



12kV Solid Insulated Vacuum RMU

Benefits

- ✓ Simple to use and operator friendly
- ✓ Numerous safety features
- ✓ Ultra low maintenance
- ✓ Low cost of ownership
- ✓ Designed for NZ conditions
- ✓ Stainless steel cabinet
- ✓ Outdoor ready
- ✓ Network reliability improvement
- ✓ Environmentally friendly



Features

- ✓ Solid insulation
- ✓ Vacuum interruption
- ✓ Two switchgear types: CB and LBS
- ✓ Reduced inventory saves money
- ✓ Extensible, both sides
- ✓ Internal arc fault management
- ✓ Double skinned terminal box
- ✓ Sturdy and reliable mechanisms
- ✓ Logical mimic panel
- ✓ Open front cable box

Mechanical and Electrical Characteristics

	LBS	CB
Type	Modular Outdoor RMU	
Insulation media	Solid Epoxy Polymer	
Interruption media	Vacuum	
Rated voltage	12kV	
Rated frequency	50/60Hz	
Rated current	630A	
Load breaking current	630A	
Short time withstand current	20kA 3s	
Short circuit making current (peak)	52kA	
Short circuit breaking current	-	20kA
Capacitive breaking current (single bank)	-	50A (C2)
Line Charging Current	10A	-
Cable charging current	31.5A (C1)	
Lightning impulse withstand, phases and ground	85kV	
Lightning impulse withstand, across isolating distance	95kV	
Power frequency withstand, phases and ground	32kV 1 min	
Power frequency withstand, across isolating distance	32kV 1 min	
Internal arc classification (IEC62271-200)	B(FLR)	
Internal arc withstand test	16kA 1s	
Earth Switch short time withstand current	20kA 3s	
Earth Switch short circuit making current (peak)	52kA	
Mechanical endurance class; CB, LBS, ES	M1 (2000,1000,1000 cycles)	
Electrical endurance class; CB, LBS, ES	E1	
Enclosure	304 stainless steel, painted	
Degree of protection (front covers open, IEC60529:2013.08)	IP3X	
Degree of protection (all covers closed, IEC60529:2013.08)	IP55	
Rated operating sequence (IEC 62271-100)	-	CO-180s-CO *
Mechanism	Spring Charged Manual /Electric release	
Cable connections	IEC DIN 'C' 630A	
Voltage sensors / Indicator	3Ø CVD / LED Indication Unit	
Current sensors for fault indicator (optional)	3Ø, on Bushing or Cable 100:1, 200:1, 400:1, 600:1	-
Fault indicator (optional)	3Ø OC and EF	-
Current sensors for protection relay (optional)	-	3Ø, on Bushing or Cable 100:1, 200:1, 400:1, 600:1
Protection relay (optional)	-	Refer ADR
Seismic rating	IEEE 693 High	
Altitude (IEC 62271-200)	<1000m	
Ambient air temperature (IEC 62271-200)	-25 to +55 °C	
Relative humidity	95%	
Maintenance	Ultra Low	
Dimensions (per module)	H1250 x W350 x D730	
Mass (per module)	204 kg	224 kg

* Reclosing option available on request

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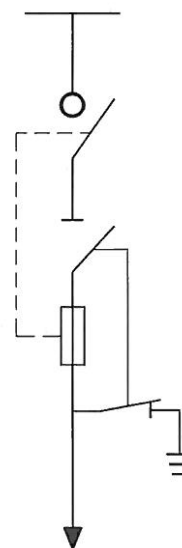
Entec 12kV Solid Insulated Vacuum RMU Fuse Type Module

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Features

- ✓ Solid insulation
- ✓ Vacuum interruption Main Switch
- ✓ Compatible with Halo CB and LBS
- ✓ Reduced inventory saves money
- ✓ Extensible, both sides
- ✓ Internal arc fault management
- ✓ Double skinned terminal box
- ✓ Sturdy and reliable mechanisms
- ✓ Logical mimic panel
- ✓ Open front cable box

