

Underground distribution switchgear

Molded vacuum switches and fault interrupters



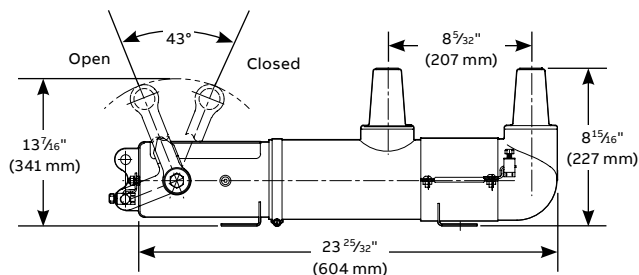
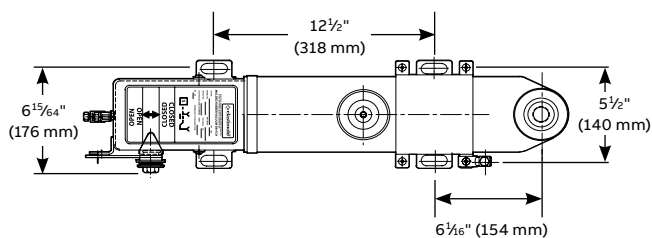
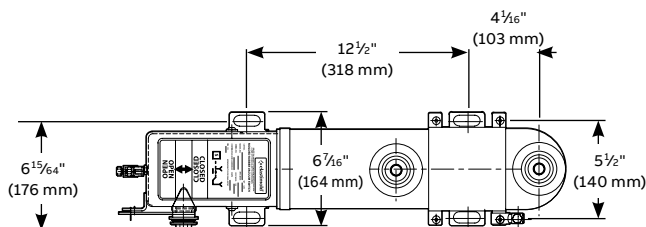
MVS molded vacuum switches

Spring-energy, load-switching devices that make, carry and interrupt load currents through 600 A on 5 to 38 kV distribution systems.

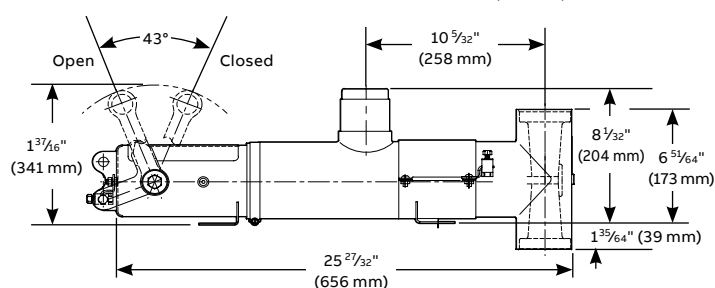
MVS molded vacuum switches include molded-in elbow connection interfaces and spring-energy mechanisms. Available in both single- and three-phase models, units are manually operated with a hotstick. Motor operator, SCADA and auto-transfer control options are available.

- EPDM molded rubber insulation — MVSs are fully sealed and submersible.
- Vacuum switching and vacuum — Interruption Components are maintenance-free and require no gas or oil.
- Compact and lightweight — Small footprint enables MVSs to fit in tight padmount, subsurface, vault or riser pole installations.

Single-phase switches approximate weight: 30 lbs.



(4) Mounting holes, 5/8" dia. x 7/8" (16 x 22 mm)



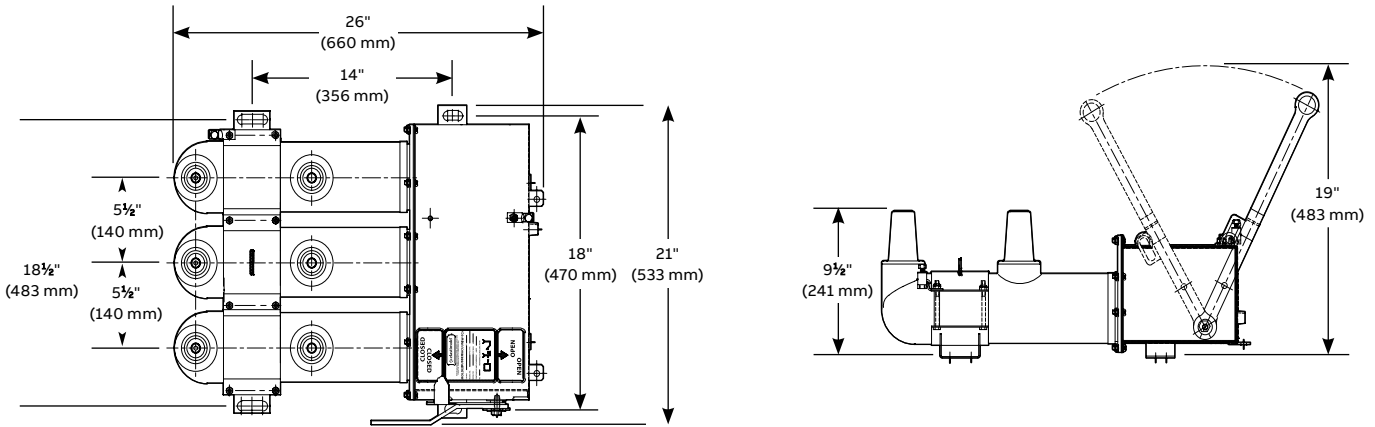
(4) Mounting holes, 5/8" dia. x 7/8" (16 x 22 mm)

Available with 600 A one-piece bushings or 200 A wells on either/both terminals.

Underground distribution switchgear

MVS molded vacuum switches

Three-phase switches approximate weight: 135 lbs.



Available with 600 A one-piece bushings or 200 A wells on either/both terminals.

Ratings

Maximum design voltage (kV)	15.5	27	38
Frequency (Hz)	50/60	50/60	50/60
BIL impulse (kV)	95	125	150
One-minute AC withstand (kV)	35	60	70
Fifteen-minute DC withstand (kV)	53	78	103
Load interrupting & loop switching (Amp)	600	600	600
Transformer magnetizing interrupting (Amp)	21	21	21
Capacitor or cable charging interrupting (Amp)	40	40	40
Asymmetrical momentary and 3-operation fault close (Amp)	20	20	20
Symmetrical one-second rating (Amp)	12,5	12,5	12,5
Continuous current (Amp)	600	600	600
Eight-hour overload current (Amp)	900	900	900

