ZTP Thermal & Power

Fuzzy Control Relay Protection

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Fuzzy adaptive setting for time-current-voltage based overcurrent

We propose, in addition to considering the voltage magnitude, a decentralized approach by using Fuzzy Logic, which calculates and extracts relay parameters for each protection device. This

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Operation analysis of fuzzy logic-based relay protection devices

Rules have been created for the identification of asymmetric types of short circuits. An algorithm of protection and automation operation using fuzzy logic elements has been developed.

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A fuzzy logic based relay for power transformer protection

In accordance with an R& D agreement between ABB and the University of Wroclaw, Poland, a multi-criteria protective relay based on fuzzy sets and logic has been developed for use with three-phase

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Fuzzy sets of overcurrent relay protection index.

This paper proposes the assessment method of the protection coordination index (PCI) for overcurrent protection relay and upstream relay. The protection

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Protection Coordination Index Assessment Using Fuzzy

The protection index of each protection component of the integrated digital relay is

assessed by a fuzzy logic controller. Then the device-level

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Improving the Differential Protection of Power Transformers

Various algorithms have been introduced for differential protection of power transformers, each of which has its limitations. One of the causes of unwanted interruption in power transformers is

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Fuzzy indirect vector control method for relay protection devices under

Abstract: Relay protection devices need to quickly respond to faults in the power system to prevent them from expanding. This requires the control algorithm to have high real-time performance and fast

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Elements of Fuzzy Logic in Protective Relays , SpringerLink

Below the fundamentals of the fuzzy sets and logic are outlined, which is followed by the application hints and selected examples of this technique for power system protection purposes.

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Fuzzy indirect vector control method for relay protection

Summary Relay protection devices need to quickly respond to faults in the power system to prevent them from expanding. This requires the control algorithm to have high real-time performance and fast

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Protection of Transformers with Fuzzy Logic

Relay control software was created in Matlab program with fuzzy logic. These relays used in the protection of power transformers have been effectively and quickly controlled.

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An adaptive fuzzy based relay for protection of distribution networks

The high penetration of Distributed Generators (DGs) increases the need for monitoring and protection of the distribution system. The stochastic nature of the DGs may result in varying fault

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Electrical Machine Protection Relay Using Fuzzy Logic

This article shows the development of comprehensive protection for electrical power machines, that is, motors, transformers, and generators, using

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Fuzzy logic-based relaying for large power transformer protection

Power transformer protective relay should block the tripping during magnetizing inrush and rapidly operate the tripping during internal faults. The frequency environment of power system has been

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Fuzzy logic based multistage relaying model for

Fuzzy logic based relaying has been proposed for power transformer protection with a new relaying algorithm for upgrading the fault detection due to the second harmonic component .

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An adaptive fuzzy based relay for protection of distribution networks

Hence, an adaptive fuzzy relay, comprising of a fuzzy inference module and a neural network learning module, has been developed for deciding the optimal protection settings in the

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Fuzzy adaptive setting for time-current-voltage based overcurrent

Abstract In this paper an adaptive protection system based on the Fuzzy Logic for the adjustment of the overcurrent relay's pick-up currents with instantaneous and current-voltage based

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Fuzzy indirect vector control method for relay protection devices under

Build a control model for relay protection devices under dynamic time regulation, establish a stability margin evaluation matrix for relay protection devices in this model, and based on this, implement

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Enhanced Transformer Protection Using Fuzzy-Logic-Integrated

Enhanced Transformer Protection Using Fuzzy-Logic-Integrated Differential Relays: A Comparative Study with Rule-based Methods Raad Ibrahim Hussein Hussein 1, Nurettin Göksenli 2, Enes Bektas

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Operation analysis of fuzzy logic-based relay protection devices

The study analysed the performance of relay protection devices based on the application of fuzzy logic. Relay protection has been found to be a key element in ensuring the safety and

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Enhanced Transformer Protection Using Fuzzy-Logic-Integrated

This paper presents the development of an improved differential relay augmented by Fuzzy-Logic Control System (FLC), to improve (a) dependability, (b) performance of the existing

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Fuzzy based Numerical Relay

A fuzzy logic approach can also be used to diagnose and reduce the induction motor faults. The paper proposed by Mahadev Kokare, et al, explains how the fuzzy logic is used to analyse, compare &

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Microcontroller based differential relay using fuzzy logic for

Various faults can occur on the transformer which may result in disconnection of a large portion of the power system. The faults on the transformers are deemed to be very hazardous considering the high

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COMPARATIVE ANALYSIS OF PI, PID AND FUZZY LOGIC CONTROLLER BASED RELAY

To meet this challenge properly, the application of a protective relay, using PI controller, PID controller and fuzzy logic controller in power system protection has been proposed in this thesis along with the

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Reliability assessment of fuzzy logic based protective relay and

The paper considers the reliability issues of protective relay and automation devices. This paper offers an architecture of the model for analyzing fuzzy logic based protective relay and

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Design of Fuzzy Logic Based Relay for Distance Protection

rip fault is 2%, and total misoperation is less than 10%. In this work, the protection scheme proposed is for transmission line's distance protections relay whose operation is adaptive and directly controlled

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Design of Fuzzy Logic Based Relay for Distance Protection

illstrom, Kasztenny, & Rosolowski, 1998), (Chhavi, 2015). In order to improve the performance of distance protection relay type, a fuzzy logic based relay is investigated since fuzzy logic

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Power Transformer Protection using Fuzzy Logic based Differential Relay

The differential relay, which operate for all internal fault types of power transformer and block due to inrush current. The major disadvantage of the branch of differential protection relays, its potential

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Reliability assessment of fuzzy logic based protective relay and

The input data of the fuzzy logic model are determined: the key indicator for assessing the proper functioning of the protective relay and automation device ?1; indicator of the overall

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