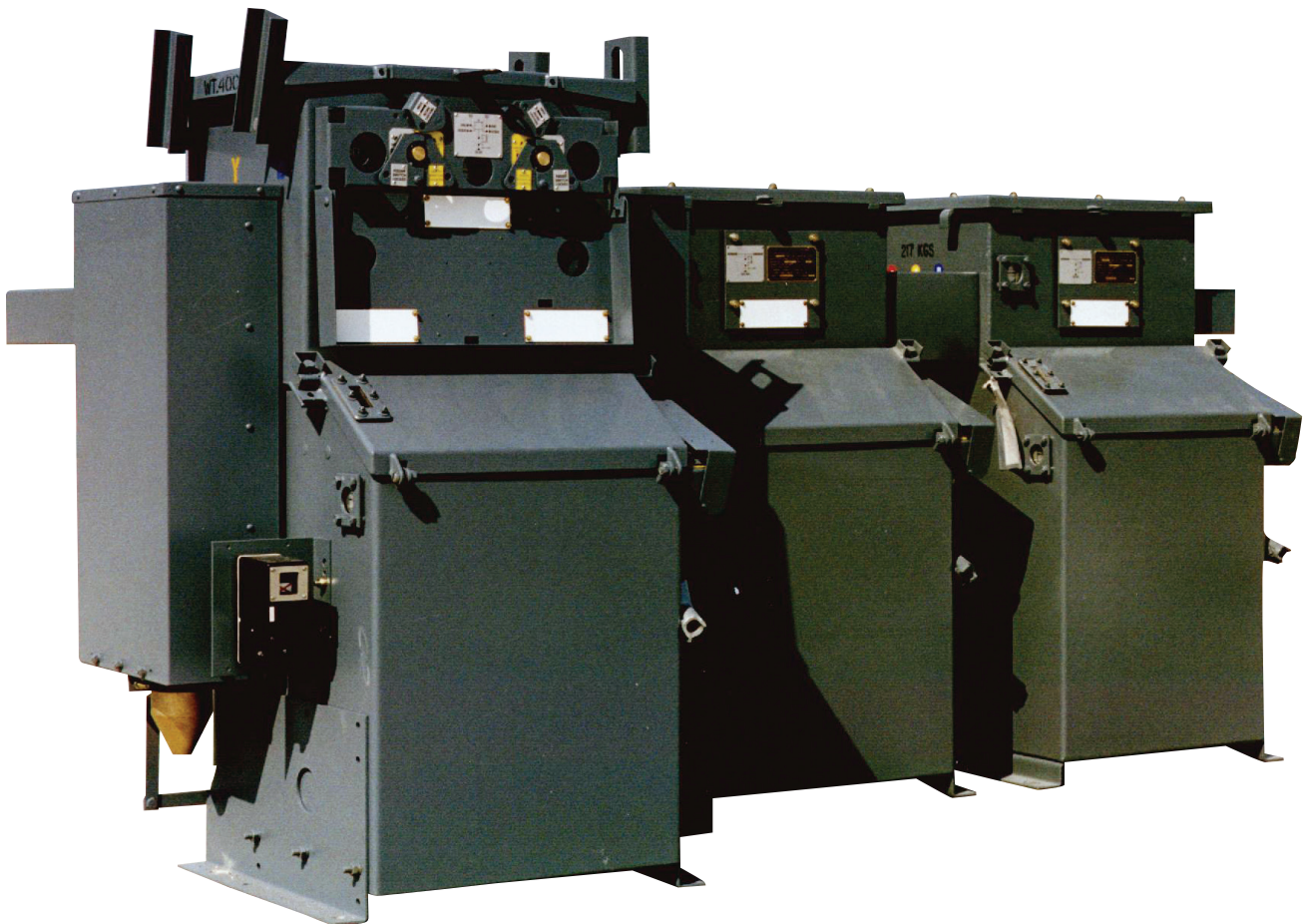


Trident Oil ring main unit



Introduction to Trident

Lucy Electric has over 100 years of experience within the power distribution industry. Our Trident range of oil insulated ring main units (RMUs) has been developed over a number of years and is a leading performer in the global market. For use in both rural and industrial settings, it can be positioned in the most extreme conditions: ambient temperatures from -10°C to 55°C, humidity of up to 100%, corrosive regions, oil fields and other hostile environments.

