Seamless switching for uninterrupted power

Amir Sami | Charter Controls

Switching between a primary source of power, usually the grid, to a secondary source (in many cases, generators), has become a crucial preventative measure, in order to avoid major disruptions or even complete loss of life.

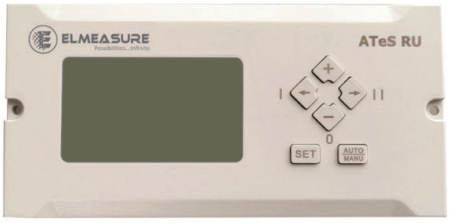
This makes it a vital step in ensuring that mission-critical systems are powered on during an event of primary power failure. So, why do people invest heavily in automatic transfer switch (ATS) products? The main reason is that they are looking for uninterrupted business operations, or zero downtime, for critical facilities.

An ATS ensures the continuous and reliable supply of power, no matter what the power source is, by safely and rapidly switching between supply sources.

A number of manufacturers design and supply various types of automatic transfer switches to satisfy this requirement. With technology advancing at a rapid pace, OEMs are now typically producing more compact, more efficient, more intelligent and faster transfer switches, with much higher reliability.

Latest ATS solutions

Elmeasure, for example, provides an entire range of auto changeover (motorised- and solenoid-based ATS) solutions, from 63A to 6,300A, with open/closed and delayed transition modes, and featuring a high-end microprocessor-based ATS controller for programming, monitoring and controlling. Such units carry an AC 33B utilisation category and comply with IEC 60947-6-1.



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In addition, optional IoT-enabled automatic transfer switches that offer easy programmability, and connection to any IoT platform for smart remote monitoring, are available.

Motorised changeover benefits

The benefits of the motorised changeover technology found in ATS solutions, from suppliers such as Elmeasure, include an inbuilt high-end microprocessor-based AMF controller with Source 1 and Source 2 protection, including under/over voltage, under/over frequency, phase sequence, and optional overload tripping logic.

Here, desirable features include: a 63A to 3,600A range, an inbuilt removable key switch which enables operators to switch between auto/manual modes, and optional RS485 Modbus protocol communications for cloud connectivity, for monitoring and control derived from master/slave architecture (PLC, SCADA).

In addition, having the high capacity capability to withstand a short circuit, and fire alarm and external fault tripping, is a benefit for automatic transfer switches. Transfer switches can also offer real-time system voltage and frequency monitoring, as well as intelligent and simultaneous monitoring of both healthiness and output sources. There is no requirement for a separate external power to power the ATS, which can be set to switch single-phase or three-phase supplies. An inbuilt microprocessor controller with diesel generator start/stop option offers the safest changeover in the event of the failure of a primary source.

Remote operation

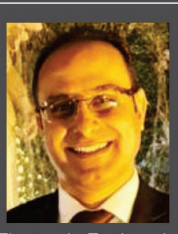
Transfer delays from 3s to 600s can be set up using a remote display unit, which can also act as a front panel, to enable parameter settings to be changed by a user, without opening the control panel door.

Customer benefits

Users of ATS solutions from Elmeasure (which has recently appointed Unipower UK Ltd. T/A Charter Controls as its UK and Ireland agent) have reported positive feedback, including highlighting them as a cost-effective solution that offers time saving in installation and setup, as well as a compact design that allows space saving and quiet operation.

http://www.charter-controls.com

About the author:



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