

UNA MVA

UNITIZED ASSEMBLY MEDIUM VOLTAGE APPLICATION

Mobile or Transportable Prefabricated Medium & Low Voltage Substation for Electrical Energy Distribution

SCADA Ready, Complies with the New Grid and Distribution Code

The UNA MVA or Unitized Assembly Medium Voltage Application are transportable substation constructed for different uses, "to customer specifications", but which have the following basic characteristics in common:

- Compactness
- Sturdy construction, with welded metal structures
- Finishing is resistant to bad weather conditions, and suitable for long period of outdoor staying even in aggressive atmospheres
- Very rapid installation
- Almost immediate putting into service since all the apparatus is pre-cabled and pre-tested in the factory
- Suitable protection devices, preset to allow personnel to operate in maximum safety, in compliance with the safety regulations in force.



Features:

- Separate compartment for Components, Busbars and Cable.
- Switchboard enclosure is made of steel sheet protected by galvanic coating and powder coating for maximum durability.
- Suitable for AIS or GIS switchgears.

Benefits:

- system easily allows the assembly to be configured to suit all technical conditions and plant operational procedures.

UNITIZED ASSEMBLY MEDIUM VOLTAGE APPLICATION

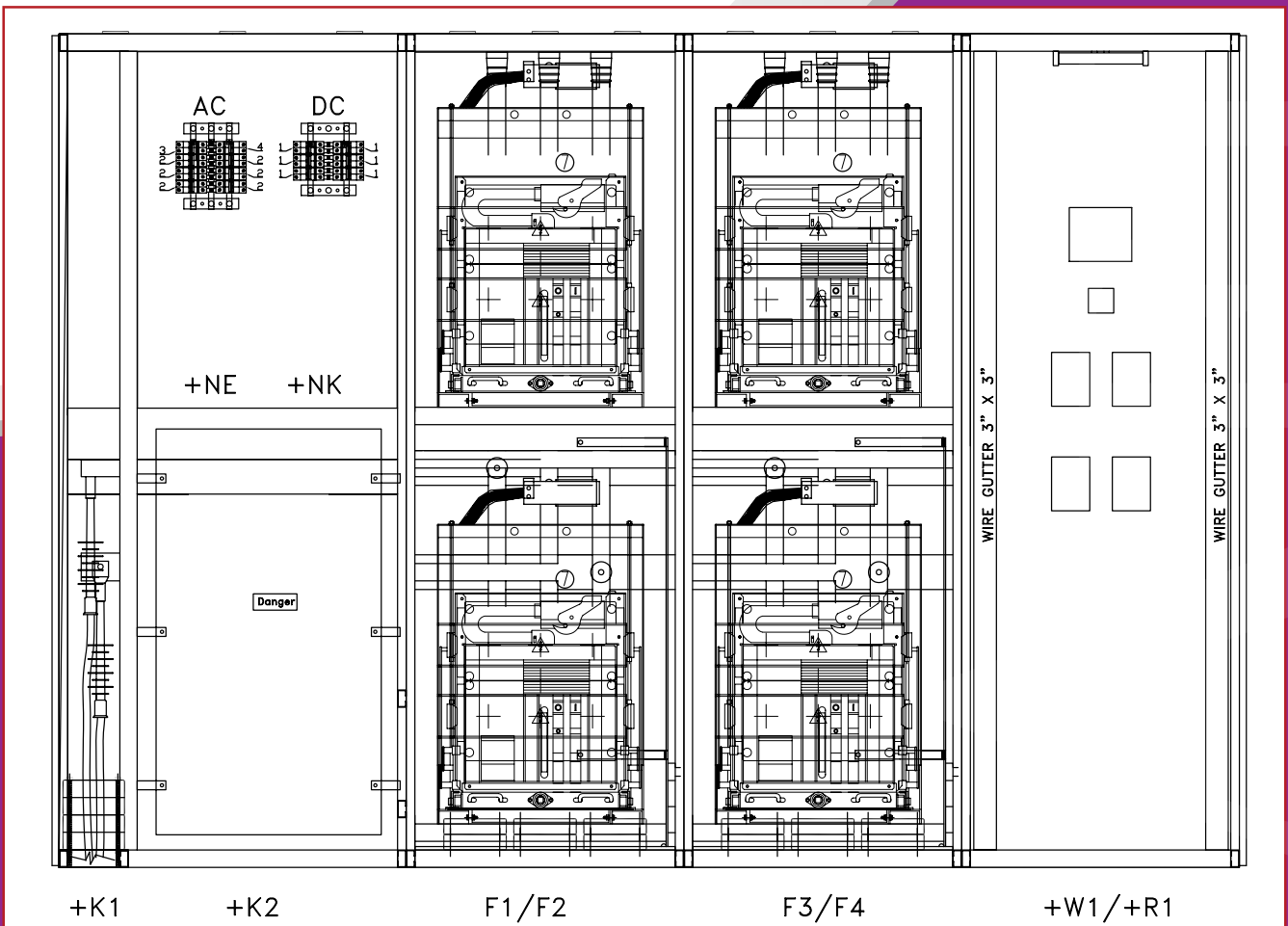
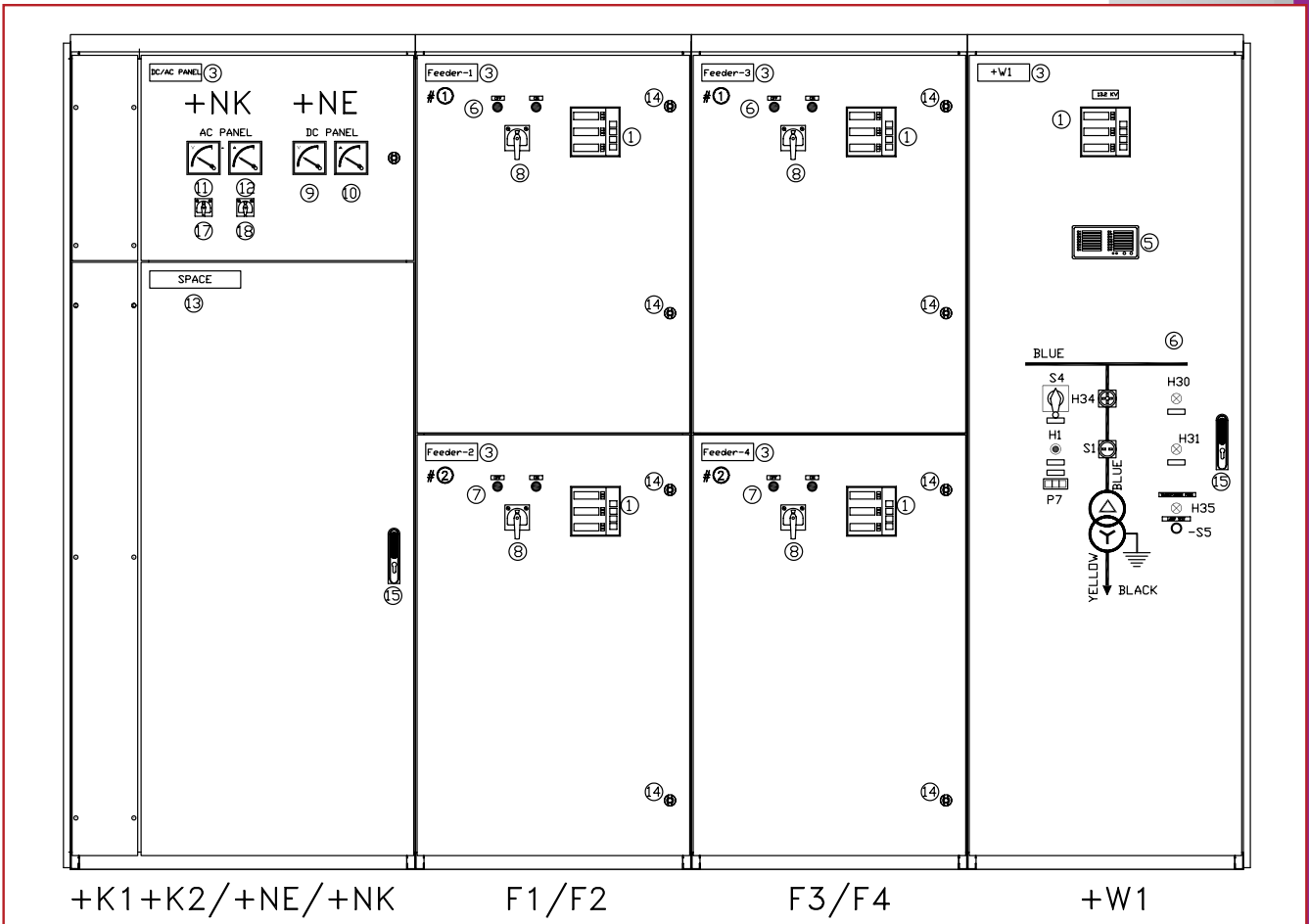
1. AUXILLIARY AND AC/DC PANEL SECTION - comprises of cable compartment, busbarring and wiring assembly, and AC/DC Panel with AC/DC Voltmeter and Ammeter.
2. FEEDER BREAKER SECTION - includes circuit breaker control switch, pilot lights, post insulators, meters, CT, and VCB (2 feeder per vertical section)
3. CONTROL & PROTECTION PANEL SECTION - includes meters, protection relays, annunciator, pilot lights, buzzer, lock out relay, check back switch, position indicator, control relays, CT test blocks and MCB control protection.
4. Automatic Battery Charger - input voltage is 220Vac, single phase, output voltage is 125Vdc. Normal capacity of 10Amps.
5. Distribution Transformer, 10kVA, conventional pole type, 7620/13200Y volts primary, 120/240 volts secondary, single phase, 2-HV bushing, 3-LV terminals, porcelain bushing, with 2-2.5% taps below and above normal operating voltage, 95kV BIL primary, 30kV BIL secondary.
6. Battery, 12Vdc per cell maintenance free 65 Amp-hr lead acid.
7. UNA MVA Outdoor Kiosk - 2510mmH x 2415mmD Outdoor NEMA 3R, 20 Footer Container Van enclosure.