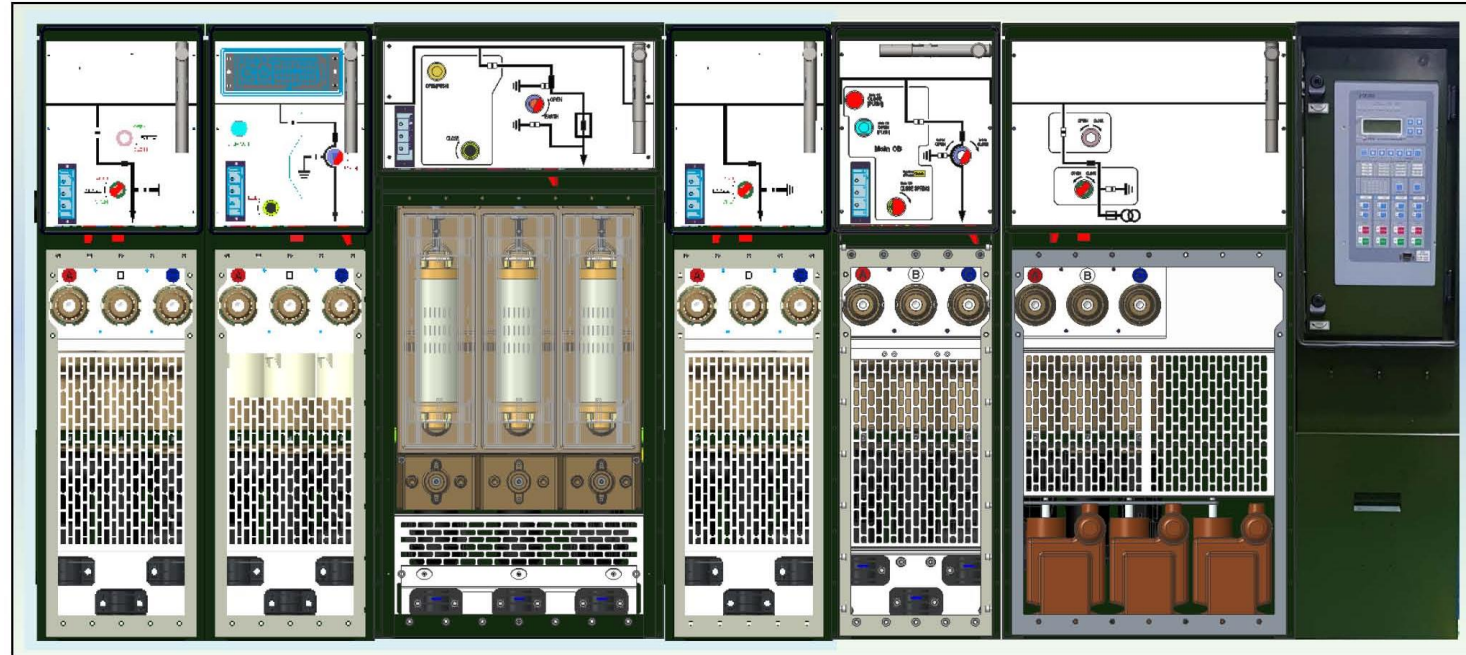


Mechanical and Electrical Characteristics*

	Main Switch (MS)	Earth / Disconnecting Switch (ES)
Type	Modular Outdoor RMU Fuse Unit	
Insulation media	Solid Epoxy Polymer / Air	
Interruption media	Vacuum	Air
Rated voltage	12kV	
Rated frequency	50/60Hz	
Rated current	630A	200A
Load breaking current	630A	2kA / 3s
Short time withstand current	Limited by Fuse Link	
Short circuit making current (peak)	52kA	5.2kA
Line Charging Current	10A	-
Cable charging current	31.5A (C1)	-
Mechanical endurance class (IEC62271-103/102)	M1 (1000)	M0 (1000)
Electrical endurance class	E1	E1
Lightning impulse withstand, phases and ground	85kV	
Lightning impulse withstand, across isolating distance	85kV	
Power frequency withstand, phases and ground	32kV 1 minute	
Power frequency withstand, across isolating distance	32kV 1 minute	
Internal arc classification (IEC62271-200)	B-FLR	
Fuse link voltage rating	12 kV	
Fuse link current rating	6.3 – 200 A	
Fuse Link Length	292 mm	
Fuse Link diameter (maximum)	88 mm	
Enclosure	304 stainless steel, painted	
Degree of protection (Enclosure)	IP55	
Degree of protection (HV Terminal Box)	IP3x	
Interlocking Device	IK10	
MS Mechanism	Spring Charged Manual Release	
Cable connections	IEC DIN 'A' 200A	
Voltage sensors / Indicator	3Ø CVD / LED Indication Unit	
Seismic rating	IEEE 693 High	
Altitude (IEC 62271-200)	<1000m	
Ambient air temperature (IEC 62271-200)	-25 to +55 °C	
Relative humidity	95%	
Maintenance	Ultra Low	
Dimensions (per module)	H1250 x W600 x D730	
Mass (per module)	300 kg	

* Preliminary data

Available Halo Modules



C

V

F

D

P

VT

S

C = Cable Switch

V = Circuit Breaker

F = Fuse Module

D = Direct Connect

P = Pre-Charged

VT = Metering Unit

S = Scada Cabinet