

MULTI CLASS STATIC AUTOMATIC BUS TRANSFER SABT (MC-SABT)



Product Description

The MC-SABT automatically transfers critical loads from a normal power source to an alternate power source in the event of interruption or abnormal conditions.

The MC-SABT was developed to protect mission critical power loads on naval ships, submarines, and other defense applications. As such, the MC-SABT is compatible with MIL-STD-1399 and STANAG 1008.

Designed using silicon-controlled rectifier (SCR) power-switching elements, the MC-SABT transfers the critical load between power sources in less than 1/4 cycle upon loss of source—more than 10 times faster than traditional electromechanical switches—appearing seamless to even the most sophisticated loads. Transfer is programmable from 1 ms to 3.5 seconds.

The MC-SABT has precision digital sense and control circuits that do not require any calibration or adjustments. All operational parameters are set digitally and the sensed analog signals are converted to digital format before being interpreted.

The MC-SABT has dedicated logic for the critical interpretation and switching operations. The dedicated logic ensures fast and predictable operation at all times. A microcontroller performs the system level functions such as operator interface (control panel), operating parameter adjustment and remote monitoring.

The MC-SABT is designed for ease of installation and minimum maintenance. The enclosure is drip proof and one size accommodates all ratings. This feature maximizes interchangeability of components.



FEATURES

- Continuous monitoring of sources
- Automatic transfer operation
- Manual transfer capability
- Redundant logic power
- Redundant fans
- Transfer between asynchronous sources of power
- Automatic retransfer with adjustable time delay
- Extensive self-monitoring capabilities
- RS-485 control and monitoring port
- Adaptable to customer's data bus protocol
- All adjustable parameters set digitally
- Parameter settings may be password protected
- Adaptable to customer's data bus protocol
- MIL-STD-1399/STANAG 1008 compatible
- MIL-S-901 Grade A shock & MIL-STD-167-1 vibration qualified
- Will not transfer into a fault
- QPL certified-pending
- Depot level support
- Hot swap SCR stack for maintenance

OPTIONS

- Bulkhead or deck mounting
- Installation and start-up
- Site testing and training programs

APPLICATIONS

- Naval ships & submarines

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ELECTRICAL CHARACTERISTICS

- Voltage/Frequency 440 V, 3-ph, 60 Hz, 3-wire
- Current Ratings 50 to 250 A
- Efficiency 99% nominal
- Overload 125% for 5 min.
- Withstand capability 20K amp for 28 msec

OPERATIONAL CHARACTERISTICS

- Senses time less than 2 ms upon loss of source
- Sense & transfer time 1/4 cycle upon loss of source
- RS-485 Port offers remote status & operation access
- User Adjustable Settings:

- Select preferred source
- Overvoltage
- Undervoltage
- Retransfer On/Off
- Retransfer delay time
- Phase Angle Error
- Transfer Delay (optional)
- Transfer Inhibit (overload)

- Panel Indicators:

- Summary alarm
- Source 1 input available
- Source 2 input available
- Phase Status
- Source 1 active
- Source 2 active
- Source 1 preferred
- Source 2 preferred
- Retransfer On
- Retransfer Off
- Load Power On

- Panel Controls:

- Fault reset
- Lamp test
- Auto retransfer on
- Auto retransfer off
- Select source 1
- Select source 2
- Control enable
- Audible alarm reset
- Auto Manual

- Options

- Audible alarm
- Maintenance bypass
- 120 VAC Voltage

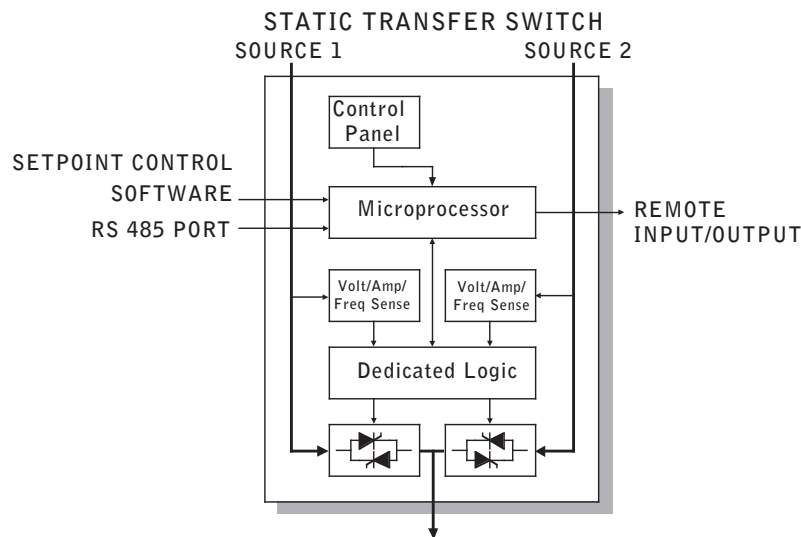
ENVIRONMENTAL CHARACTERISTICS

- Operating temperature - 0°C to 50°C
- Relative humidity 0% to 95% (non-condensing)
- Shock MIL-S-901 Grade A
- Vibration MIL-STD-167-I for Type I equipment

PHYSICAL CHARACTERISTICS

(For all Ratings)

- Weight 346 lbs/157 kg
- Dimensions 36" H x 25.5" W x 13.5" D
(91.5 mm H x 647 mm W x 343 mm D)



TO CRITICAL LOAD
Dedicated logic provides the fastest and most reliable operation for the critical switching functions, while the microprocessor attends to system level functions

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