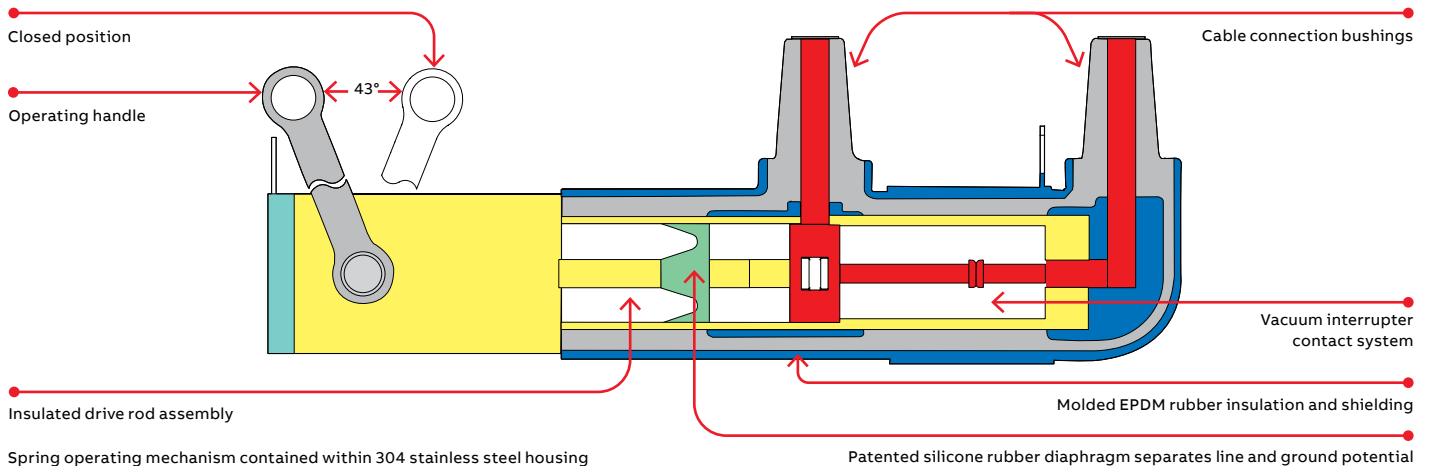
Application information

- Construction: Submersible, corrosion resistant, fully shielded
- Ambient temperature range: -40 °C to 65 °C

Certified tests

MVS loadbreak switches have been designed and tested per applicable portions of IEEE, ANSI, NEMA and other industry standards, including:

- IEEE C37.74** standard for subsurface, vault and padmounted load-interrupting switches
- IEEE 386** standard for separable connectors and bushing interfaces
- IEC 265** international standards for load-interrupting switches
- ANSI C57.12.28** standard for padmount enclosures



Underground distribution switchgear

MVI molded vacuum fault interrupters

Make, carry and automatically interrupt currents through 25,000 A symmetrical on 5–38 kV distribution systems.

- Vacuum interrupters, programmable, electronic, self-powered controls and EPDM rubber insulation provide compact, lightweight and submersible overcurrent protection
- Field programmable with a wide range of time-current characteristic (TCC) curves and trip settings
- TCC curves provide predictable tripping for ease of coordination with upstream and/or downstream protective devices
- Control monitors the circuit condition – when the programmed parameters are exceeded, a signal is sent to the tripping mechanism
- Available motor operators and controls enable radial feeders or loops to be reconfigured, either manually or via SCADA

MVI molded vacuum fault Interrupters include molded-in elbow connection interfaces and trip-free mechanisms. They are available in single- and three-phase models.

Application information

Construction: submersible, corrosion resistant, fully shielded

Operating temperature range: -40 °C to 65 °C

For dimensions, see page A81.



Underground distribution switchgear

MVI molded vacuum fault interrupters

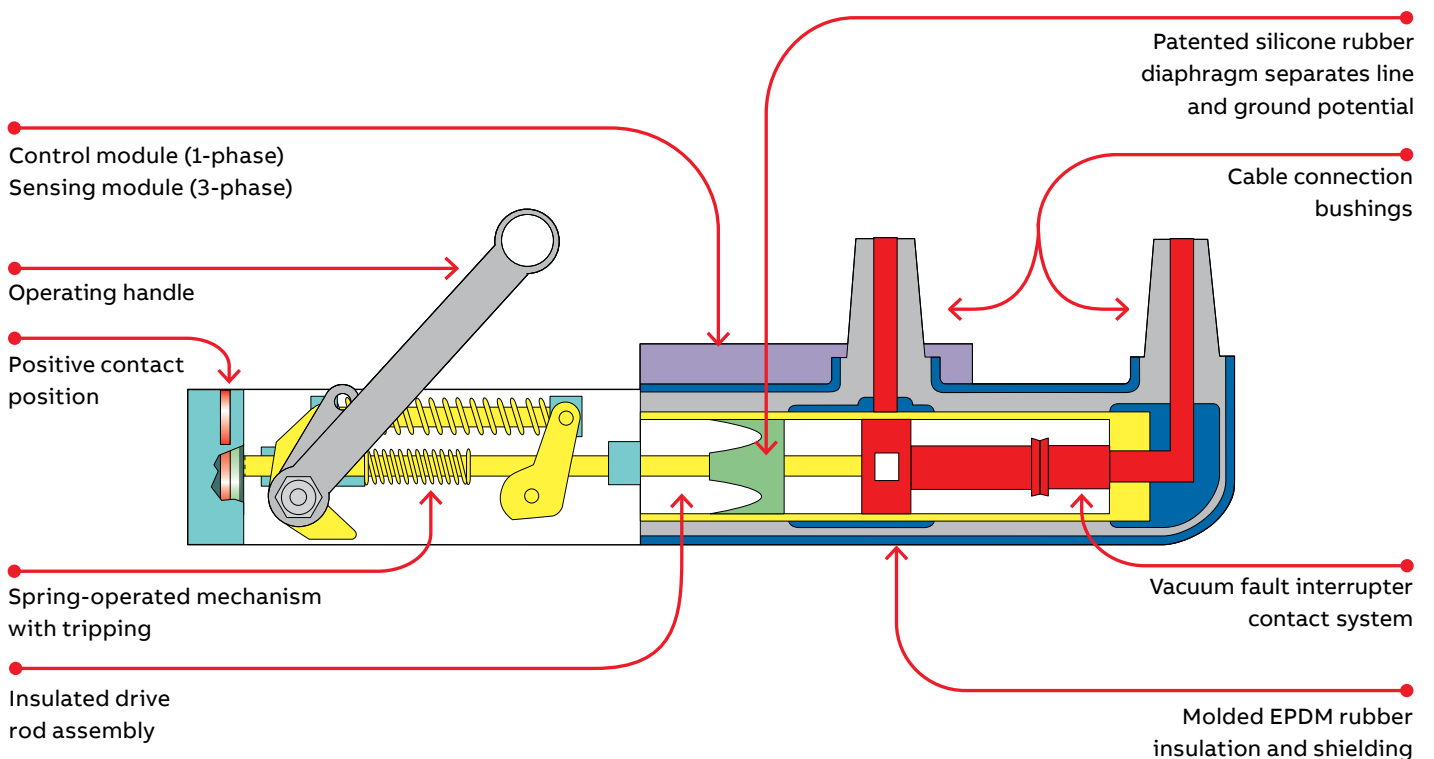
Certified tests

MVI molded vacuum fault interrupters have been designed and tested per applicable portions of IEEE, ANSI, NEMA and other industry standards, including:

ANSI C37.60	Standard for fault interrupters
IEEE 386	Standard for separable connectors and bushing interfaces
ANSI C57.12.28	Standard for padmounted enclosures

