

ASCO 7000 Series Microprocessor Controller

The 7000 Series Microprocessor Based Controller is used with all sizes of Automatic Transfer Switches from 30 through 4000 amperes. It represents the most advanced digital based microprocessor control panel in the industry and includes, as standard, all of the voltage, frequency, control, timing and diagnostic functions required for most emergency and standby power applications.

Because of severe voltage transients frequently encountered with industrial distribution systems, the microprocessor logic board is separated and isolated from the power board as shown below. This improves electrical noise immunity performance and helps assure compliance with the rigorous transient suppression standards highlighted below.

- Emission Standard - Group 1, Class A (EN 55011:1991)
- Generic Immunity Standard, for which: (EN 50082-2:1995)
- Electrostatic Discharge (ESD) Immunity (EN 61000-4-2:1995)
- Radiated Electromagnetic Field Immunity (ENV 50140:1993)
- Electrical Fast Transient (EFT) Immunity (EN 61000-4-4:1995)
- Surge Transient Immunity (EN 61000-4-5:1995)
- Conducted Radio-Frequency Field Immunity (EN 61000-4-6:1996)
- Voltage Dips, Interruptions and Variations Immunity (EN 61000-4-11:1994)

Features

- Digital microprocessor.
- Touch pad programming of features and settings without the need for meters or variable power supplies.
- Sixteen (16) selectable operating voltages available in a single Controller.
- Onboard diagnostics provide control panel and ATS status information to analyze system performance.
- Displays and counts down active timing functions.
- Selectable multi-language display (English, German, Spanish, French. For others contact ASCO).
- Password protection to prevent unauthorized tampering of settings.
- Serial communications board (RS-485 protocol) for remote monitoring and control with ASCO PowerQuest(r) Vpi and SiteWeb™ communications products. Specify optional accessory 72A.
- Load shed option for SYNCHROPOWER(r) bus optimization applications. Specify optional accessory 30B.

Voltage and Frequency Sensing

- 3-Phase under and over voltage settings on normal and emergency sources.
- Under and over frequency settings on normal and emergency. True RMS Voltage Sensing with +/- 1% accuracy; Frequency Sensing Accuracy is +/- 0.2%.
- Selectable settings: single or three phase voltage sensing on normal and emergency; 50 or 60Hz.
- Phase sequence sensing for phase sensitive loads. Voltage unbalance detection between phases.

Status and Control Features

- Output contacts for engine-start signals.
- Selection between commit/no-commit on transfer to emergency after engine start and normal restores before transfer.

- Advanced inphase algorithm which automatically measures the frequency difference between the two sources and initiates transfer at appropriate phase angles to minimize disturbances from transferring motor loads.
- Event log displays 99 logged events with the time and date of the event, event type and event reason.
- Output signals for remote indication of normal and emergency source acceptability.
- Statistical ATS/System monitoring data screens which provide:
 - Total number of ATS transfers.
 - Number of ATS transfers caused by power source failure.
 - Total number of days ATS has been in operation.
 - Total number of hours that the normal and emergency sources have been available.

Time Delays

- Engine start time delay - delays engine starting signal to override momentary normal source outages - adjustable 0 to 6 seconds (can be extended to 60 minutes with external 24 volt DC source).
- Transfer to emergency time delay - adjustable 0 to 60 minutes.
- Emergency source failure time delay to ignore momentary transients during initial generator set loading - adjustable 0 to 6 seconds.
- Retransfer to normal time delay with two settings:
 - Power failure mode - 0 to 60 minutes.
 - Test mode - 0 to 60 minutes.
- Unloaded running time delay for engine cooldown - adjustable 0 to 60 minutes.
- Pre and post transfer signal time delay for selective load disconnect with a programmable bypass on source failures - adjustable 0 to 5 minutes. This signal can be used to drive a customer furnished relay, or for (2) sets of double throw contacts rated 3 amps at 480 volts AC, specify ASCO optional accessory 31Z.
- Fully programmable engine exerciser with (7) seven independent routines to exercise the engine generator, with or without loads, on a daily, weekly, biweekly or monthly basis.
- Contains all alarm signals, logic and time delays for use with closed transition switches.
- Insynch time delay - 0 to 3 seconds.
- Failure to synchronize - 1 to 5 minutes.
- Extended parallel - 0.1 to 1.0 seconds.
- Delayed transition load disconnect time delay - adjustable 0 to 5 minutes.