# DSA type relay protection device



## Overview

Monitoring Relays Surge Arresters for AC and DC systemsDSA A, DSA P and DSA D are Type 2 (Class C) surge arresters according to EN 61643-11 (VDE 0675, part.

## Key Takeaways

DSA type devices are Type 2 surge protection devices designed to safeguard low-voltage AC and DC systems from transient overvoltages, with monitoring capabilities for both local and remote status. Overview and FunctionDSA devices, including DSA A, DSA P, and DSA D, are classified as Type 2 (Class C) surge arresters according to EN 61643-11 standards, suitable for protecting electrical systems from transient overvoltages caused by indirect lightning strikes or switching operations. They are used in both AC and DC systems, including industrial, residential, and photovoltaic installations.

### The A

C models feature a gas tube between neutral (N) and protective earth (PE), making them compatible with TN-S and TT systems and preventing high contact voltages upstream of differential relays. Configurations and MonitoringDC models are available in 2-pole or 3-pole configurations, allowing protection in differential and common modes. Control windows (green/red) and contact outputs enable local and remote monitoring, alerting operators when plug-in cartridges need replacement.

DS

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A devices can be installed on DIN rails in standard distribution boxes, and if placed within 10 meters of the protected device, the protection distance can be considered negligible. Installation GuidelinesDSA can operate without additional protection if a general circuit breaker or fuse ≤ 125 kA is installed and the short-circuit current ≤ 25 kA at the installation point. For distances greater than 10 meters, the real protection distance can be calculated using the formula: (Uw - Up/f) / K, where K = 25 V/m, Uw is the device's breaking voltage, and Up/f is the total protection level.

### Applications

Industrial and residential low-voltage systemsPhotovoltaic generation plants (both AC and DC sides)Buildings without external lightning protection systems (LPS)Upstream of differential relays to prevent impermissible voltages Integration with Protective RelaysWhile DSA devices primarily protect against transient overvoltages, they complement protective relays that detect abnormal currents, voltages, or faults in the system. Protective relays can isolate faulty sections, while DSA devices prevent damage from voltage spikes, ensuring system reliability and safety.

### Key Advantages

Comprehensive surge protection for AC and DC systemsPlug-in cartridges with visual and remote monitoringDIN-rail mountable for easy integrationCompliance with EN 61643-11 standardsSuitable for photovoltaic and industrial applications DSA type devices are therefore an essential component in modern low-voltage electrical systems, providing both overvoltage protection and status monitoring to enhance system safety and reliability.

## Article Content

Monitoring Relays Surge Arresters for AC and DC systems

DSA A, DSA P and DSA D are Type 2 (Class C) surge arresters according to EN 61643-11 (VDE 0675, part 6-11) suitable for protecting low voltage systems from transient overvoltage due to both indirect

Monitoring Relays Surge Arresters for communication systems Type

DSA S is a surge protection for electronic measuring, controlling and regulating systems. It is suitable for protecting from overvoltages devices like inverters, ener-gy meters, interface protec-tions (coupling

Ground Fault Protection Specification Guide | PDF | Relay | Switch

It provides detailed specifications for 9 different ground fault monitoring and detection devices: DGF-CT-A, GFR-RM, GADD MKIII, GADP, DSA, DSP MKII, MGFR-20-ZB, MGFR-200-2B, and MGFR-1200-ZB.

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DSB 52 DS ENG 100713.qxd:DSA eng.qxd

Monitoring Relays Surge Arresters for AC systems Type DSB52 A Product Description DSB52 series of overvolt-age surge protection devices is suitable for the (MOV) block with thermal disconnection

DSA 230 LA DEHNsafe type 3 surge protection

DEHNsafe 230 LA type 3 surge protection in accordance with EN 61643-11 with monitoring device and disconnecting device. Enhanced safety thanks to fault-proof Y protective circuit.

Federal Pacific Electric FPE Ground Fault Protection Equipment

We stock a broad range of Federal Pacific Electric ground fault equipment that includes the DSA, DSP-TLR, GADD and DRR along with the associated sensors.

Power System Protective Relays: Principles & Practices

(surge withstand capability) A device that interconnects a protective relay system to an independent computer, for example, an analog to digital converter, a scanner, a buffer amplifier.

Protective Relays: Types, Working Principle & Uses

Protective relays are power system protection devices that monitor current, voltage, frequency, impedance, or differential quantities and command circuit breakers when faults or

Protection relays

Numerical relays are based on the use of microprocessors. The first numerical relays were released in 1985. A big difference between conventional

What is Protection Relay?

A protection relay is a crucial component of electrical systems that safeguard infrastructure, employees, and equipment from electric problems and malfunctions. It functions as a

Types of Electrical Protection Relays or Protective Relays

□□ Key learnings: Protective Relay Definition: A protective relay is an automatic device that senses abnormal conditions in electrical circuits and triggers actions to isolate faults. Types of

Introduction to Protective Relaying | Electric Power

Introduction to Protective Relaying What are Protective Relays, or Protection Relays? Protective relays are used in industrial power generation and supply

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Protective Relay : Working, Types, Circuit & Its Applications

The protective relay diagram is shown below. Protection Relay Protective Relay Working Principle A protective relay is used to protect the device once the fault is detected within a system. Once the

Types of Protective Relays

Types of Protective Relays In a power system consisting of generators, transformers, transmission and distribution circuits, it is inevitable that sooner or later some failure will occur somewhere in the system.

Protective Relay: Working, Types, and Applications

Learn about protective relays, their working principle, types, and applications in power systems. Discover how relays protect transformers,

Types of Relays and their Applications

In the present world, different types of relays are used in the electrical home appliances and line conditioning circuits. Some of them are latching relays,

SIPROTEC 4 Distance Protection 7SA522

Indications Designators for information, which may be output by the relay or required from other devices or from the switch gear, are marked in a monospace type style in quotation marks. Deviations may

Electromagnetic Relay Working | Types of Electromagnetic Relays

Electromagnetic Relay Electromagnetic relays are operated by electromagnetic action. Although modern electrical protection relays often use microprocessor-based relays, electromagnetic

Related Video Reference

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