MVI ratings

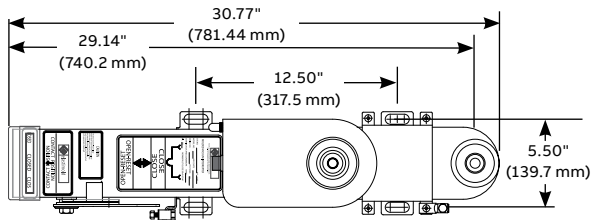
Voltage class (kV)	15	15	15	27	35	35
Maximum design voltage (kV)	17	17	15.5	29	38	38
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
BIL impulse (kV)	95	95	95	125	150	150
One-minute AC withstand (kV)	35	35	35	40	50	50
15-minute DC withstand (kV)	53	53	53	78	103	103
Load interrupting and loop switching (Amp)	630	630	630	630	630	630
Capacitor or cable charging interrupting (Amp)	10	10	10	25	40	40
Line charging (Amp)	2	2	2	5	5	5
Asymmetrical momentary and 3-operation fault close (Amp)	20,000	25,600	32,000	20,000	20,000	40,000
Symmetrical one-second rating (Amp)	12,500	16,000	20,000	12,500	12,500	25,000
Continuous current (Amp)	630	630	630	630	630	630
Eight-hour overload current (Amp)	900	900	900	900	900	900
Current sensor ratio	1,000:1	1,000:1	1,000:1	1,000:1	1,000:1	1,000:1
Mechanism	Spring operating	Spring operating	Spring operating	Spring operating	Spring operating	Mag actuator



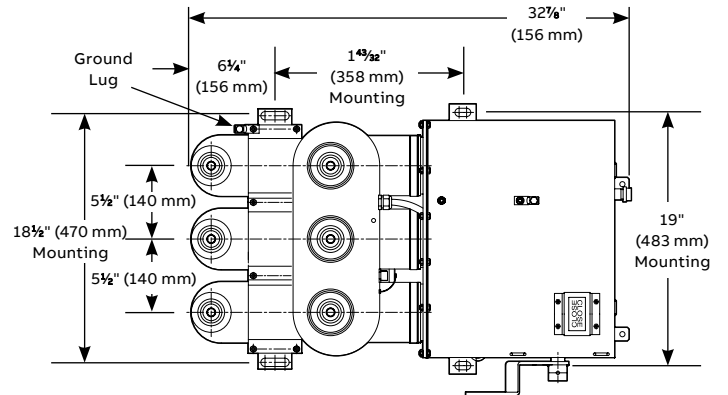
Underground distribution switchgear

MVI molded vacuum fault interrupters

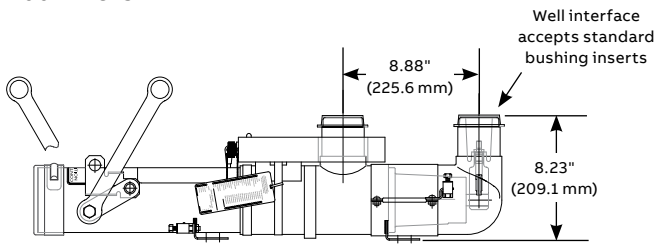
Front view single-phase



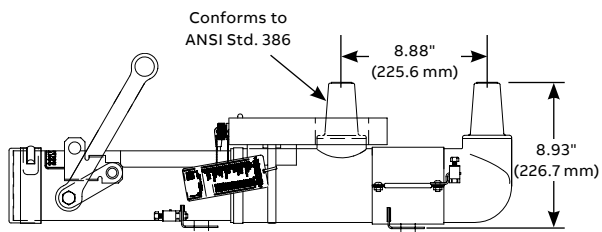
Front view three-phase



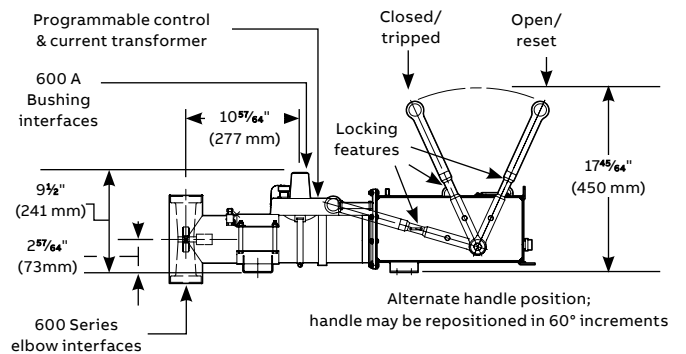
200 A wells



600 A bushings



600 A T elbow interface



Molded vacuum interrupter and switchgear controls

Choose among various electronic control options to interrupt faults

- 01 Internal control
- 02 External control

- Self-powered electronic control packages – No batteries or external power are required
- Controls send a signal to the vacuum interrupters to trip open and interrupt the fault when an overcurrent condition is detected
- Field-selectable fuse or relay curves and trip settings – one device for many protection schemes

Molded vacuum interrupters are provided with self-powered electronic control packages requiring no batteries or external power. Depending on the application, six electronic control options are available for the MVI – See below and on following page.



01



02

Internal control

This control is integral to the unit (no separate control box). It is accessible via a computer connection to view or modify settings. This control is used on ganged three-phase or single-phase MVI interrupters. Phase and ground trip, as well as inrush restraint, are available. The E-Set software enables the user to connect to the internal control, either in the shop or in the field, to program or change settings. An MVI-STP-USB programming connector is required to connect between the PC and the MVI. With a computer connected to the MVI control, the user can view real-time currents, the number of overcurrent protection operations, current magnitude of the last trip and the phase/ground fault targets. This is the standard control option.

Note: E-Set can be downloaded from www.elastimoldswitchgear.com.

External control with selectable single-/three-phase trip function (style 80)

This control is mounted externally to the mechanism of the interrupter and provides the ability to select between a single-phase trip and a three-phase trip. The 80 can be used with one three-phase interrupter or the 380 control with three single-phase interrupters. For three-phase applications, the ground trip function can be blocked from the front panel. Manual trip and reset target buttons are also located on the front panel. This control uses the E-Set software, which enables programming via a computer using the MVI-STP-USB adapter. E-Set features custom TCC curves and provides access to the last fault event information, as well as real-time current per phase.

