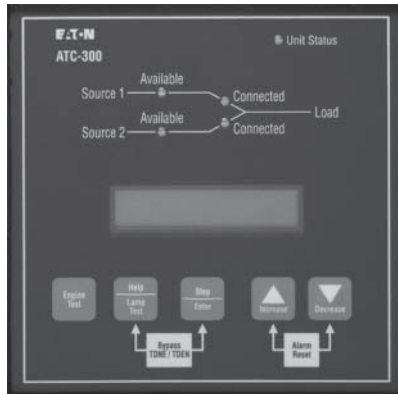


### ATC-300 Controller and ATC-300+ Controller



ATC-300 Controller

#### General Description

Transfer switches are equipped with the high-performance ATC-300+ digital transfer controller, receive rock-solid monitoring, status reporting and transfer control operation. Its superior design and robust construction make the ATC-300+ the industry benchmark for critical and distributed power systems.

The ATC-300+ will supersede the ATC-300 controller for units supplied after September 2011. The ATC-300+ will have the same form and fit as the ATC-300. Size and mounting dimensions are identical. In addition, the ATC-300+ will have additional optional capability for manual retransfer, Source 2 emergency inhibit and RS-485 Modbus communication capability.

#### Application Description

Taylor's ATC-300+ controller-based automatic transfer switch is designed to provide unmatched performance, reliability and versatility for critical standby power applications.

#### Features, Benefits and Functions

##### Standard Features

- Auxiliary relay contacts:
  - Source 1 present 2NO and 2NC
  - Source 2 present 2NO and 2NC
- Switch position indication contacts:
  - Source 1 position 1NO and 1NC
  - Source 2 position 1NO and 1NC
- Source 1 and Source 2 sensing:
  - Undervoltage/underfrequency
  - Overvoltage/overfrequency
  - Three-phase rotation protection
  - Three-phase voltage unbalance
- Pretransfer signal contacts 1NO/1NC
- Go to emergency (Source 2)
- Source-2 emergency inhibit contact
- Seven field-programmable time delays
- LCD-based display for programming, system diagnostic and Help message display
- Mimic diagram with source available and connected LED indication
- Time-stamped history log
- System TEST pushbutton
- Programmable plant exerciser—OFF, daily, 7-, 14-, 28-day interval selectable run time 0–600 minutes no load/load with fail-safe

##### Optional Features

- Suitable for use as service equipment in the standard enclosure size when used with breaker-based design transfer switches
- Available UL 1449 3rd Edition compliant surge protection devices
- Integrated distribution panels
- Field-selectable multi-tap transformer panel permits operation on a wide range of system voltages
- Integral overcurrent protection available when used with breaker-based design transfer switches
- Space heater with thermostat
- Ammeter—load side
- Power quality metering
- Manual retransfer selector switch
- Stainless steel cover for controller
- Source 2 inhibit
- Manual retransfer
- RS-485 communication capability

#### Standards and Certifications

- UL listed component
- Meets UL 1008
- Meets intent of UL 991
- Meets IEC 1000-4-2, 1000-4-3, 1000-4-4, 1000-4-5, 1000-4-6, 1000-4-11
- Meets CISPR 11, Class A
- Complies with FCC Part 15, Class A

## Technical Data

**Table 25.4-5. ATC-300+ Controller Specifications**

Description	Specification
Input control voltage	65–145 Vac 50/60 Hz
Voltage measurements of	Source 1 $V_{AB}$ Source 1 $V_{BC}$ Source 1 $V_{CA}$ Source 2 $V_{AB}$ Source 2 $V_{BC}$ Source 2 $V_{CA}$
Voltage measurement range	0–790 Vac rms (50/60 Hz)
Voltage measurement accuracy	±2% of nominal input voltage
Frequency measurement for	Source 1 and Source 2
Frequency measurement range	40–70 Hz
Frequency measurement accuracy	±0.3 Hz
Undervoltage dropout range Breaker/switch style ATS Contactor style ATS	50–97% of the nominal system voltage 78–97% of the nominal system voltage
Undervoltage pickup range	(Dropout +2%) to 99% of the nominal system voltage
Overvoltage dropout range Breaker/switch style ATS Contactor style ATS	105–120% of the nominal system voltage 105–110% of the nominal system voltage
Overvoltage pickup range	103% to (dropout –2%) of the nominal system voltage
Underfrequency dropout range	90–97% of the nominal system frequency
Underfrequency pickup range	(Dropout +1 Hz) to 99% of the nominal system frequency
Overfrequency dropout range Breaker/switch style ATS Contactor style ATS	103 to 110% of the nominal system frequency 103 to 105% of the nominal system frequency
Overfrequency pickup range	101% to (dropout –1 Hz) of the nominal system frequency
Operating temperature range	–20° to +70°C (–4° to +158°F)
Storage temperature range	–0° to +85°C (–22° to +185°F)
Operating humidity	0–95% relative humidity (noncondensing)
Operating environment	Resistant to ammonia, methane, nitrogen, hydrogen and hydrocarbons
Generator start relay	5A, 1/6 hp at 250 Vac/5A at 30 Vdc with a 150W maximum load
K1, K2, pretransfer, alarm relays, K3, K4	10A, 1–3 hp at 250 Vac/10A at 30 Vdc
Enclosure compatibility	NEMA 1, NEMA 3R and NEMA 12 UV-resistant ATC-300 faceplate

The following set points are programmable if the corresponding feature is programmed.

**Table 25.4-6. ATC-300+ Programming Features/Set Points** ①

Set Point	Set Point Units	Description	Range	Factory Default
TDES	Minutes: seconds	Time delay engine start	0–120 seconds	0:03
TDNE	Minutes: seconds	Time delay normal to emergency	0–1800 seconds	0:00
TDEN	Minutes: seconds	Time delay emergency to normal	0–1800 seconds	5:00
TDEC	Minutes: seconds	Time delay engine cool-off	0–1800 seconds	5:00
TDN	Minutes: seconds	Time delay neutral	0–120 seconds	0:00
PLANT EXER	Days	Plant exerciser programming	Off, daily, 7-day, 14-day or 28 day	Off
TEST MODE	—	Test Mode	0, 1 or 2 (0 = no load engine test, 1 = load engine test, 2 = disabled)	0
TER	Hours: minutes	Engine run test time	0–600 min	5:00
TPRE	Minutes: seconds	Pre-transfer delay timer	0–120 sec	0:00
PHASES	—	Three-phase or single-phase	1 or 3	As ordered
VOLT UNBAL	Volts	Voltage unbalanced	0 or 1 (1 = enabled)	1
UNBAL DROP %	Percent	Percent for unbalanced voltage dropout	5–20% of phase voltage unbalance	20%
UNBAL PICK %	Percent	Percent for unbalanced voltage pickup	Dropout minus (UNBAL DROP % –2) to 3%	10%
UNBAL DELAY	Seconds	Unbalanced delay timer	10–30	0:20
TDEF	Seconds	Time delay emergency fail timer	0–6 sec	6
PHASE REV	—	Phase reversal	OFF, ABC or CBA	OFF

① Complete list of programming selections found in IB01602009E.