

短文

## 配电网线损计算径向基函数神经网络方法

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收稿日期 2005-8-30 修回日期 2006-3-25 网络版发布日期 2007-5-11 接受日期

摘要

提出了一种电力配电网线损计算的RBFNN(Radial basis function neural networks)方法, 主要利用RBFNN较强的拟合特性映射线损与特征参数之间复杂的非线性关系, 记忆配电线路在结构参数和运行参数变化时线损的规律. 采用LBG聚类方法和一种确定最佳聚类数的标准来优化RBFNN隐层节点, 以提高网络的利用效率. 实例仿真验证了所提方法的有效性和实用性.

关键词 [RBF神经网络](#) [聚类算法](#) [配电网](#) [线损](#)

分类号 [TM744](#)

## RBFNN Method of Calculating Energy Losses of Power Distribution Systems

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Abstract

A Radial basis function neural networks(RBFNN) method of calculating energy losses in distribution systems is proposed. RBFNN method, due to its strong regression ability, is able to map complex non-linear relation between energy losses and feature parameter in distribution systems, and memorize the rule of energy losses varying with distribution net structure and operation parameters. LBG clustering algorithm and a clustering criterion are used to determine optimal number of hidden nodes of RBFNN, and therefore the use efficiency of the RBFNN is improved. Simulation has verified the validity and practicability of the proposed method.

Key words [RBFNN](#) [clustering algorithm](#) [distribution net](#) [energy losses](#)

DOI: 10.1360/aas-007-0334

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