Molded vacuum interrupter and switchgear controls

—
01 SEL-751A
Feeder protection

—
02 SEL-451
Automation and
auto-transfer controls
(standard and fast
transfer options)



—
01



—
02

Smart grid ready

Works with the industry-leading protection and automation controls

- SEL automation controls from Schweitzer Engineering Laboratories

Elastimold 80 control time current curves (TCCs)

Curve no.	Curve reference no.	Curve type
Relay curves (minimum trip 30–600 A)		
01	MVI-TCC-01	E slow
02	MVI-TCC-02	E standard
03	MVI-TCC-03	Oil fuse cutout
04	MVI-TCC-04	K
05	MVI-TCC-05	Kearney QA
06	MVI-TCC-06	Cooper EF
07	MVI-TCC-07	Cooper NX-C
08	MVI-TCC-08	CO-11-1
09	MVI-TCC-09	CO-11-2
10	MVI-TCC-10	T
11	MVI-TCC-11	CO-9-1
12	MVI-TCC-12	CO-9-2
13	MVI-TCC-13	Cooper 280ARX
14	MVI-TCC-14	F
16	MVI-TCC-16	Kearney KS
17	MVI-TCC-17	GE relay
18–23	MVI-TCC-18–23	CO-8-1–CO-8-6
24–27	MVI-TCC-24–27	CO-9-3–CO-9-6
28–31	MVI-TCC-28–31	CO-11-3–CO-11-6
Fuse curves (minimum trip 10–200 A)		
54	MVI-TCC-54	E slow
55	MVI-TCC-55	E standard
56	MVI-TCC-56	Oil fuse cutout
57	MVI-TCC-57	K
58	MVI-TCC-58	Kearney QA
59	MVI-TCC-59	Cooper NX-C
60	MVI-TCC-60	T

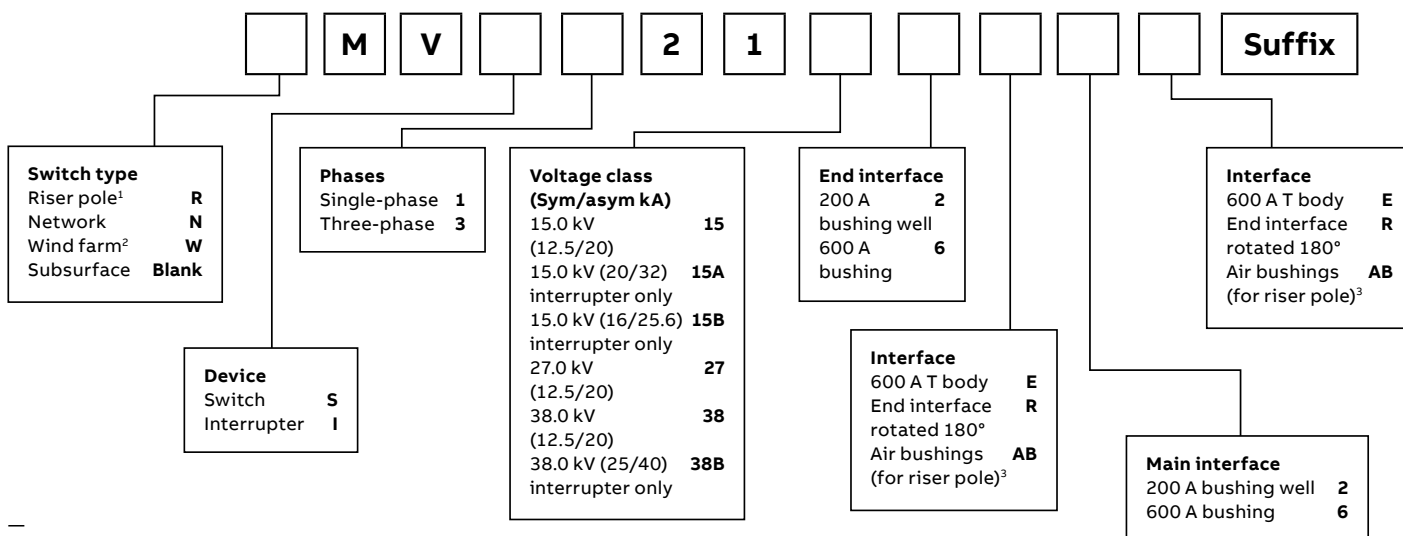
Ordering information

Elastimold MVS and MVI units

The following diagram shows how to construct a catalog number for molded vacuum switches and interrupters.

Example: The catalog number for a molded vacuum interrupter on a three-phase, 27 kV system, with 600 A terminal and parking stands between bushings is MVI3212766PS.

Indicates field that must be filled in to complete order.



1) For riser pole option, specify where to locate air bushings.
 2) Wind farm option is only for 38 kV, 600 A interrupter.
 3) Air bushings can only be specified for 600 A.

Controls and accessories

Suffix	Description
80	External 80 control with selectable single-/three-phase trip function (to be used on ganged three-phase MVI mechanism)
380	External 80 control with selectable single-/three-phase trip function (to be used on three single-phase mechanisms)
MO120A	120 V AC motor controller for MVS3 or MVI3 units (includes standard 30-ft. cable)
MO12D	12–24 V DC motor controller for MVS3 or MVI3 units (includes standard 30-ft. cable)
PS	Parking stand for MVS or MVI (between bushings for single- or three-phase units)
MPS	Parking stand for MVS3, MVI3 or RMVI3 on mechanism cover
PS6	Double parking stand for MVS3, MVI3 or RMVI3 (between bushings and on mechanism cover)
BT	Bail tab plate installed for three-phase units only
P	Customer settings to be programmed at the factory

NOTE: Leave suffix blank for internal (self-contained) control.

Underground distribution switchgear

Molded vacuum switches and fault interrupters

Elastimold MVI molded vacuum interrupters***

Cat. no.	Description	Width in. (mm)	Height in. (mm)	Depth in. (mm)	Weight lb. (kg)	Diagram
Riser pole (three-phase installations only)						
RMVI3-21-15-6ABX-YY	15 kV 2-way 3-phase interrupter with air bushings on top terminals	30 (762)	45 (1,143)	25 (635)	150 (68))
RMVI3-21-27-6ABX-YY	25 kV 2-way 3-phase interrupter with air bushings on top terminals	30 (762)	45 (1,143)	25 (635)	150 (68)	
RMVI3-21-38-6ABX-YY	38 kV 2-way 3-phase interrupter with air bushings on top terminals	30 (762)	45 (1,143)	25 (635)	150 (68)	
RMVII-21-15-6ABX-3YY	15 kV 2-way 3-phase interrupter with air bushings on top terminals, 1-phase trip selectable	30 (762)	45 (1,143)	25 (635)	150 (68)	
RMVII-21-27-6ABX-3YY	27 kV 2-way 3-phase interrupter with air bushings on top terminals, 1-phase trip selectable	30 (762)	45 (1,143)	25 (635)	150 (68)	
RMVII-21-38-6ABX-3YY	38 kV 2-way 3-phase interrupter with air bushings on top terminals, 1-phase trip selectable	30 (762)	45 (1,143)	25 (635)	150 (68)	
Subsurface single-phase vacuum switches						
MVI1-21-15-XX	15 kV 2-way 1-phase interrupter	6 (152)	31 (787)	9 (229)	45 (20))
MVI1-21-15-6EX	15 kV 2-way 1-phase interrupter, elbow interface	6 (152)	31 (787)	11 (279)	45 (20)	
MVI1-21-27-XX	27 kV 2-way 1-phase interrupter	6 (152)	31 (787)	9 (229)	45 (20)	
MVI1-21-27-6EX	27 kV 2-way 1-phase interrupter, elbow interface	6 (152)	31 (787)	11 (279)	45 (20)	
MVI1-21-38-XX	38 kV 2-way 1-phase interrupter	6 (152)	31 (787)	9 (229)	45 (20)	
MVI1-21-38-6EX	38 kV 2-way 1-phase interrupter, elbow interface	6 (152)	31 (787)	11 (279)	45 (20)	
Subsurface three-phase vacuum switches						
MVI1-21-15-XX-3YY	15 kV 2-way 3-phase interrupter, 1-phase trip selectable ext. control	20 (508)	31 (787)	9 (229)	145 (66))
MVI1-21-27-XX-3YY	27 kV 2-way 3-phase interrupter, 1-phase trip selectable ext. control	20 (508)	31 (787)	9 (229)	145 (66)	
MVI1-21-38-XX-3YY	38 kV 2-way 3-phase interrupter, 1-phase trip selectable ext. control	20 (508)	31 (787)	9 (229)	145 (66)	
MVI3-21-15-XX-YY	15 kV 2-way 3-phase interrupter	20 (508)	33 (838)	10 (254)	145 (66)	
MVI3-21-27-XX-YY	27 kV 2-way 3-phase interrupter	20 (508)	33 (838)	10 (254)	145 (66)	
MVI3-21-38-XX-YY	38 kV 2-way 3-phase interrupter	20 (508)	33 (838)	10 (254)	145 (66)	

