere bushings. Bushing and bushing-well interfaces are in accordance with IEEE Standard 386 to accept all standard insulated connectors and inserts.

When optional voltage indication is specified, all routine operating tasks—switching, voltage testing, and grounding—can be accomplished by a single person without cable handling or exposure to medium voltage. An optional feature that combines voltage indication with provisions for low-voltage phasing is also available. Cable testing for faults can be performed through the back of a user-supplied elbow or through a user-supplied feed-through insert, eliminating the need for difficult cable handling or parking stands.

UnderCover™ Style

When the UnderCover Style is specified, the gear is provided with a stainless steel tank and submersible wiring.

Vault-Mounted Style

Two versions of vault-mounted style Vista switchgear are available: Wet-Vault Mounted Style is intended for vaults subject to periodic flooding and includes submersible wiring and electrical components. Dry-Vault Mounted Style is intended for vaults not subject to periodic flooding and does not include submersible wiring and electrical components.

When the Wet-Vault Mounted Style is specified, a stainless steel tank is furnished suitable for mounting on the floor or wall of a vault. When the Dry-Vault Mounted Style is specified, a mild-steel tank is furnished.

Load-Interrupter Switch

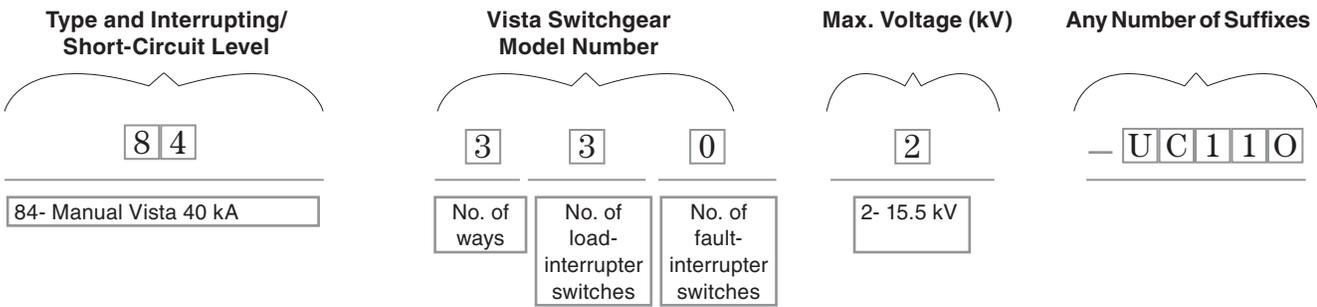
Vista Underground Distribution Switchgear features load-interrupter switches for three-pole live switching of three-phase circuits.

Complete ratings for the load-interrupter switch, as applied in Vista switchgear, are shown in Table 1 on page 2. In addition to the load-dropping ratings shown, the switch is capable of interrupting transformer magnetizing currents associated with the applicable loads as well as line-charging and cable-charging currents typical for distribution systems of these voltage ratings. For applications involving load current with high harmonic content (such as rectifier load currents), refer to the nearest S&C Sales Office. The duty-cycle fault-closing rating shown for the switch defines the ability to close the switch into the Closed or Grounded position the designated number of times against a three-phase fault equal to the rated value, with the switch remaining operable and able to carry and interrupt rated current.

EXCLUSIONS: Units listed in Table 2 on page 3 do not include the switchgear style, optional features, or accessories listed in Tables 3 through 5 on pages 3 and 4.



Anatomy of a Manual Vista Switchgear Catalog Number, Loadbreak Switch Rated 40 kA Sym.:



The catalog number created above represents an UnderCover style Vista switchgear unit, 40 kA, with three load-interrupter switches for a 15.5-kV application. The unit will have auxiliary contacts with submersible wiring and two-hole ground pads.

How to Order

Complete these steps to identify the base catalog number, the appropriate options, and the product accessories needed for a complete order:

STEP 1. Obtain the catalog number of the desired switchgear unit from Table 2 on page 3.

Catalog Number:

STEP 2. Specify the desired switchgear style from Table 3 on page 3 and add the appropriate suffix to the catalog number.

Suffix:

STEP 3. Add suffix designations to the catalog number indicating the optional features desired, selected from Table 4 on page 4. (Add as many suffixes as required.)

Suffixes:

Note: At this point, the catalog number for the Vista switchgear unit is complete. The next step involves choosing product accessories that would be separate line items on the order. Contact S&C for additional available options.

STEP 4. Obtain catalog numbers for any accessories from Table 5 on page 4 and apply as a separate line item on the order.

