

## ACCESSORY FPC FIRE PUMP CONTROL

The Fire Pump Control accessory includes all features necessary for a Lake Shore Dual Motor or Insulated Case Automatic Transfer Switch to meet or exceed NFPA 20 (Chapter 10), U.L. 1008 and NEMA ICS 227-47 requirements for an Automatic Transfer Switch to be used in a Fire Pump Circuit.

NFPA 20 requires the Automatic Transfer Switch to be a self-contained power switching assembly, housed in a separate enclosure. The transfer switch is dedicated to the fire pump load exclusively and is both electrically or manually operable and mechanically held.

An Isolating Switch, located within the Transfer switch enclosure and externally operable, is provided ahead of the input terminals of the emergency side of the switch.

Lake Shore Electric Accessory FPC, which is for a Utility (Normal) source and Generator (Alternate) source, includes all of the following LSEC accessories which comprise a fire pump control package that conforms to NFPA 20:

Time Delay Engine Start	Provides an adjustable delay after normal source failure before initiating engine start signal of emergency source.
Time Delay Return	Provides a delay after the return of normal power before retransferring the load from the emergency source.
Time Delay Transfer	Allows for a time delay in the neutral position between opening the contacts on one source and closing the contacts on the other source.
Under Voltage / Phase Rotation Relay	Provided on the Normal source for close-differential monitoring of the Normal source voltage to ensure that it is within acceptable limits and proper phase rotation.
Frequency-Voltage Relay	Provides protection against transferring to the emergency source until the generator has reached both operating frequency and voltage.
Start Contact	Starting Contact provides for starting an engine when initiated by the Transfer Switch.
Auxiliary Contacts	Provided on the emergency source to indicate remotely that the Transfer Switch has been transferred to the Alternate source.
Pilot Lights	Provide two indicating lights mounted on the exterior of the Transfer Switch enclosure showing to which source the load is connected.
Special Devices	Other devices necessary to meet the requirements of NFPA 20, listed below: Isolation Switch which is lockable in the open position Audible alarm on opening of the isolation switch Visual indication of isolation switch position Auxiliary contacts for remote annunciation of isolation switch position
Surge Suppression	Protection for the Transfer switch from transient voltage surges which may harm the control circuitry.
Load Test Switch	Provides engine starting plus transfer of the load to the emergency source. This switch is door mounted.
Labels & Markings	Transfer switch will be labeled as required by U.L. 1008 and NFPA 20 for use in a fire pump circuit.

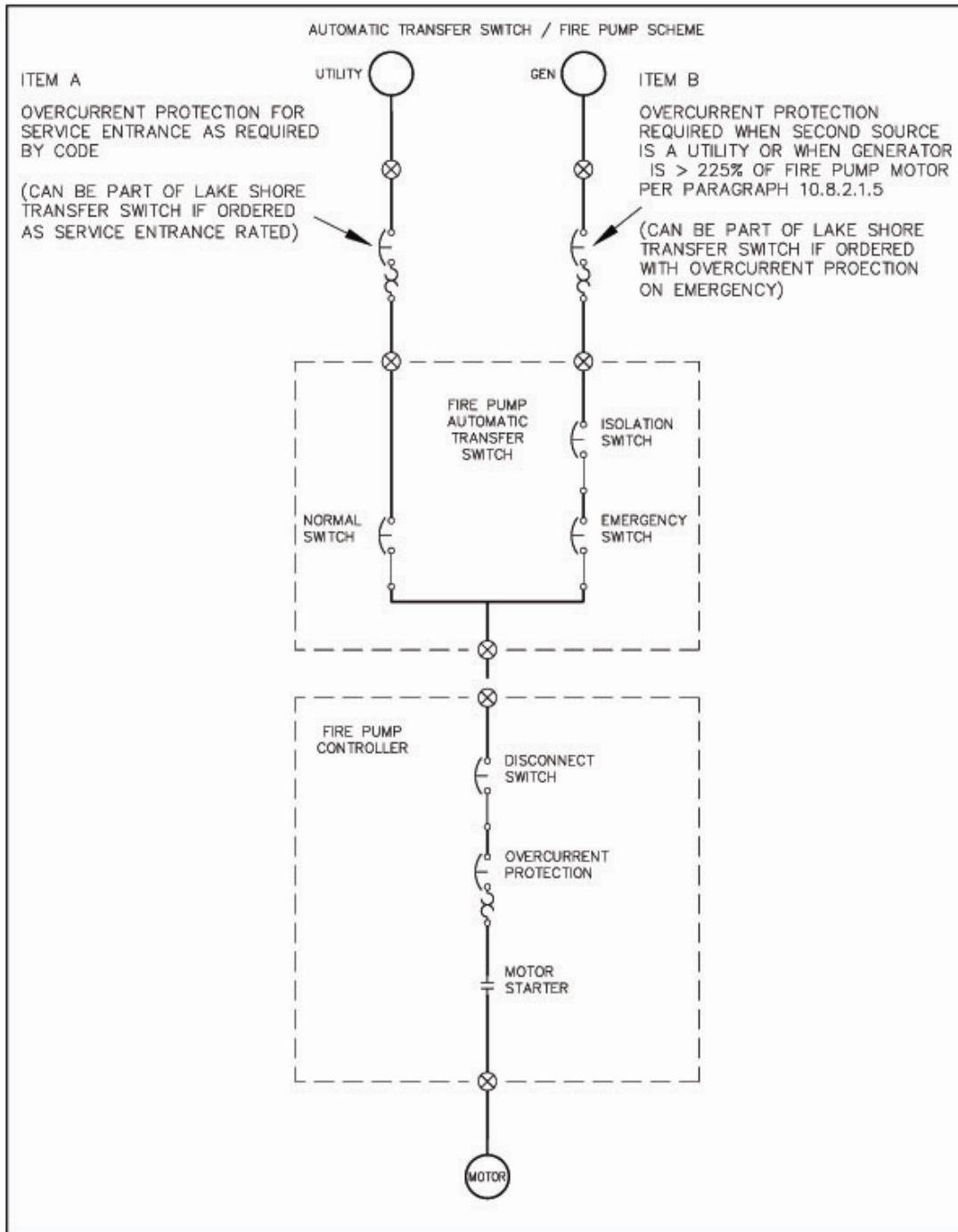
The most common type of installation uses an on site engine generator set as the emergency power source. The single line of this configuration is shown on page 2.

The overcurrent protection shown on the normal side, (item A) can be incorporated in the Lake Shore Electric Fire Pump Transfer Switch by ordering it as service entrance rated.

The overcurrent protection shown on the emergency side, (item B) which is required in the event the alternative source is provided by a second utility, or the generator is larger than 225% of the fire pump motor's rated full load current, can also be incorporated into the Lake Shore Electric Fire Pump Transfer Switch by ordering it with overcurrent protection on emergency.



## AUTOMATIC TRANSFER SWITCH / FIRE PUMP SCHEME



**ENCLOSURES**

The Automatic Transfer Switch with fire pump control requires a larger enclosure than the standard Automatic Transfer Switches.

400 Ampere ATS	70"H x 33"W x 18"D
600 - 800 Ampere ATS	92"H x 42"W x 20"D