*** Air bushings on top terminal.

Accessories (order separately)

Cat. no.	Description
MVI-STP-USB	Adapter for connection between MVI units with internal control and a computer for programming/viewing settings
MV1PMB	Pole-mounting bracket for 1-phase units only
MV3PMB	Pole-mounting bracket for 3-phase units only
MV3HPMB	Horizontal pole-mounting bracket for 3-phase units only
MV13PMB	Pole-mounting bracket for three 1-phase units only
35AL-11	Connector bare wire type 3/4"-16 rod for riser pole units; qty. Of 1 needed per phase
35AL-12	Connector 2-hole spade type 3/4"-16 rod for riser pole units; qty. Of 1 needed per phase

Notes: Weights and dimensions are approximate.

X = 6 for 600 A or 2 for 200 A or 6E for 600 A T interface.

Y = 10, 20, 30, 80 for different electronic controls.

Leave blank for internal (self-contained) control.

Accessories should be added as suffix to the main catalog number unless otherwise noted.

Other configurations are available. Please consult your local representative on configurations not shown here.

The 3-phase vacuum interrupters are motor-ready.

Underground distribution switchgear

Elastimold multi-way switchgear and transfer packages

- 01 Subsurface-style unit
- 02 Vault-style unit
- 03 Padmount unit (load side)

Multi-way unit construction

Multi-way vault and padmount units are built using MVS and MVI modules as required by the application. These are mounted onto the ES multi-way common bus system and assembled on a free-standing, floor-mounted frame. At this stage, the product is ready to be used in vault installations.

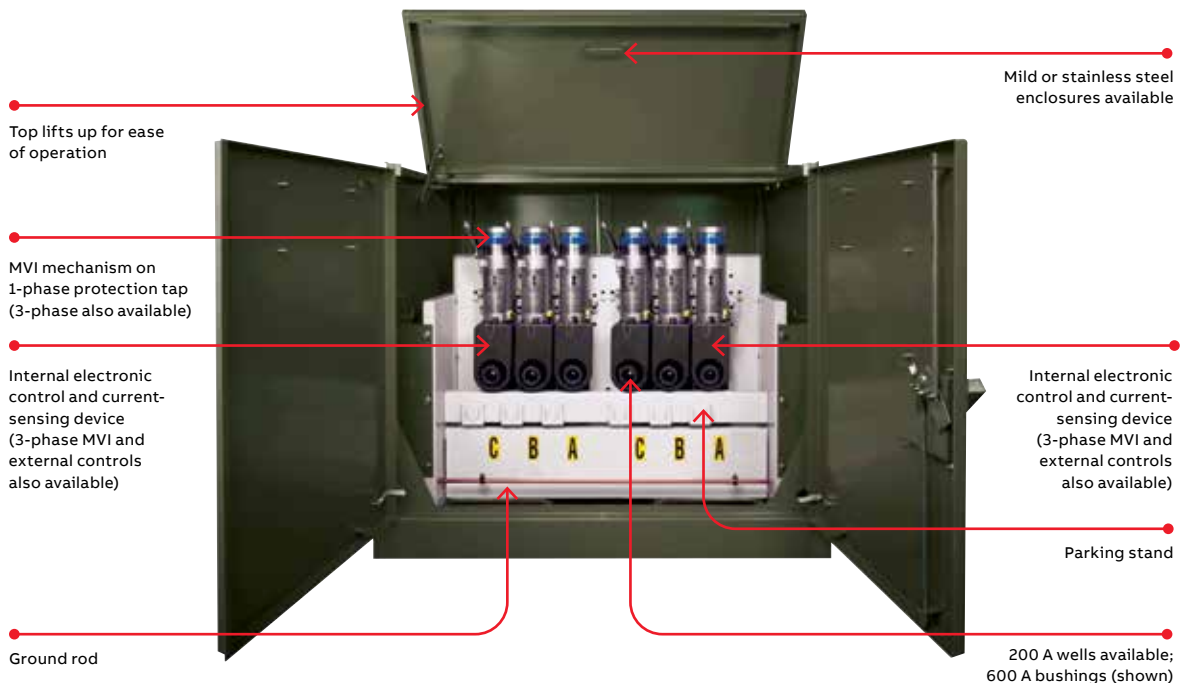
For padmount installations, a double-sided, drop-over, painted, mild steel enclosure is provided. Munsell Green 7GY 3.29/1.5 is the standard enclosure color. Other colors are available upon request. Painted stainless steel or fiberglass enclosures are available as options.