Technical Specifications:

1. All switchgears are Versa Modular System (VMS) design structures. BI sheet Ga#14 for the frames and Ga#16 for the enclosure element base on the non-welded framework construction for free standing panel.
2. Enclosure protection is IP-40 (Nema 1) for indoor use only, Form 1, standard powder painted gray or wrinkled beige color.
3. Uses 99.99% copper busbar of strength E-CUF30, silver plated and bolted at joint with heat shrinkable tube rigidly supported by track resistance polyester glass resin bus support.
4. SCADA ready, compliant with new grid and distribution code.
5. Current Transformer is torroidal type, Relaying and Metering class 50-400Hz, 10kV BIL full wave.
6. Control Voltage for the VCB or SF6 Circuit Breaker is 125Vdc.
7. Voltage Transformer has a voltage class of 110kV BIL 0.3WXYZ.
8. Digital multimeter reads all electrical parameters including Total Harmonics Distortion (THD).



ROBIE-MVSG UNA MVA SCHEMATIC DIAGRAM



The **Asiaphil Mobile Switchgear** is routine engineered to ensure a safe and easy operation. The following safety features are considered:

- Transit in paved roads with a speed of up to 60kph.
- Possible to be successfully tilted in transit up to 20 degrees without the danger of overturning.
- All equipment will withstand strains due to normal road vibrations.
- Possible to be energized and operated with an out-of-level until 5 degrees.
- Protection and control switchboards safely placed, allowing easy operation and maintenance.
- Constructed and designed based on a size of a 20-footer container complete with heat insulation, Swing Aluminum door and glass window.
- Quick installation, a concept of PLUG & PLAY application since the apparatus is pre-cabled and pre-tested in our factory.
- Applicable for emergency situation with suitable protection devices, preset to allow personnel to operate in maximum safety.

Construction characteristics of the containers

The container consists of a welded structure made of steel sheets and channels, constructed according to experienced criteria for industrial/highway containers. The internal walls and roof are made of steel sheets of suitable thickness, insulated using thermic panels made of non-flammable material.

Container dimensions:

H = 2510 mm
W = 2415 mm
L = 6060 mm

Substation Solution 1:

UNA MVA 2 feeder, 15kv, 5 MVA, complete with MVSG, control & protection panel, metering panel, battery and battery charger.



- 1 Kiosk
- 2 2/4 Feeder Medium Voltage switchgear
- 3 AC/DC Panel
- 4 Protection Panel
- 5 Kiosk that consist of a 2/4 Feeder Medium Voltage switchgear, AC/DC Panel and Protection Panel

Manufactured by:



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