

# Dual Power Automatic Transfer Switch

## RDQ3NM Series

### Application



RDQ3NM Dual Power ATS is a fully new product of our company, by organizes top engineers in two years research and development, grand launch at the end of 2014, completely subvert the traditional dual power ATS design style, leading in the international industrial design concept in the design process, from the product structure, appearance, ergonomia, and control circuit etc., comprehensive improvement of the traditional ATS, so as to make it has the quality of international first-class products and with high competitive price.

RDQ3NM series intelligent dual power auto transfer switch (brief as ATS) suitable for emergency power supply system with rated AC voltage 400V, 50/60Hz. When one power source fault, can auto interchange from main power to backup power, no need manual operation, to protect the power supply stability. Mainly apply to the important place which not allow power cutoff such as Hospital, shopping mall, bank, chemical industry, metallurgy, high building, military facilities and fire-fighting etc. Product accord with standard of IEC60947-6-1: 《Auto transfer switch》, 《Civil high building fire-fighting standard》, 《High building fire-fighting standard》, 《Civil building electric design standard》 etc.

### Working Conditions

- Ambient temperature:  $-20^{\circ}\text{C} \sim +40^{\circ}\text{C}$  ; 24hours average not more than  $+35^{\circ}\text{C}$  ;
- Atmospheric conditions: humidity not more than 50% at max.  $+40^{\circ}\text{C}$  , higher humidity is allowed at lower temperature, at most wet month, the average max humidity is 90% at the average min temperature  $+25^{\circ}\text{C}$  , and have considered the condensation on the product surface due to temperature variation.
- Altitude: Not more than 2000m;
- Pollution Class: The installation site environment pollution Class 3.

### Basic Structure

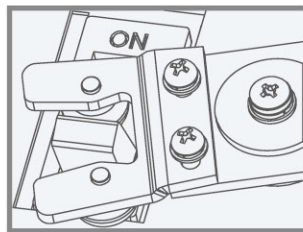
RDQ3NM series intelligent ATS comprised with two 3P or 4P MCCB and its accessories (Aux、contact、 Alarm contact), Mechanical interlocking transmission mechanism, intelligent controller etc. Have integral and split type two structures. Integral type is controller and executive unit installed at a same base; Split type is controller installed on the panel and the executive unit installed on the base inside the panel box, a 2m length signal cable connecting the controller with the executive unit.

The features:

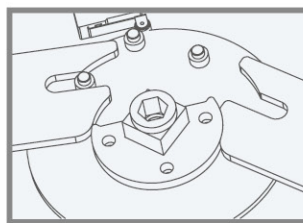
- There is a reliable mechanical interlock device and electric interlock protection between two MCCB, completely avoid the possibility of two MCCB closed at same time;
- Intelligentized controller adopt the single chip microcomputer (SCM) as the control core, simple hardware, strong functions, easy extension, high reliability;
- Intelligent controller circuit layout design adopt power sampling separate with SCM control, from the hardware to overcome the electromagnetic interference;

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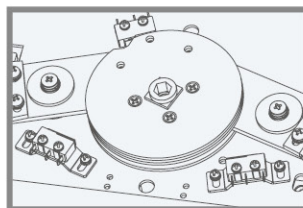
- With short circuit, over load protection functions, over-volt & under-volt、phase missing auto transfer function and intelligent alarm function;
- Auto transfer data by external setting freely, with operation motor protect function;
- Signal connecting cable have passed FLUKE instrument channel test, anti near crosstalk、attenuation crosstalk and back wave loss, can meet the test criteria for permanent link;
- The ATS controller installation method provide customer with highly autonomy, split installation only need simply connect the attached RJ45 signal cable to the corresponding terminal port;
- The controller part based on the previous similar product, have made enhancement process of the electronic components, make it more matching with the product operation.
- Product appearance lead in international design concept, more elegant and practical.
- Mechanism innovation made following improvements:



The push handle adopt adjustable slider structure design, have more wide circuit breaker's ON/OFF travelling distance, make the production process more simple.



Optimized cam transmission mechanism design ensures the reliability of mechanical interlock and at same time makes the mechanical life more than 10000 times.



Adopt mechanical positioning detect structure, make the ATS switching more accuracy and reliable during fire linkage.