

INSTALLATION AND OPERATING INSTRUCTIONS

Servicenter™ mini-unit substation

Single-phase models



Servicenter™ mini-unit substation

Receiving

Upon receipt of shipment, examine the package for any damage that may have occurred in transit. If the shipping container must be opened outdoors, take proper precautions to prevent the entrance of moisture. While unpacking, examine the unit for broken, bent, loose parts or other damage. If injury from outside sources is evident, file a damage claim with the transportation company and notify the nearest ABB Sales Office.

Storage

The storage area should be clean, dry, and, when possible without extreme temperature variations. Before placing the unit in service after a period of storage, be sure it is clean and dry by observing the instructions under "Installation."

Handling

Provisions for lifting are provided on the top of the unit. Because Servicenter™ are surprisingly heavy for their size, care should be exercised to assure adequate capacity of lifting equipment. For safety, lifting chains or slings should be used and secure such that the unit is lifted in the

vertical position and also secured such that the unit cannot become disconnected during lifting.

Installation

Preparation: Any accumulation of dirt or dust may be removed by brushing with a soft non-metallic brush, by blowing dry air on the unit, or by using a vacuum cleaner. If moisture is evident by the appearance of rust, the unit should be dried out by placing it in an oven or by blowing heated air over it. The temperature should not exceed 220°C. Megger readings of 10 megohms minimum after the unit is cooled to room temperature should be obtained before installation.

Mounting

The only foundation necessary is a wall or other vertical surface strong enough to support the weight of the unit. Free circulation of air is essential for proper operation of the unit. The Servicenter™ is

cooled by free circulation of the surrounding air over its surfaces. The Servicenter™ will perform at its rated output when surrounding air does not exceed 40°C (104°F) and adjacent structures permit free movement of cooling air. A minimum distance to adjacent structures of one inch, except mounting surface, is required. The unit must be mounted upright with the circuit breaker compartment at the bottom.

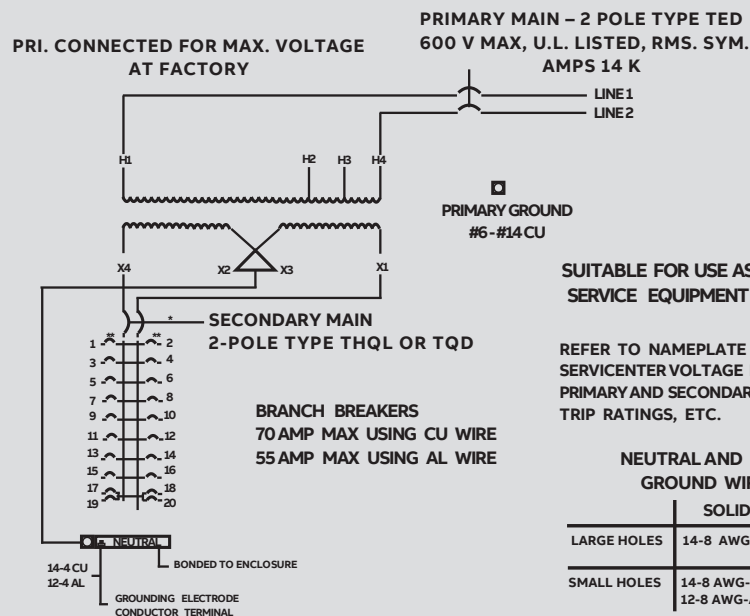
Connections



NOTE: Do not make or change connections while unit is energized!

Reference should be made to the wiring diagram when making connections. A new grounding electrode conductor is to be connected to the neutral bar of the secondary in accordance with the National Electric Code.

Typical wiring diagram



*SHORT CIRCUIT CURRENT RATING 10,000 RMS SYMMETRICAL AMPERES, 240V MAXIMUM.

Connections (continued)

If a primary grounding conductor is available, it may be connected to the primary ground terminal.

The secondary grounding conductor and the secondary ground conductors are to be installed in the neutral terminal strip. This neutral terminal strip is bonded to the enclosure.

Care must be taken to place all leads from the source, or from the same load, through one knockout so that no part of the Servicenter™ enclosure is positioned between such leads.

Make certain that all connections are electrically tight so that current-carrying parts are under adequate pressure to prevent joint heating. If aluminum cable is used, adequate preparations of the aluminum cable and protection of the joint is essential.

Secondary branch circuit breaker ampere ratings and branch circuit conductor sizes must be selected in accordance with the National Electric Code.

The Servicenter™ is factory connected on the primary side for the highest rated input voltage. If the primary input voltage is lower, the one transformer lead may be removed from the lead side of the primary main breaker and replaced with a tap lead of voltage rating corresponding to the source voltage. The unused primary leads to the transformer must be insulated.



NOTE: Do not remove the cover on primary side of breaker, cover must be in place at any time during and after installation.



NOTE: Do not make or change connections while unit is energized!

The primary main breaker and the secondary main breaker may be changed out using breakers of equal voltage rating and equal or lower current rating.

Higher current rating than what is supplied must not be used. Lower current rated primary breaker may result in nuisance tripping due to inrush current to the primary of the transformer.

After all electrical connections have been made and the required branch circuit breakers installed, the inside metal cover plate must have the corresponding branch circuit breaker knockouts removed and the cover plate carefully reinstalled and fastened in place being sure that no cables are caught between the cover plate and the framework and all breakers are aligned with the holes in cover plate.

Branch circuit identification positions should be recorded on the wiring diagram on the inside of the outer enclosure cover.

After the inner cover is place, the unit should then be energized and operations checked by operating the circuit breakers, and checking output voltage.

The outer cover should the be closed and secured by the screw at the bottom. In addition, a padlock may be used to secure the outer cover of the unit using the holes (0.281 inch diameter) provided.



Caution procedure for aluminum terminations

General

The following procedure is recommended when connecting aluminum wire.

Step 1. Strip the insulation, being careful not to nick wire.

Step 2. Wire-brush the conductor strands.

Step 3. Thoroughly coat the stripped conductor with a suitable antioxidant compound such as ALNOX or PENETROX A13.

Step 4. Insert conductor and tighten connector screw securely.

Preventive maintenance

The only preventive maintenance required is periodic inspection of connections, operation of circuit breakers, and removal of accumulated dust, dirt, and lint.



NOTE: This transformer is constructed with substances which are potentially harmful for the environment. Shall not be disposed as normal waste. Please consult your local regulations for disposal requirements.

Renewal parts

Because of the unit structure of the Servicenter™, field repairs are usually uneconomical except for replacement of the circuit breakers. No spare parts or renewal parts are recommended. If conditions of operation dictate the need for standby equipment, a complete spare unit is recommended.