Catalog Number:

Example: The catalog number below is for a dry-vault mounted style Vista switchgear unit, Model 440, with four load-interrupter switches, for a 15.5-kV application. The unit will have axillary contacts terminated in an enclosure furnished with a terminal block for customer connections:

8 4 4 4 0 2 - V 3 C 1 2

Table 1. 50/60-Hz ANSI Ratings^①

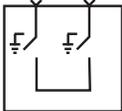
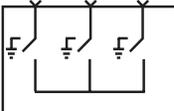
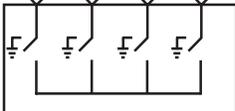
| kV | | | Amperes, RMS | | | | |
|--------------|------|-----|------------------------|---------------------|---|--|-------------------------|
| System Class | Max | BIL | Main Bus Cont. Current | Short-Circuit, Sym. | Load-Interrupter Switch | | |
| | | | | | Cont., Load Dropping, and Load Splitting ^② | Three-Time Duty-Cycle Fault-Closing, Sym. ^③ | Mom. and ½-Second, Sym. |
| 15.5 | 15.5 | 95 | 600 | 40 000 | 600 | 40 000 | 40 000 |

① ANSI ratings have been assigned in accordance with the applicable portions of IEEE C37.74.

③ Applicable to fault closing into the **Closed** or **Grounded** position.

② Parallel or loop switching. Load-interrupter switches can switch the magnetizing current of transformers associated with the load-dropping rating. Unloaded cable switching rating: 10 amperes at 15.5 kV.

Table 2. Three-Phase Units

| Model ^① | One-Line Diagram ^② | Ratings ^③ | | | Catalog Number | Net Wt., Lbs. ^④ | Page Reference for Dimensional Information |
|--------------------|---|----------------------|-----|----------------------------------|----------------|----------------------------|--|
| | | kV | | Short-Circuit Amperes, RMS, Sym. | | | |
| | | Max | BIL | | | | |
| 220 |  | 15.5 | 95 | 40 000 | 842202 | 950 | 4 |
| 330 |  | 15.5 | 95 | 40 000 | 843302 | 1050 | |
| 440 |  | 15.5 | 95 | 40 000 | 844402 | 1360 | |

① The model number defines the total number of ways and the number of load-interrupter switch ways. For example, a Model 440 has “4” ways in total of which “4” are load-interrupter switch ways.

③ Refer to Table 1 for continuous, load-dropping, interrupting, and momentary ratings.

② Refer to the nearest S&C Sales Office for other possible configurations.

④ Welded-steel tank including components and SF6 gas.

Table 3. Switchgear Styles

| Item | Suffix to be Added to Switchgear Catalog Number |
|---|---|
| UnderCover Style. Includes stainless steel tank and submersible wiring and control housings | -U |
| Dry-Vault Mounted Style. Includes mild-steel tank. Does not include submersible wiring and control housings | -V3 |
| Wet-Vault Mounted Style. Includes stainless steel tank and submersible wiring and control housings | -V4 |

Table 4. Optional Features

| Item | | Suffix to be Added to Switchgear Catalog Number | Applicable to Models |
|--|--|---|---|
| Auxiliary contacts | Submersible wiring routed on tank for future customer connection | -C11 | All models |
| | Wires terminated in an enclosure furnished with a terminal block for customer connections | -C12 | Dry-Vault Mounted Styles |
| Potential indication with test feature. Includes LCD screen to indicate presence of voltage on each phase and solar panel to supply power for testing of the complete voltage-indication circuit and phasing circuit (if furnished). One potential indicator is provided for each bus-terminal, load-interrupter switch, and fault-interrupter way | <i>Without</i> provisions for low-voltage phasing | -L1 | All models |
| | <i>With</i> provisions for low-voltage phasing | -L2 | |
| International crating ^① | | -L71 | All models |
| Two-hole ground pad, one per way, located below bushings or bushing wells (in lieu of standard one ground pad per tank) | | -O | All models |
| Remote low-pressure alarm ^② —includes internal contact for remote low-pressure indication, with wiring to outside of tank | With wires routed on tank for future customer connections | -R11 | Dry-Vault Mounted Styles |
| | | -R12 | UnderCover and Wet-Vault Mounted Styles |
| | With wires terminated in an enclosure furnished with a terminal block for customer connections | -R2 | Dry-Vault Mounted Styles |
| Key interlocks. Locks load-interrupter switch in the Open position ^③ | Way 1 | -X1 | All models |
| | Way 2 | -X2 | All models |
| | Way 3 | -X3 | All models |
| | Way 4 | -X4 | All models |

① Wood products used in packaging are either hardwood or certified by the wood supplier as being “heat treated” (kiln dried) to a core temperature of 133°F (56°C) for a minimum of 30 minutes.

② Must be specified if remote supervisory features such as remote low-pressure indication are planned.

