

# Overvoltage Protection

MWD / MWK - Family

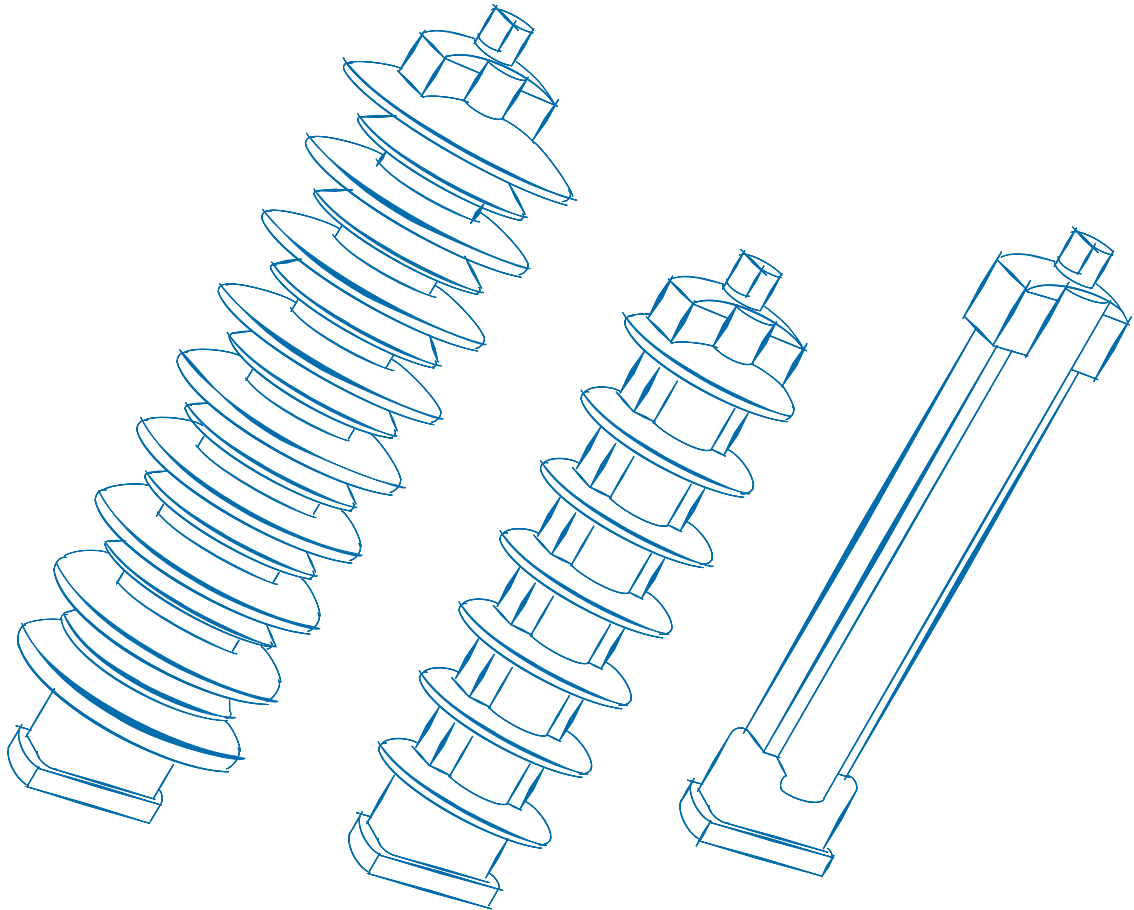


ABB Power Distribution



## MWD / MWK

### Metal-Oxide Surge Arresters With ABB Metal-Oxide-Resistors Without Spark-Gaps

Type MWD and MWK surge arresters are renowned for their high performance in both indoor and outdoor installations. Surge arresters of these types are now in service for more than 10 years. Based on this experience they are fulfilling the highest requirements regarding electrical and mechanical strength.

MWD- and MWK-arresters are produced with a polymer housing made of silicone. This housing is directly moulded onto the active part of the arrester, thus avoiding any air volume or air gap inside the housing. The arresters are extremely resistant against overload, thus preventing explosions and subsequential damage to other equipment in the near vicinity.