01



02



03

Underground distribution switchgear

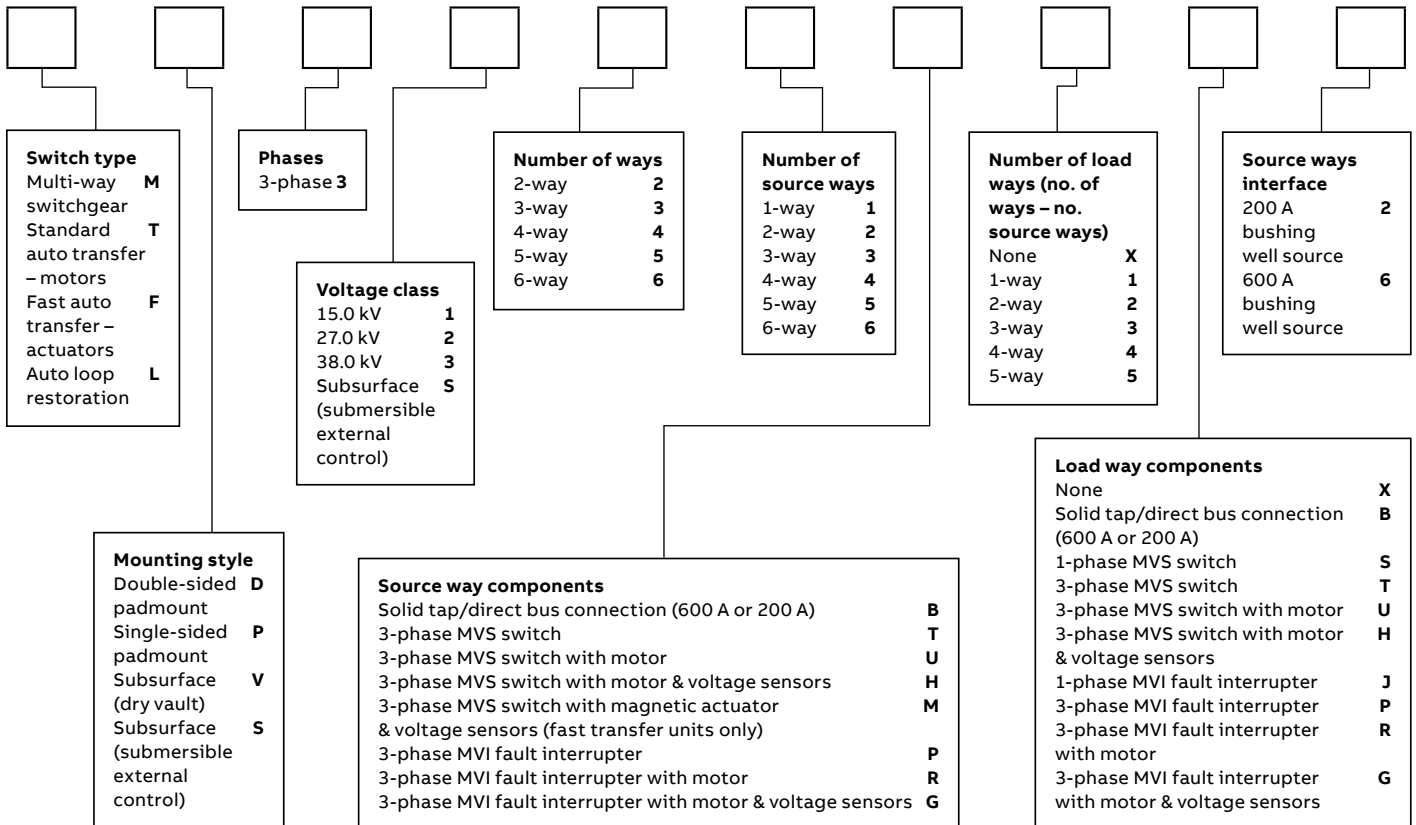
Elastimold multi-way switchgear and transfer packages

The following diagram shows how to construct a catalog number for multi-way switchgear or transfer packages.

Example: Multi-way switchgear
MD3142T2P62XIXXAE000: Multi-way, double-sided padmount, 3-phase, 15.0 kV, 95 kV BIL, 12.5 kA interrupting capability, 4-ways, 2 source ways, source component: three-phase molded vacuum switches (MVS3), 2 load ways, load component: three-phase molded vacuum interrupter (MVI3), 600 A bushing interfaces (source), 200 A bushing well interfaces (load), source control: none, load control: Elastimold MVI internal control, PT: PT not required, enclosure: mild steel, Munsell green 7GY 3.29/1.5 and flat ground bar, English labels and instructions.

Example: Auto transfer switchgear with SEL control package
TD3242H2P62GHFXAE000: Automatic transfer, double-sided padmount, 3-phase, 27.0 kV, 125 kV BIL, 12.5 kA interrupting capability, 4-ways, 2 source ways, source component: three-phase molded vacuum switches (MVS3) with 12–24 V DC motor and voltage sensors, 2 load ways, load component: three-phase molded vacuum interrupter (MVI3), 600 A bushing interfaces (source), 200 A bushing well interfaces (load), source control: sel 451-5 relay, load control: SEL 751A relay, PT: two (2) 27 kV PT (13200–14400 V AC (WYE), enclosure: mild steel, Munsell green 7GY 3.29/1.5 and flat ground bar, English labels and instructions.

Indicates field that must be filled in to complete order.



Underground distribution switchgear

Elastimold multi-way switchgear and transfer packages

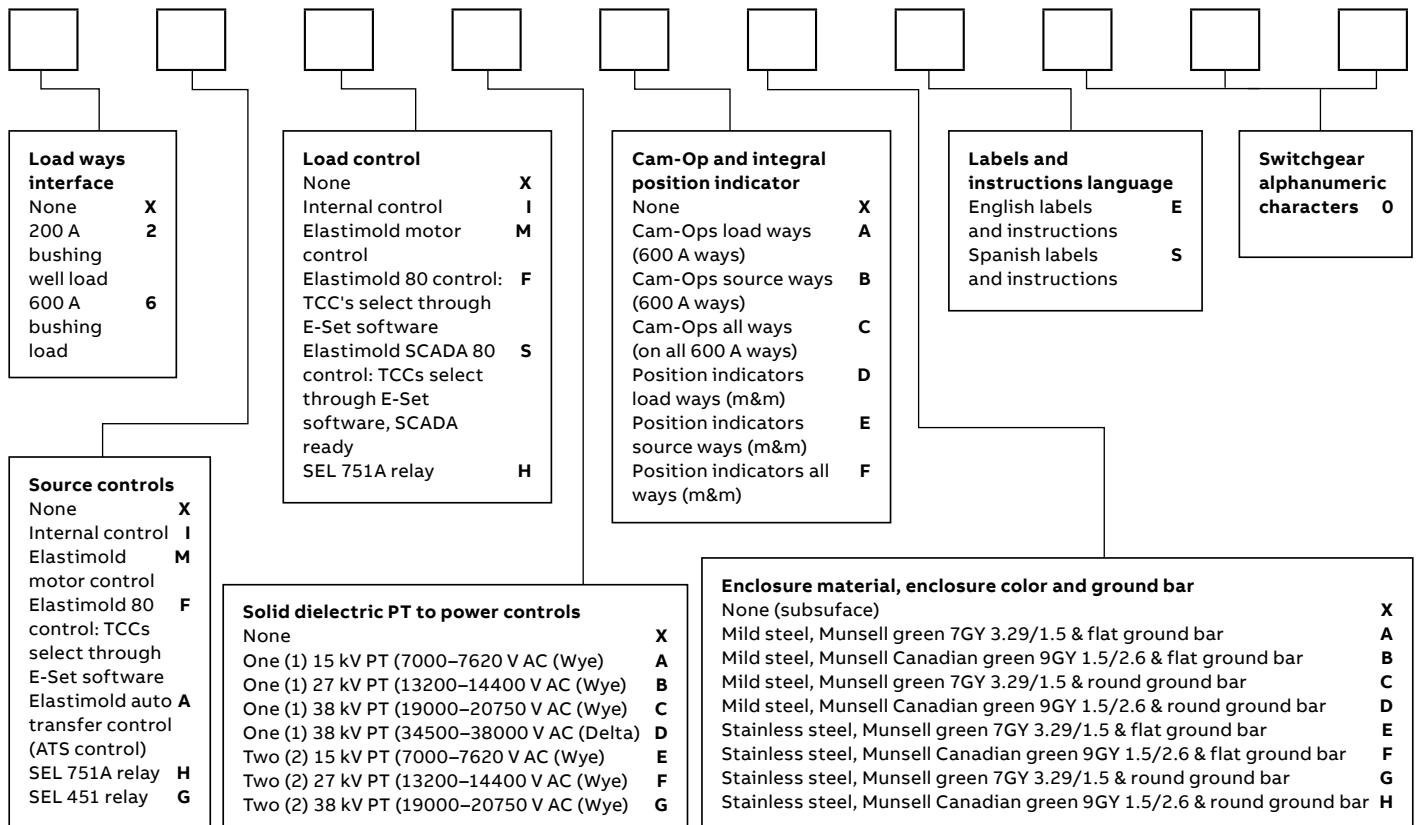
Example: Auto transfer switchgear with Elastimold control package

