

PDV/PVR DISTRIBUTION ARRESTERS

Installation Instructions: 17-5122

CAUTION

The equipment covered by these instructions should be installed and serviced only by competent personnel familiar with good safety practices. This instruction is written for such personnel and is not intended as a substitute for adequate training and experience in safe procedures.

WARNING

Prior to installing this product, check the nameplate information to verify that it is the correct product for the application. Verify that the nameplate information corresponds to the information provided on the outline drawing.

Introduction

Hubbell Power Systems surge arresters are designed to limit surge voltage by conducting the surge current to ground, and thus avoiding equipment damage. The arresters are of single pole design, suitable for outdoor use, and designed in accordance with the latest revision of industry standard IEEE C62.11 and/or IEC 60099-4.

Each PDV and PVR distribution arrester contain a number of vertically stacked zinc oxide valve elements overwrapped with an epoxy-impregnated fiberglass filament wrap, contained within ESP® polymer weathershed housing(s).

Application

WARNING

PDV and PVR Distribution arresters must be applied where the continuous phase-to-ground voltage at the arrester location does not exceed the arrester continuous voltage capability as indicated on the nameplate. Arrester physical size may not determine the voltage rating. Do not install arrester if type, rated voltage (U_r for IEC arresters) and maximum continuous operating voltage (U_c for IEC arresters) are not exactly the same on the nameplate and packaging labels.

Packaging

PDV and PVR arresters are typically packaged in sturdy cardboard boxes and stacked on a wooden pallet. Some arresters may be packed in wooden crates or multi-cell containers. Hardware and mounting accessories will be assembled to the arrester or contained within the box or crate.

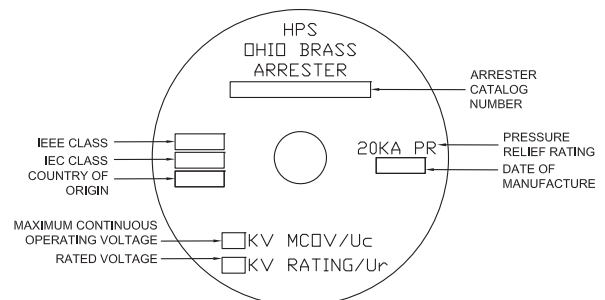
Initial Inspection

Rough handling can result in damage to the surge arrester. Arresters should be carefully removed from the carton or container for inspection. If damage is apparent, do not install the arrester. Claims for shipping damage should be registered immediately with the common carrier.

The arrester model number, rated voltage (U_r for IEC arresters), and MCOV (U_c for IEC arresters) are identified on the arrester

nameplate. The nameplate information should be checked against the shipping memorandum.

The drawing below shows the typical information contained on the nameplate. The nameplate information is found on the top metal plate of the arrester. Additional nameplate formats are used for customer specific requests.

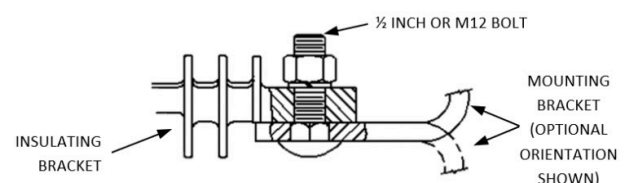


Installation

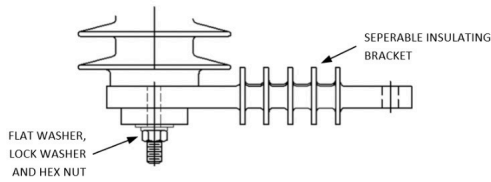
Install the arrester electrically as close as practicable to the equipment to be protected. Keep the arrester connections short and direct.

The arrester insulating bracket should not be modified or tampered with as this could result in impaired operation of the ground lead disconnecter. Additionally, the top and bottom sealing bolts of the arrester should not be loosened or otherwise modified as this may compromise the arrester seal integrity.

For arresters with mounting brackets, such as transformer or NEMA crossarm brackets, the following illustration shows the recommended arrangement for fastening the optional bracket to the insulating bracket of the arrester. A star washer or serrated washer should not be used in conjunction with the insulating bracket as this can cause damage to the assembly.



In some cases, the distribution arrester may come with a separate insulating bracket which is intended for field assembly. For optimal results, install the fastening hardware onto the bottom stud in the order shown below.



Line and ground leads are recommended to be AWG #6 to AWG #2. The line lead should not place excess mechanical strain on the arrester. The ground lead should include ample slack to ensure the ground lead disconnect can successfully operate in the remote instance of arrester short circuit.

The recommended tightening torques for PDV and PVR arrester fasteners are provided below. To confirm the stud type, please refer to the product sales drawing.

Stud Size	Maximum Recommended Tightening Torque
3/8"	20 ft-lb (27 Nm)
1/2" (M12)	40 ft-lb (54 Nm)

Altitude and Temperature

PDV and PVR distribution class arresters can be used from 0 to 12,000 feet (3600m) altitude. These arresters can be used in locations where the maximum temperature does not exceed 60° C and where the weighted average temperature does not exceed 45° C. The minimum operating temperature is -40° C.

Periodic Inspection, Maintenance And Removal

Before inspecting or handling, disconnect the arrester from the line. When a metal-oxide arrester is disconnected from an energized line, it is possible for a small amount of static charge to be retained by the arrester. As a precautionary measure, install a temporary ground on the line end of the arrester after it is disconnected from the line. This will ensure that any retained charge is discharged to ground. **Remove the temporary ground before the arrester is re-installed.**

These arresters do not require field testing, and no test that applies power voltage in excess of maximum arrester voltage rating should be made without consulting Hubbell. There is no single field test that will indicate the complete operating characteristics of the arrester.

Storage

All Hubbell polymer housed arresters covered by these instructions may be stored outdoors if suitable precautions are taken to prevent deterioration of the packing material. Otherwise, it is recommended to store these arresters indoors.

For more information about Hubbell distribution arresters, contact your Hubbell representative.

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These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to Hubbell Power Systems, Inc.

