Easy-to-operate ATS controller with advanced diagnostic capabilities

The Eaton ATC-900 controller brings ease of use, adaptability, supervisory and programming capabilities to automatic transfer switch equipment. Extreme reliability makes this controller ideal for mission-critical applications in health care, wastewater, data center and other industrial and commercial applications. The ATC-900 controller is compatible with Eaton's complete transfer switch product offering including contactor, breaker and Magnum® transfer switches.

Ease of use

- 4.3-inch color TFT display and LED mimic bus provide high visibility
- Simple arrow keys are used for quick screen navigation
- Easy-to-interpret function descriptions without use codes
- Data screens are grouped for ease of viewing and secure edits
- PC-based configuration software for controller setup
- USB drive for uploading and downloading programmed set points

Advanced diagnostics

- Event logging and recording, 450 time-stamped events
- Event capture for 12 most recent events
- USB drive for uploading and downloading event data
- DCT metering module for load side metering and DC power input (optional)

Monitoring and control

- Selective and automatic load shedding (with optional DCT module)
- Remote load testing
- Three-source ATS control—master and slave controller functionality
- Industry standard Modbus® 485
- Eaton's Power Xpert® Gateway module provides Modbus TCP/IP, SNMP or BACnet protocol for up to 32 transfer switches (optional)
- Eaton HMi transfer switch remote annunciator and controller provide remote monitoring and control for up to eight transfer switches (optional)

Flexibility

- Open In-phase, Open Delayed or Closed Transition control (subject to switch construction)
- 0 to 600 Vac, field programmable
- Up to 20 total configurable inputs and outputs

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Features	Description
Applicable standards	
UL 991	Tests for safety-related controls employing solid-state devices
UL 1008 Recognized	Standard for transfer switch equipment
FCC Part 15	Conducted/Radiated Emissions (Class A)
C1SPR11	Conducted/Radiated Emissions (Class A)
IEC 1000-2	Electrosatic Discharge test
IEC 1000-3	Radiated Susceptibility tests
IEC 1000-4	Fast Transient tests
IEC 1000-5	Surge Withstand tests
Seismic	2009 IBC, 2010 CBC and OSHPD certified in ATS assemblies
CSA Conformance	C22.2 No. 178-1978 (Reaffirmed 1992)
European Standard Conformance	CE mark
Operating environment range	Operation –20° to +70°C, humidity up to 90% (noncondensing)
User interface	4.3 inch color TFT (480 x 272), LED mimic bus and pushbuttons
Memory	Non-volatile memory
Voltage	Voltage L-L measurements of: Source 1 and 2 VAB, VBC and VCA Voltage measurement range: 0 to 790 Vac rms (50/60 Hz) Voltage measurement accuracy: ±1% of full scale
Frequency	Frequency measurements of: Source 1 and Source 2 Frequency measurement range: 40 Hz to 70 Hz Frequency measurement accuracy: ±0.3 Hz over the measurement range
Control power	120 Vac (50/60 Hz) (operating range 65–160 Vac) or 24 Vdc (±10%) with optional DCT module
Metering	Source 1 voltages (three-phase) Source 2 voltages (three-phase) Load voltages (three-phase) Voltage unbalance and phase rotation sensing Source 1 frequency Source 2 frequency Load frequency Optional metering Load currents (three-phase) Load kW Load kVAR Load kVA PF
Sampling	64 samples per cycle Each voltage and current are sampled every third cycle
Display languages	English, French, Spanish
Enclosure types	NEMA®1, 12, 3R and 4X, UV-resistant faceplates
Communications	Modbus RTU USB (for flash drives) Modbus TCP/IP (optional)
Time delays	Time delay normal to emergency Time delay emergency to normal Time delay pre- and/or post-transfer Time delay in neutral (subject to switch construction) Time delay engine start Time delay engine cool-off Time delay emergency fail timer Voltage unbalance time delay
Control inputs (for customer)	Four programmable (expandable to include all 12 with accessory I/O modules) 1) Monitor Mode 2) Bypass Timers 3) Lockout 4) Manual Retransfer On/Off 5) Manual Retransfer 6) Slave In 7) Remote Engine Test 8) Preferred Source Selection 9) Go to Emergency 10) Emergency Inhibit 11) ATS on Bypass 12) Go to Neutral

Features	Description
Output relays (for customer)	Two standard and four programmable (expandable to 20 with accessory I/O module) 1) Load sequence 2) Selective load shed 3) Load bank control 4) Pre-/post-transfer 5) Pre-transfer 6) Post-transfer 7) User remote control 8) Source 1 available (standard) 9) Source 2 available (standard) 10) Source 1 connected 11) Source 2 connected 12) ATS not in automatic 13) General alarm 14) ATS in test 15) Engine test aborted 16) Cooldown in process 17) Engine start contact status 18) Generator 1 start status 19) Generator 2 start status 20) Emergency inhibit on 21) ATS on bypass
Gen start relays	Gen Start 1—NO/NC contacts Gen Start 2—NO/NC contacts
Engine Test / Plant Exercise	Two Plant Exerciser schedules Off, daily, 7-day, 14-day, 28-day, or up to 12 specific calendar dates Separate time delays from normal operation Control input provided for remotely initiating an Engine test
Historical counters	Source 1 Engine Run Time Source 2 Engine Run Time Source 1 Available Time Source 2 Available Time Source 1 Connected Time Source 2 Connected Time Tier IV Timer Load Energized Time Number of transfers Counter resets are time-stamped and logged as events
Event logging	Up to 450 time-stamped event summaries and details are stored. All metered values are also logged for each event Events include: 1) Actions of the transfer sequence 2) Alarms 3) Changes to the set points 4) Changes to the time/date 5) Resetting a historical counter 6) Engine Run test Time-stamping resolution of 0.1 second
Event recording	4 seconds of metered data is stored every 20 msec for certain events. The data is captured 2 seconds before and 2 seconds after the event (except for a power failure, which is 4 seconds before) Data for 10 events is stored and may be downloaded over USB or displayed graphically. Events include: 1) Source unavailability actions that initiate a transfer sequence (undervoltage, overvoltage, etc.) 2) Successful transfers (at the point of breaker/contactor closure) 3) Unsuccessful transfers (at the point of breaker/contactor failure to close or open)
3-Source ATS control	Provided by master/slave I/O
USB capability	Download set points to flash drive Upload set points from flash drive Download event logging data Download event records (oscillographic data)
Expandable I/O	Each accessory I/O module provides four programmable inputs and four programmable outputs Can have up to four accessory I/O modules

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

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