

Neuheit
New
Nouveau
Novità

Novedad

Automatic transfer switch ATS010

Service continuity to the fore

604042/011



A high level of reliability of the power supply source is always required in the sphere of low voltage distribution systems. In fact, types of user loads where a power cut can cause considerable loss of data, damage to work processes, plant stoppages, etc. are becoming increasingly common.

For this reason, ABB SACE has developed ATS010 (*Automatic Transfer Switch*) - the solution for automatic mains-generator group transfer, able to manage the whole system for emergency power supply.

Thanks to a transfer logic with integrated safety, ATS010 offers a highly reliable solution to the problem of service continuity. A high performance mains sensor, an electric interlock and the power outputs for controlling the circuit-breakers are all contained in a single device. Moreover, ATS010 has been thought up to fit in perfectly with ABB SACE moulded-case and air circuit-breakers, thereby ensuring availability of a complete and co-ordinated system.



ABB

ATS010 - Automatic Transfer Switch

Device for mains-generator group transfer

ATS010 by ABB SACE is a microprocessor-based electronic device dedicated to automatic transfer between a normal line and an emergency line. In particular, it is able to check the power supply characteristics of the normal line and, in the case of any anomaly, to send the *start/stop* commands to the generator to control the two circuit-breakers which have to be switched.

The apparatus which can be controlled directly are both moulded-case (with stored energy or direct action motor operator) and air ABB SACE circuit-breakers. Circuit-breaker switching is managed according to a range of delays which can be set by the user, as well, of course, as any alarms coming from the field.



Vast range of applications

The ATS010 device is highly suited to use in all emergency power supply systems where a ready-to-install, easy-to-use and reliable solution is required.

Some of its main applications are therefore:

- Power supply of UPS (*Uninterrupted Power Supply*) groups in general
- Operating theatres and primary hospital services
- Emergency power supplies for civil buildings, hotels and airports
- Data banks and telecommunication systems
- Power supply of industrial lines for continuous processes.