TD3242H2P62AFFXAE000: Automatic transfer, double-sided padmount, 3-phase, 27.0 kV, 125 kV BIL, 12.5 kA interrupting capability, 4-ways, 2 source ways, source component: three-phase molded vacuum switches (MVS3) with 12–24 V DC motor and voltage sensors, 2 load ways, load component: three-phase molded vacuum interrupter (MVI3), 600 A bushing interfaces (source), 200 A bushing well interfaces (load), source control: Elastimold automatic transfer control, load control: Elastimold 80 control: TCCs select through E-set software, PT: two (2) 27 kV PT (13200–14400 V AC (WYE), enclosure: mild steel, Munsell green 7GY 3.29/1.5 and flat ground bar, English labels and instructions.

Online switchgear configurator

The ABB online switchgear configurator makes it easy to order Elastimold switchgear by walking you step by step through configuration. See pages A89–A90 for details.

Indicates field that must be filled in to complete order.



Underground distribution switchgear

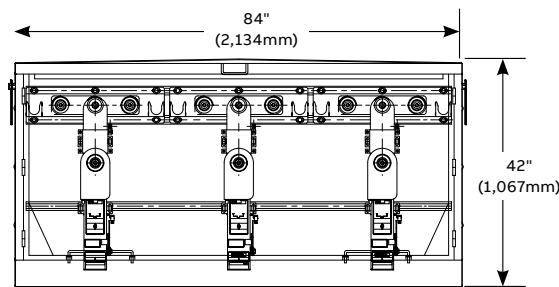
Elastimold multi-way switchgear and transfer packages

Elastimold switching and sectionalizing switchgear

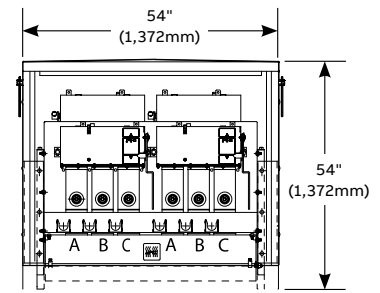
Cat. no.	Description	Width in. (mm)	Height in. (mm)	Depth in. (mm)	Weight lb. (kg)	Diagram
Vault						
ESV313-TTT-XXX	15 kV 3-way 3-phase switch	48 (1,219)	36 (914)	22 (559)	750 (340)	
ESV323-TTT-XXX	27 kV 3-way 3-phase switch	48 (1,219)	36 (914)	22 (559)	750 (340)	
ESV333-TTT-XXX	38 kV 3-way 3-phase switch	48 (1,219)	36 (914)	22 (559)	750 (340)	
ESV314-TTTT-XXXX	15 kV 4-way 3-phase switch	48 (1,219)	36 (914)	22 (559)	880 (399)	
ESV324-TTTT-XXXX	27 kV 4-way 3-phase switch	48 (1,219)	36 (914)	22 (559)	880 (399)	
ESV334-TTTT-XXXX	38 kV 4-way 3-phase switch	48 (1,219)	36 (914)	22 (559)	880 (399)	
Padmount						
PMVS1-21-15-XX	15 kV 2-way 3-phase switch	36 (914)	30 (762)	30 (762)	310 (141)	
PMVS1-21-27-XX	27 kV 2-way 3-phase switch	36 (914)	30 (762)	30 (762)	310 (141)	
PMVS1-21-38-XX	38 kV 2-way 3-phase switch	36 (914)	30 (762)	30 (762)	310 (141)	
ESD312-T-XX	15 kV 2-way 3-phase switch	36 (914)	48 (1,219)	42 (1,067)	680 (308)	
ESD322-T-XX	27 kV 2-way 3-phase switch	36 (914)	48 (1,219)	42 (1,067)	680 (308)	
ESD332-T-XX	38 kV 2-way 3-phase switch	36 (914)	48 (1,219)	42 (1,067)	680 (308)	
ESD313-TTT-XXX	15 kV 3-way 3-phase switch	54 (1,317)	48 (1,219)	54 (1,317)	1,250 (567)	
ESD323-TTT-XXX	27 kV 3-way 3-phase switch	54 (1,317)	48 (1,219)	54 (1,317)	1,250 (567)	
ESD333-TTT-XXX	38 kV 3-way 3-phase switch	54 (1,317)	48 (1,219)	54 (1,317)	1,250 (567)	
ESD314-TTTT-XXXX	15 kV 4-way 3-phase switch	54 (1,317)	48 (1,219)	54 (1,317)	1,380 (626)	
ESD324-TTTT-XXXX	27 kV 4-way 3-phase switch	54 (1,317)	48 (1,219)	54 (1,317)	1,380 (626)	
ESD334-TTTT-XXXX	38 kV 4-way 3-phase switch	54 (1,317)	48 (1,219)	54 (1,317)	1,380 (626)	

Note: X = 6 for 600 A or 2 for 200 A.
Other configurations are available. Consult your local representative for configurations not shown here.

