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
## Features | Description
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### 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)
CTSPR11 | Conducted/Radiated Emissions (Class A)
IEC 1000-2 | Electrostatic 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) | CE mark
### European Standard Conformance
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 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 | Download set points to flash drive
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)
3) Unsuccessful transfers (at the point of breaker/contactor closure)
2) Successful transfers (at the point of breaker/contactor sequence (undervoltage, overvoltage, etc.)
1) Source unavailability actions that initiate a transfer sequence
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
### 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
### 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 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
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 engine in process
4) ATS in test
5) Engine test aborted
6) Cooldown in process
7) Emergency inhibit on
8) ATS not in automatic
9) General alarm
10) Source 1 available (standard)
11) Source 2 available (standard)
12) Source 1 connected
13) Source 2 connected
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
### 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
### 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
3) Source engine in process
4) ATS in test
5) Engine test aborted
6) Cooldown in process
7) Emergency inhibit on
8) ATS not in automatic
9) General alarm
10) Source 1 available (standard)
11) Source 2 available (standard)
12) Source 1 connected
13) Source 2 connected
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
### Three-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)
### Limited warranty
Eaton will repair or replace any parts of this equipment that fail in normal use within the warranty period. The warranty period is one year from the date of purchase and extends to the original purchaser only. The warranty does not cover the cost of removal or reinstallation of the equipment.
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