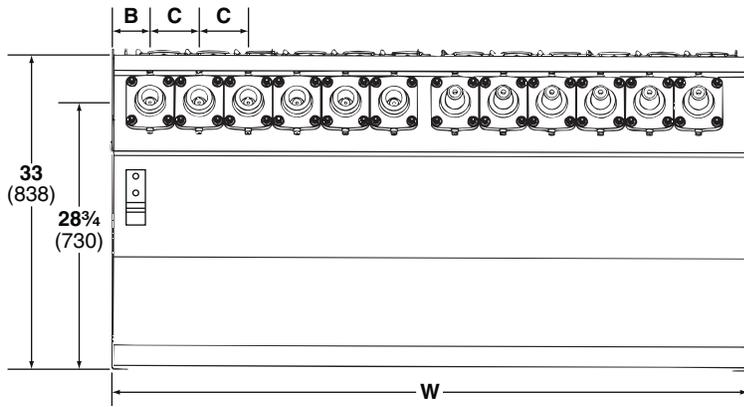
③ Motor operators can not be retrofitted onto ways with key interlocks.

Table 5. Accessories

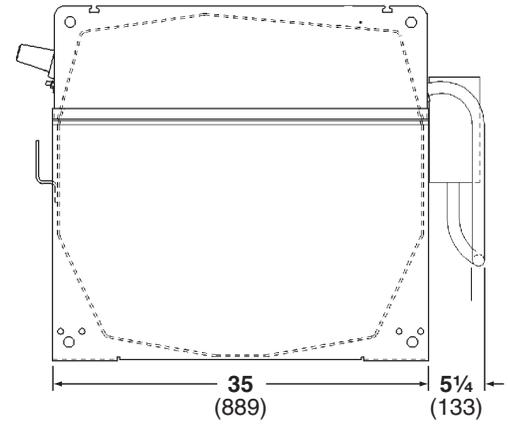
| Item | Catalog Number | |
|---|--|----------|
| Shotgun clamp sticks for use with separable connectors | 77.5-inch (196.9 cm) length | 9933-150 |
| | 101.5-inch (257.8 cm) length | 9933-151 |
| Storage bag for shotgun clamp sticks, heavy canvas | 78-inch (198.1 cm) length | 9933-152 |
| | 102-inch (259.1 cm) length | 9933-153 |
| Portable motor operator for operation of load-interrupter switches and single- or three-pole fault interrupters from a remote location. Includes carrying case and 50-foot cable with remote controls. Power supplied by: | User-furnished 24-Volt battery and battery charger | 38320R1 |
| | S&C-furnished 24-Volt battery and battery charger | 38322R1 |
| | S&C-furnished ac input power supply | 38323R1 |

Vista Switchgear Tank

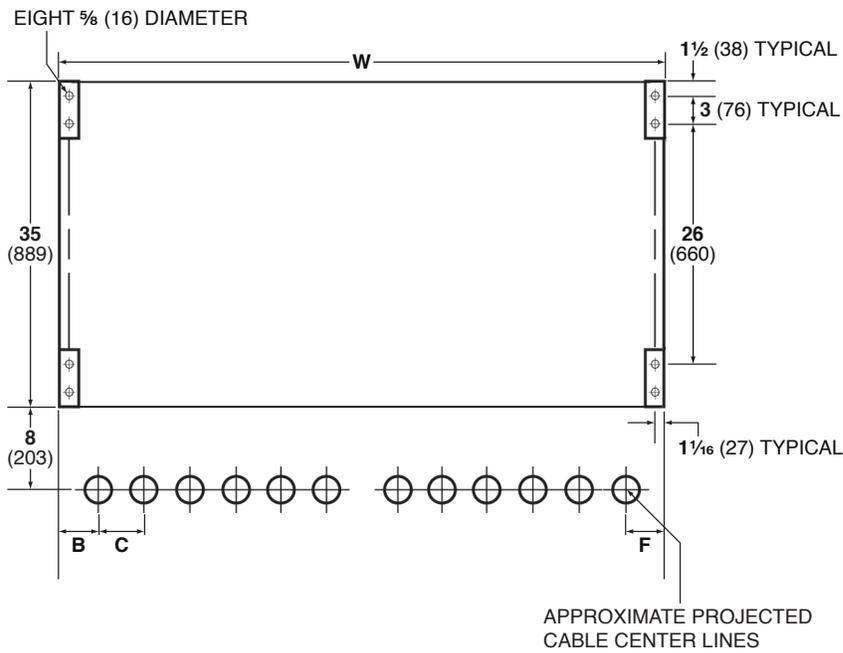
Dimensions in inches (mm)



TERMINATION VIEW



SIDE VIEW



ANCHOR BOLT PLAN

| Model | B | C | F | W |
|-------|---------------------------------------|-------------|---------------------------------------|--|
| 220 | 4 ²⁵ / ₃₂ (121) | 7 1/2 (191) | 4 ²⁵ / ₃₂ (121) | 69 ⁹ / ₁₆ (1767) |
| 330 | 4 ²⁵ / ₃₂ (121) | 7 1/2 (191) | 4 ²⁵ / ₃₂ (121) | 69 ⁹ / ₁₆ (1767) |
| 440 | 4 ²⁵ / ₃₂ (121) | 7 1/2 (191) | 4 ²⁵ / ₃₂ (121) | 9 ⁹ / ₁₆ (2338) |