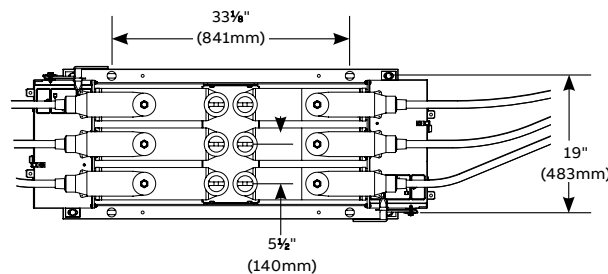
Diagrams



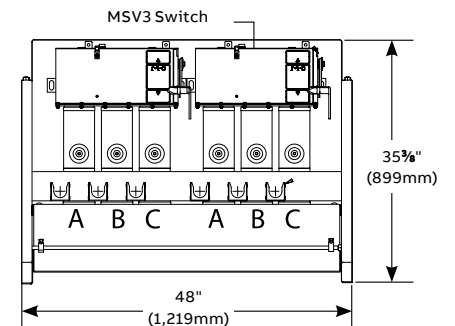
Single-side padmount ESP313-BJB-626



Double-side padmount ESD3X4-IIPP-6622-S



Subsurface ESS3X2-TT-66



Vault ESV3X4-TTTT-2222

Underground distribution switchgear

Elastimold multi-way switchgear and transfer packages

Elastimold overcurrent protection switchgear

Cat. no.	Description	Width in. (mm)	Height in. (mm)	Depth in. (mm)	Weight lb. (kg)	Diagram
Vault						
ESV313-TPP-XXX	15 kV 3-way 3-phase (1) source switch, (2) vacuum interrupter taps	40 (1,016)	48 (1,219)	22 (559)	660 (299)	
ESV323-TPP-XXX	27 kV 3-way 3-phase (1) source switch, (2) vacuum interrupter taps	40 (1,016)	48 (1,219)	22 (559)	660 (299)	
ESV313-TTP-XXX	15 kV 3-way 3-phase (2) source switches, (1) vacuum interrupter tap	40 (1,016)	48 (1,219)	22 (559)	660 (299)	
ESV323-TTP-XXX	27 kV 3-way 3-phase (2) source switches, (1) vacuum interrupter tap	40 (1,016)	48 (1,219)	22 (559)	660 (299)	
ESV314-TPPP-XXXX	15 kV 4-way 3-phase (1) source switch, (3) vacuum interrupter taps	40 (1,016)	48 (1,219)	22 (559)	880 (399)	
ESV324-TPPP-XXXX	27 kV 4-way 3-phase (1) source switch, (3) vacuum interrupter taps	40 (1,016)	48 (1,219)	22 (559)	880 (399)	
ESV314-TTPP-XXXX	15 kV 4-way 3-phase (2) source switches, (2) vacuum interrupter taps	40 (1,016)	48 (1,219)	22 (559)	880 (399)	
ESV324-TTPP-XXXX	27 kV 4-way 3-phase (2) source switches, (2) vacuum interrupter taps	40 (1,016)	48 (1,219)	22 (559)	880 (399)	
ESV314-TTTP-XXXX	15 kV 4-way 3-phase (3) source switches, (1) vacuum interrupter tap	40 (1,016)	48 (1,219)	22 (559)	880 (399)	
ESV324-TTTP-XXXX	27 kV 4-way 3-phase (3) source switches, (1) vacuum interrupter tap	40 (1,016)	48 (1,219)	22 (559)	880 (399)	
Padmount						
PMVI1-21-15-XX	15 kV 2-way 1-phase interrupter	36 (914)	30 (762)	30 (762)	310 (141)	
PMVI1-21-27-XX	27 kV 2-way 1-phase interrupter	36 (914)	30 (762)	30 (762)	310 (141)	
PMVI1-21-38-XX	38 kV 2-way 1-phase interrupter	36 (914)	30 (762)	30 (762)	310 (141)	
PMVI1-21-15-XX-3YY	15 kV 2-way 3-phase interrupter 1-phase trip selectable ext. control	48 (1,219)	42 (1,067)	30 (762)	680 (308)	
PMVI1-21-27-XX-3YY	27 kV 2-way 3-phase interrupter 1-phase trip selectable ext. control	48 (1,219)	42 (1,067)	30 (762)	680 (308)	
PMVI1-21-38-XX-3YY	38 kV 2-way 3-phase interrupter 1-phase trip selectable ext. control	48 (1,219)	42 (1,067)	30 (762)	680 (308)	
ESD312-P-XX	15 kV 2-way 3-phase (1) vacuum interrupter tap	36 (914)	48 (1,219)	42 (1,067)	680 (308)	
ESD322-P-XX	27 kV 2-way 3-phase (1) vacuum interrupter tap	36 (914)	48 (1,219)	42 (1,067)	680 (308)	
ESD332-P-XX	38 kV 2-way 3-phase (1) vacuum interrupter tap	36 (914)	48 (1,219)	42 (1,067)	680 (308)	
ESD313-TPP-XXX	15 kV 3-way 3-phase (1) source switch, (2) vacuum interrupter taps	54 (1,372)	48 (1,219)	54 (1,372)	1,160 (526)	
ESD323-TPP-XXX	27 kV 3-way 3-phase (1) source switch, (2) vacuum interrupter taps	54 (1,372)	48 (1,219)	54 (1,372)	1,160 (526)	
ESD333-TPP-XXX	38 kV 3-way 3-phase (1) source switch, (2) vacuum interrupter taps	72 (1,829)	54 (1,372)	72 (1,829)	1,500 (680)	
ESD313-TTP-XXX	15 kV 3-way 3-phase (2) source switches, (1) vacuum interrupter tap	54 (1,372)	48 (1,219)	54 (1,372)	1,160 (526)	
ESD323-TTP-XXX	27 kV 3-way 3-phase (2) source switches, (1) vacuum interrupter tap	54 (1,372)	48 (1,219)	54 (1,372)	1,160 (526)	
ESD333-TTP-XXX	38 kV 3-way 3-phase (2) source switches, (1) vacuum interrupter tap	72 (1,829)	54 (1,372)	72 (1,829)	1,500 (680)	
ESD314-TPPP-XXXX	15 kV 4-way 3-phase (1) source switch, (3) vacuum interrupter taps	54 (1,372)	48 (1,219)	54 (1,372)	1,380 (626)	
ESD324-TPPP-XXXX	27 kV 4-way 3-phase (1) source switch, (3) vacuum interrupter taps	54 (1,372)	48 (1,219)	54 (1,372)	1,380 (626)	
ESD334-TPPP-XXXX	38 kV 4-way 3-phase (1) source switch, (3) vacuum interrupter taps	72 (1,829)	54 (1,372)	72 (1,829)	1,500 (680)	
ESD314-TTPP-XXXX	15 kV 4-way 3-phase (2) source switches, (2) vacuum interrupter taps	54 (1,372)	48 (1,219)	54 (1,372)	1,380 (626)	
ESD324-TTPP-XXXX	27 kV 4-way 3-phase (2) source switches, (2) vacuum interrupter taps	54 (1,372)	48 (1,219)	54 (1,372)	1,380 (626)	
ESD334-TTPP-XXXX	38 kV 4-way 3-phase (2) source switches, (2) vacuum interrupter taps	72 (1,829)	54 (1,372)	72 (1,829)	1,500 (680)	
ESD314-TTTP-XXXX	15 kV 4-way 3-phase (3) source switches, (1) vacuum interrupter tap	54 (1,372)	48 (1,219)	54 (1,372)	1,380 (626)	
ESD324-TTTP-XXXX	27 kV 4-way 3-phase (3) source switches, (1) vacuum interrupter tap	54 (1,372)	48 (1,219)	54 (1,372)	1,380 (626)	
ESD334-TTTP-XXXX	38 kV 4-way 3-phase (3) source switches, (1) vacuum interrupter tap	72 (1,829)	54 (1,372)	72 (1,829)	1,500 (680)	

Note: X = 6 for 600 A or 2 for 200 A.

YY = 10, 20, 30, 80 for different electronic controls. Consult your local representative on 38 kV multi-way configurations.