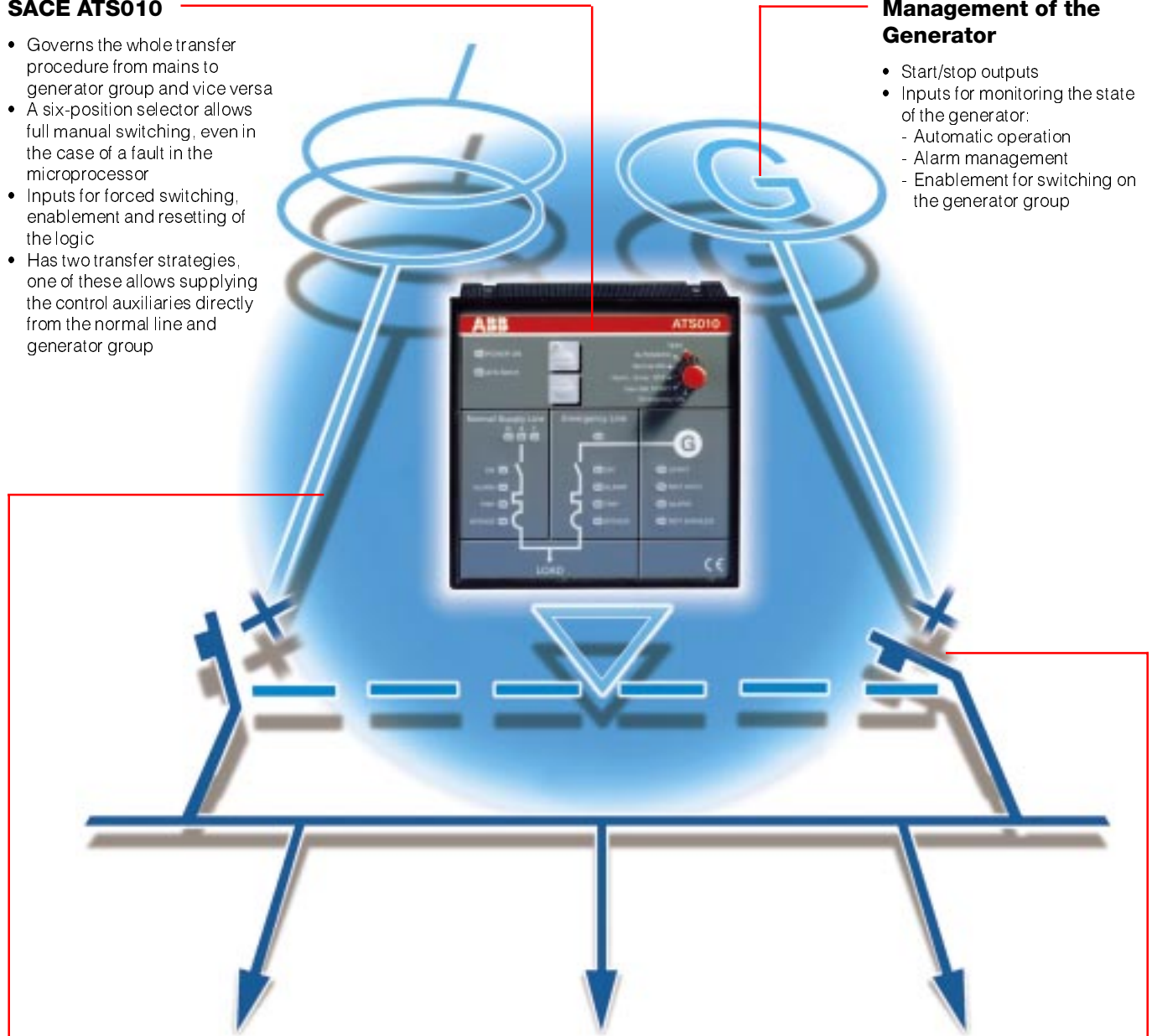
The system

SACE ATS010

- Governs the whole transfer procedure from mains to generator group and vice versa
- A six-position selector allows full manual switching, even in the case of a fault in the microprocessor
- Inputs for forced switching, enablement and resetting of the logic
- Has two transfer strategies, one of these allows supplying the control auxiliaries directly from the normal line and generator group

Management of the Generator

- Start/stop outputs
- Inputs for monitoring the state of the generator:
 - Automatic operation
 - Alarm management
 - Enablement for switching on the generator group



Mains sensor

- Possibility of direct connection up to 500 V AC
- Rated voltage set by means of dip-switches
- Three-phase sensor able to detect:
 - Maximum and minimum voltage with thresholds adjustable by means of a trimmer
 - Maximum and minimum frequency
 - Dissymmetry
 - Cyclic direction inverted

Management of the Circuit-breakers

- Possibility of using all the ranges of ABB SACE moulded-case and air circuit-breakers
- Direct connection to the control devices (motors or coils) for most of the versions available thanks to the integrated power outputs.
- Integrated safety logic
- Integrated electric lock
- Alarm management (trip, failed command, ...)



Notable features of the ATS010

Simple use: thanks to its front graphics and the use of signalling LED which facilitate readout of the state of the system

Flexibility of use: a single device can be used in systems with different features

Operating reliability: the use of integrated safety in the logic and in the operating mechanism provides allows extremely high system reliability.

Main technical characteristics

Dimensions (HxLxD)	[mm]	144x144x85
Weight	[kg]	0.8
Type of installation		Front of switchboard
Degrees of protection		IP54
Operating temperature	[°C]	-20 ... +70
Maximum humidity		90% without condensation
Power supply	[V]	24 V DC, 48 V DC
Rated normal line (N) voltage, U_n	[V]	500 V AC in the case of direct connection
Normal line (N) frequency, f_n	[Hz]	50, 60

Threshold and time setting range

Minimum voltage		-5% ... -30% U_n
Maximum voltage		+5% ... +30% U_n
Fixed frequency thresholds		-10% ... +10% f_n
T1: Circuit-breaker/Normal line (N) opening delay	[s]	0 ... 32 s
T2: generator starting delay	[s]	0 ... 32 s
T3: generator stopping delay	[s]	0 ... 254 s
T4: delay on switching for return of mains	[s]	0 ... 254 s
T5: Circuit-breaker/Emergency line (E) closing delay	[s]	0 ... 32 s

Compliance with standards

Electronic equipment for use in power installations	EN 50178 (1997)
Complies with the EC Directive:	"Low Voltage Directives" (LVD) no. 73/23 EEC "Electromagnetic Compatibility Directive" (EMC) no. 89/336 EEC
Electromagnetic compatibility	EN 50081-2, EN 50082-2
Ambient conditions	IEC 68-2-1, IEC 68-2-2, IEC 68-2-3,

ABB

ABB SACE S.p.A.

L.V. Breakers Division

Via Baioni, 35

24123 Bergamo - Italy

Tel.: +39 035.395.111 - Telefax: +39 035.395.306-433

<http://www.abb.com>