



OUTDOOR OIL FILLED METERING UNITS - 11 to 33kV

A division of ACTOM (Pty) Ltd

ACTOM

Formerly ALSTOM South Africa

ACTOM Outdoor Oil Filled Metering Units - 11 to 33kV

General

ACTOM's High Voltage Equipment Division manufactures 11,22 and 33kV metering units (combined current and voltage transformer) suitable for various conditions and applications. All metering units have a one year comprehensive guarantee, and are manufactured to highest quality of workmanship and materials. ACTOM High Voltage is ISO9001 accredited, and all units are type tested at SABS to IEC standards.

Pole mounted

Unit is suitable for H pole construction. Manufactured to Eskom specification, consisting of the following:

- Current transformers on all three phases, suitable for 4 wire metering
- Five limb three phase voltage transformer
- Can carry up to 1250A primary current
- Available in 11,22 and 33kV
- VT LV fuses in terminal box
- Oil level dipstick
- Surge arrester brackets

Ground mounted

Manufactured to Eskom specification which consist of the following:

- Current transformers on all three phases, suitable for 4 wire metering
- Five limb three phase voltage transformer
- Can carry up to 600A primary current
- Available in 11 and 22kV
- LV fuses in terminal box
- Oil level dipstick

Current transformer secondary cores

Secondary windings are situated between the source and load side of the HV bushings, one per phase.



The pole mounted metering unit is suitable for H pole construction



The ground mounted metering unit is available in 11 and 22kV

The toroidal cores are made from grain oriented silicon steel (grade M0H). The design of the core is dependent on the ratio, burden and class of accuracy. The core is annealed, allowed to cool down, covered with insulation material and the desired number of turns are wound. The core is tested according to the latest international standard.

Voltage transformer windings

The windings are of inductive three phase five limb type and are designed with a low flux density accommodating a voltage factor of 1.9V-30 sec. The VT normally has one secondary winding, but in some cases a second winding can be accommodated.

Steelwork

The transformer tank is manufactured out of mild steel and is of fully welded construction. The steelwork can be either hot dipped galvanized or hot wire zinc metal sprayed and painted to customer requirements.

Secondary terminal enclosure: (Pole mounted units)

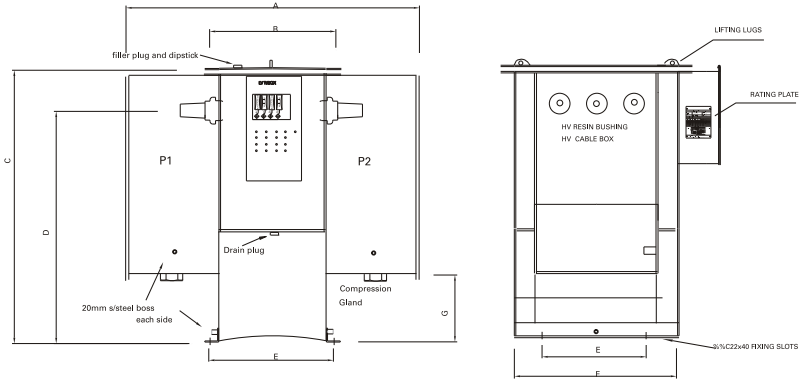
The terminal enclosure of the units is of a weatherproof type fitted with a lockable sliding cover. Inside the enclosure, the secondary windings and VT terminations are brought out through LV terminals. The VT windings are protected by 10 Amp fuses. The neutral side of the secondaries is brought out via links.

The bottom of the terminal enclosure has an insect proof air vent that prevents condensation. The glandplate is made from aluminium and is bolted to the bottom of the terminal enclosure.

Terminal enclosure: (Ground mounted units)

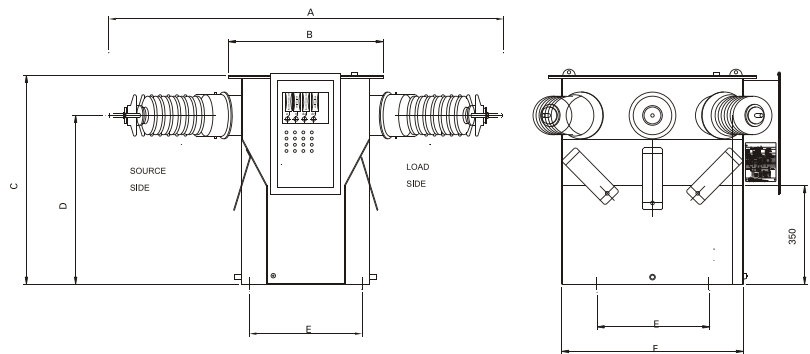
The HV bushings are enclosed in a large mild steel box and are covered with a bolted and gasketed removable lid. The bottom of the enclosure has a removable gland plate and is fitted with a cable gland type SCG no 8 or 9 to accommodate the HV 2XLPE cable.

The ground mounted unit consists of six HV 600 Amp cast resin screened insulators.



STANDARD DIMENSIONS (mm) GROUND MOUNTED METERING UNIT

		A	B	C	D	E	F	G			
Nominal System Voltage	Impulse Withstand Voltage	Total Width	Tank Width	Height	Height Bushing to base	Fixing Centres	Tank Length	HV T/box to base	Phase to Phase Clearance	Phase to Earth Clearance	Total Mass (kg)
11kV	95kV	1070	400	975	945	400	585	245	135	90	370
22kV	150kV	1130	450	1095	965	400	685	265	135	90	470



STANDARD DIMENSIONS (mm) POLE MOUNTED METERING UNIT

		A	B	C	D	E	F	G			
Nominal System Voltage	Impulse Withstand Voltage	Total Width	Tank Width	Height	Height Bushing to base	Fixing Centres	Tank Length	LV T/box to base	Phase to Phase Clearance	Phase to Earth Clearance	Total Mass (kg)
11kV	95kV	1010	500	720	570	400	540	340	190	290	250
11kV 1200A	95kV	1230	550	720	565	800x400	1340	340	500	330	580
22kV	150kV	1400	550	745	600	400	645	370	325	355	350
33kV	200kV	1675	560	785	610	400	700	385	410	355	400



The HV terminal is fitted with a cable gland, type SCG no 8 or 9, to accommodate the HV XLPE cable



LV terminal enclosure is of a weatherproof type and fitted with a sliding cover

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