Corrosion protection

The main body of the unit is fabricated from 4mm steel which is shot blasted, zinc sprayed and then coated with an epoxy powder paint finish for durable outdoor and indoor use.

Maintenance

The Trident range of ring main units requires very low levels of maintenance. Under normal conditions a routine inspection is required at an interval of once every seven years.

Operation

Mechanism

The operating mechanisms are of the independent manual spring type for both Main and Earth switches ensuring that speed of operation is independent of the operator.

Ring switches

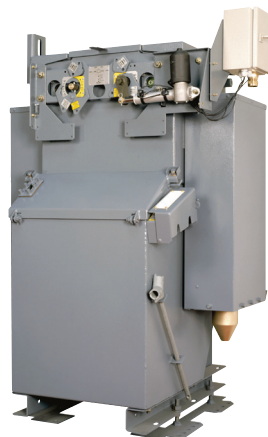
Ring switches are fault make, load break three position type 'ON', 'OFF' and 'EARTH ON'.

Fuse switch

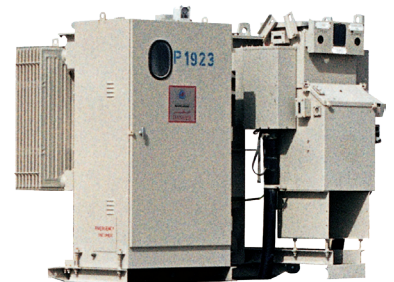
The fused tee-off is of the fault make, fault break, three position type 'ON', 'OFF' and 'TRANSFORMER EARTH ON'. The fuse switch has a double isolation feature for additional operational safety.

Characteristics:

- Ratings up to 15.5kV
- Long service life
- Low maintenance
- IP54 for installation outdoors
- Oil insulated
- Interlocked for safe operation
- Padlocking facilities
- Fully extensible
- Rugged design for hot and humid environments

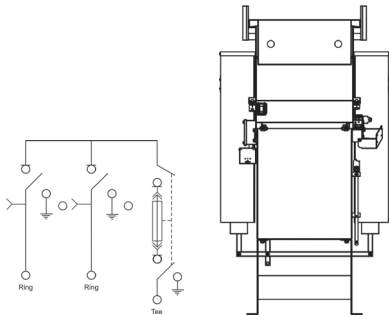


Trident with retrofit motor operation

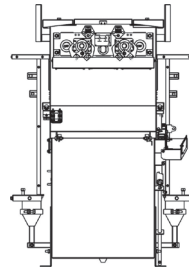
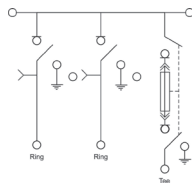


Trident transformer mounted

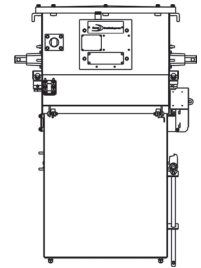
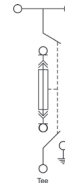
Trident oil RMU range



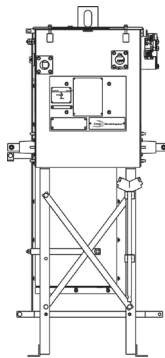
FRMU
Non extensible
fused RMU



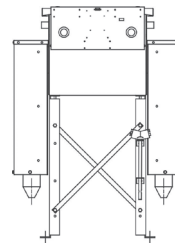
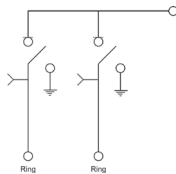
FRMUE
Extensible
fused RMU



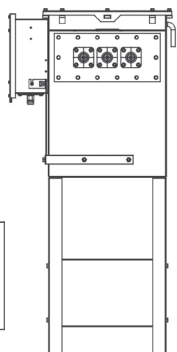
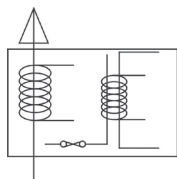
EFS
Extensible
fuse switch



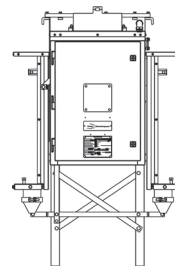
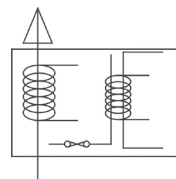
EOS
Extensible
oil switch



DEOS
Extensible
double oil switch



TMC metering unit
Transformer mounted



BMC metering unit
Freestanding

Safety

The unit has been designed to ensure maximum operator safety. Live parts are contained within an earth sheet steel enclosure. Cable termination boxes are located away from the operator – to the side and the rear, to ensure operator safety at all times. A single line diagram and mechanical indicators exist on the front of each unit to aid user safety and interlocks on all switch positions prevent incorrect operation. In addition padlocking facilities are provided for all positions and can be equipped with neon voltage indicators (live cable indication), interlocked cable test facility on tee-off and Castell interlocking.

