

# Instruction Leaflet for Silicone-housed POLIM-K Solid State Metal Oxide Surge Arresters

## **SAFETY NOTICE**

- Keep these instructions available to those responsible for the proper installation, maintenance and operation of this product.
- Follow your company's safety procedures.
- Read these instructions carefully before attempting to install, operate or maintain this device. Failure to follow these instructions could cause severe personal injury, death or property damage.
- Apparatus covered by this instruction literature should be operated and serviced only by competent personnel familiar with good safety practice. These instructions are written for such personnel and are not intended as a substitute for proper training and experience in safety procedures for this type of equipment.

## **Introduction**

Silicone-housed metal oxide surge arresters are used for overvoltage protection of high voltage equipment, either indoor or outdoor. These surge arresters meet all NEMA, ANSI, and IEC standards. These instructions are for surge arresters rated 5 through 45 kV.

## **Description**

A master nameplate located on the surge arrester lists the style number, serial number, voltage rating, MCOV (maximum continuous operating voltage) rating and the year of manufacture. The complete surge arrester will include the line terminal bracket and ground terminal.

Line and ground terminals: POLIM-K are suitable for copper or aluminum conductors (cable size #12 to #6).

## **Receipt**

On receipt of the surge arrester, carefully inspect the shipping packaging and units for any visible signs of damage. Check nameplates to be sure the desired ratings have been received and check parts against the packing list. If damage or shortage exists, save the shipping packaging and packing materials, file a claim immediately with the carrier and promptly notify the nearest ABB Sales Office.

## **Installation**

Locate surge arresters such that they are not accessible to people. Surge arresters have dangerous high voltage, terminal to terminal, under normal operating conditions. Surge arresters should be installed above reach of people and behind safety fences. The arrangement should be such that the maximum arrester mechanical loading from conductor pull, wind load and earthquakes does not exceed the maximum design cantilever static strength (see ABB Product Bulletin).

To obtain the best margin of protection by the surge arrester, it should be located as near the apparatus to be protected as possible using leads of the shortest length. Ground leads should be tied to a substation common ground.

## **Testing of In-Service Surge Arresters**

No simple field test will verify the complete characteristics of a surge arrester unit. This requires extensive, rather specialized test facilities.

## **Notes**

1. Voltage ratings per latest revision of ANSI C62.11.
2. Silicone-housed surge arresters are designed to be operated at voltages equal to or less than the MCOV rating shown on the master nameplates.
3. Increase clearances 3% for each 1000 ft. over 6000 ft.
4. Dimensions can be obtained from the outline drawing.
5. Minimum phase-to-ground and phase-to-phase spacing for surge arresters are specified on the outline. Other apparatus standards, other specifications or local codes may supersede distances specified on the outline.

## **Maintenance**

Under normal conditions, the silicone-housed surge arrester requires no maintenance. In locations where the environment is hazardous to insulating structures, periodic inspection of the surge arresters may disclose the need to remove contaminants of dirt, soot, salt and other conducting materials.

## **Correspondence**

Inquiries pertaining to silicone-housed surge arresters should be directed to the nearest ABB Sales Office, giving all information stated on the master nameplate.

For more information please contact:

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