In comparison to other polymeric materials, silicone has the highest resistance against pollution. The silicone used by ABB has proven itself under severe environmental conditions like water, salt fog, sand, industrial pollution as well as UV-radiation. The excellent behaviour of our silicone against aging has been demonstrated in tests and in service.

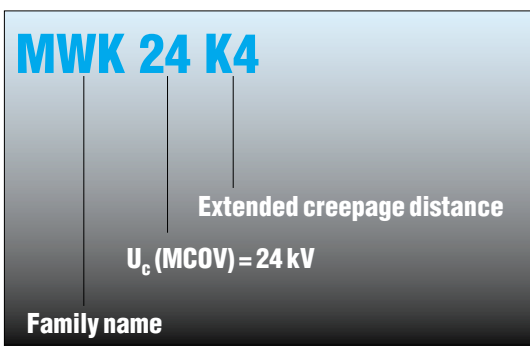
The arresters are tested according to the IEC-standard 99-4, 1991.

The type tests were performed successfully and test reports are available on request.

MWD arresters are designed for use in cubicles of medium voltage switchgear installations. Having no sheds, MWD arresters are most suitable for applications with limited space. On request insulated terminals are available.

For outdoor use the arrester of type MWK can be supplied with normal as well as with extended creepage distance (K4).

The type designation refers to  $U_c$  or MCOV (maximum continuous operating voltage), as shown in the example below:



## Advantages

- Low protection level (low residual voltage)
- Long protection distance
- Very high energy input capacity
- Stable characteristic
- Proof against aging
- Pollution resistant
- Shatterless housing
- Maintenance free
- High cantilever and torsional strength

### MWK

Arresters protecting a SF<sub>6</sub> gas insulated switch - disconnecter (typ Sectos NXA / ABB Transmit Oy, Finland)



## Main data

For system voltages up to	44 kV
Rated discharge current 8/20 $\mu$ s	10 kA
Impulse withstand current 4/10 $\mu$ s	100 kA
Long duration current impulse For a.c. systems	550 A / 2 ms up to 62 Hz

Line discharge class according to IEC 99-4, 1991 class 2

## Energy input capacity

With two line discharges as tested in the operating duty test 5.5 kJ / kV<sub>Uc</sub>

Energy at one high current impulse 100 kA 4 / 10  $\mu$ s. 3.4 kJ / kV<sub>Uc</sub>

Pressure relief up to a fault current of 20 kA / 0.2 sec

Explosion and shatter-resistant design as per IEC TC 37, WG 4 class X

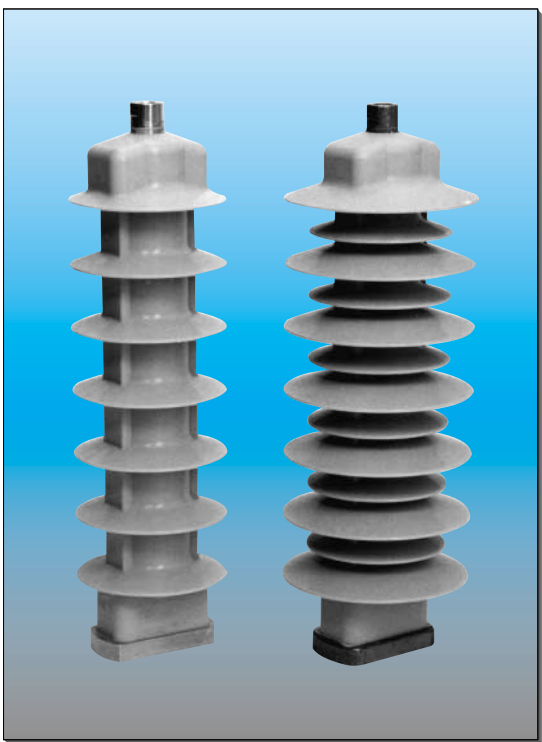
## Mechanical Data

Cantilever strength	350 Nm
Torsional strength	68 Nm
Vertical load	1200 N

## Application

Protection of medium-voltage networks against both multiple atmospheric and switching overvoltages. Suitable for the protection of transformers and medium voltage switchgears. For both indoor and outdoor installations.

MWK / MWK K4



MWD

Protection of a medium voltage switchgear





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