

An Intelligent Protective Device of Three-phase  
Supply on FMAT—251 Mass Spectrometer

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**Abstract**: An new intelligent protective device of three-phase power for special use on FMAT—251 mass spectrometer has been introduced in the paper. The problem that misphase of external three-phase electric supply power in the course of practical operation after reconstruction of FMAT—251 mass spectrometer led to counterclockwise running of mechanical pump and therefore resulted in such an accident as heavy pollution of vacuum system was resolved. Automatic protective function of electric supply power on the three-phase electromotor was improved simultaneously, aimed at such problems as phase deficiency, overvoltage, undervoltage, electric leakage operation of three-phase electromotor.

**Key words**: Phase sequence; Segregation; Monolithic machine.

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