Accessories

Lucy Electric has developed a number of accessories that can be added to a Trident RMU providing flexible solutions for our customers.

- Remote tripping
- Ring switch actuators
- RTU mounting bracket
- Earth fault indicators
- Test plug devices
- Busbar connection
- Cabling
- End cap kit

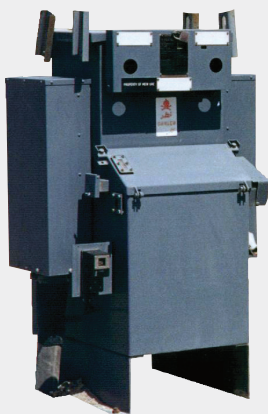
Automation

The Trident range of oil ring main units can be fully equipped with automation features to address customers' requirements for remote monitoring and control.

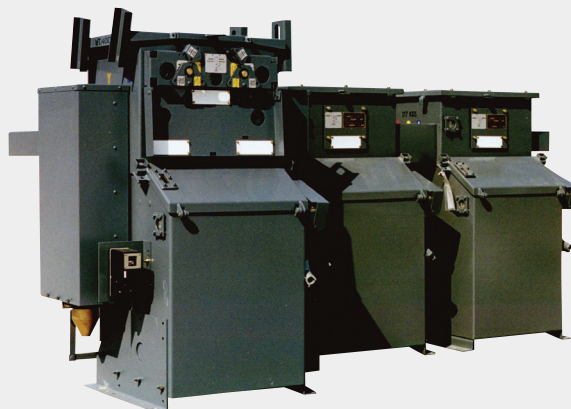
A variety of automation options are available:

- Retrofittable motorised actuator, available as a single left hand or right hand or double ring switch configuration. Status indicators for the ring switches are also available. The non-intrusive nature of the retrofit assembly negates the need to shut down the unit whilst the installation takes place.
- The tee-off fuse switch can be fitted with a shunt trip for remote tripping and auxiliary contacts for remote indication.
- A purposely designed Remote Terminal Unit (RTU) mounting bracket can accommodate our Gemini- RTU on either the right or the left hand side of the Trident RMU.
- Earth fault passage indicators complete the picture by providing crucial information on the location of earth faults in a MV network split ring. Our Gemini range of automation products and systems ensure an integrated solution, so that the Trident RMU can be monitored and controlled by most utility NMS/ SCADA systems.

In essence, our automation solution is a factory built automation package that can be ready for immediate installation with minimal on-site works.



Trident freestanding



Trident extensible

Trident oil RMU range

Electrical performance

Product		FRMU	EFS	EOS	DEOS
		RMU	Fuse Switch	Oil Switch	Double Oil Switch
Rated voltage	kV	15.5	15.5	15.5	15.5
Ring switch					
Rated current	A	630		630	630
Making capacity (Main/Earth)	kA Pk	50		50	50
Breaking capacity (Main)	A	630		630	630
Short time withstand (Main/Earth)	kA 3 sec	20		20	20
Basic impulse level	kV	95/110		95/110	95/110
Fuse switch					
Rated current	A	200	200		
Making capacity (Main/Earth)	kA Pk	50kA/7.8kA Pk	50kA/7.8kA Pk		
Breaking capacity (Main/Earth) 95/110kV	kA	20	20		
Short time withstand current (Earth)	kA 3 sec	3.15	3.15		
Basic impulse level	kV	95/110	95/110		
General					
Rated frequency	Hz	50/60	50/60	50/60	50/60
Minimum operating temperature	°C	-10 to +55	-10 to +55	-10 to +55	-10 to +55
IP rating	IP	IP54	IP54	IP54	IP54
Weight (without oil)	kg	320	217	140	320
Standards		IEC 60420, 60265-1, 60694, 60294			
Dimensions					
Height (min)	mm	1262	1116	1400	1185
Width	mm	908	865	642	920
Depth	mm	757	1050	600	750

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