

GTX IEC EXPANSION AUTOMATIC TRANSFER SWITCH (ATS)
SEQUENCE OF OPERATION

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1 General

The GTX Series Automatic Transfer Switch (ATS) is the device to quickly and safely transfer the load the circuit from normal power source to emergency power source when normal source have issue and back to normal source after it return to well. Permitting load to continue running with minimal or no outage during loss of utility power.

Which may offer 40A-400A current ratings, single phase & 3 phases 50&60Hz, 2 poles/3 poles/4 poles multiple options.

We offer the sales drawing, schematic drawing , O&M, Brochure etc for customer application reference. .

1.1 Automatic Transfer Switches

Each ATS has the following power connections:

- Normal – Closed (Normal Source – Primary Supply)
- Emergency – Open (Emergency Source – Alternate Supply)
- Load – Feeder to load being served.

1.2 Indicators

The following indicator lights will be provided on the control panel of each ATS:

- S1(Utility) Available Green LED: When on, Indicates source is acceptable .
- S1(Utility) Position Green LED: When on, Indicates ATS is connected to Utility.
- S2(Utility) Available Green LED: When on, Indicates source is acceptable .
- S2(Utility) Position Green LED: When on, Indicates ATS is connected to Generator.
- Timing/In-Phase Amber LED: When blinking, Indicates the ATS is timing a Delay, when on steady, indicates the ATS is waiting for both sources to synchronize with each other. When off and other lights is on, indicates the ATS is in working.

1.3 Control Switches

The following control switches will be provided on the control panel of each ATS:

- MX70 controller for voltage & frequency sensing and control the power panel to transfer.
- May use the TEST key, EXERCISE SET Key, BYPASS TIMER Key, CANCEL Key to implement the test, cancel, bypass or pre scheduled repeating self test function.
- Each ATS will be assembled with one Manual handle for the operators to transfer the ATS switch between normal source and emergency source manually, all manual operation must be operated base on without power status
- All delay time setting will be used the computer to connect the controller for delay timer setting.

2 ATS Operation

The following operations to each ATS:

2.1 Loss of Preferred Source

- Upon loss of Preferred Source, the delay to engine start timer(P) begins its timing cycle. After the P timer has completed its timing cycle, the engine start contacts close to start the generator
- When generator voltage and frequency reach the preset restore points, the Alternate source available Led illuminates. Simultaneously, the delay to generator timer(W) begins its timing cycle. When the W time delay is completed the ATS will transfer to Generator, the S1 position LED goes off, and the S2 position LED illuminates.

2.2 Automatic Return from Loss of Preferred Source

- After power is restored to the preferred source, the delay to utility timer(T) begins its timing cycle. When the T timer has completed its timing cycle the ATS will transfer. The optional S2 alternative source position LED go off, and the S1 position LED illuminates.
- The delay engines stop timer(U) begins its timing cycle. The generator runs unloaded for the duration of the U timing cycle. When the timer completes its timing cycle, the generator will stop, The S2 available LED goes off. .

2.3 Alternate Source Not Available or if both sources fail.

- If the alternate source is not available or if both sources fail. If the normal source fails, no transfer will occur.

2.4 Manually transfer between Preferred source and Alternative source

- Every ATS Power panel assembled with one manual handle for If the operator wants the ATS to transfer to the alternate source manually, all manual operation must be operated base on without power status.
- For manually transfer, the operator just insert the manual handle to the rotary axis hole, then may operate to the preferred source or alternative source. We may see if which have been connected the source by the indication of the “N” or “E” indicator on the cover.

END OF SECTION