Medium Voltage Automatic Transfer Switch (ATS)

IEM's Medium Voltage Automatic Transfer Switch (ATS) is available from 1200A - 2000A at 2.4kV - 15kV in 3 pole configurations. The ATS's utilize our IEM XFR-200 controller and is easy to interface to multiple sources as well as supporting a wide variety of communication options for connection to the existing Building Management or SCADA system. Our ATS's are suitable for emergency systems, legally required standby systems and optional standby systems.

Medium Voltage Automatic Transfer Switch (ATS)

Full Customization and Design Flexibility

Component and Metering Selection Options

Fully Rated Bus Based on Density Ratings

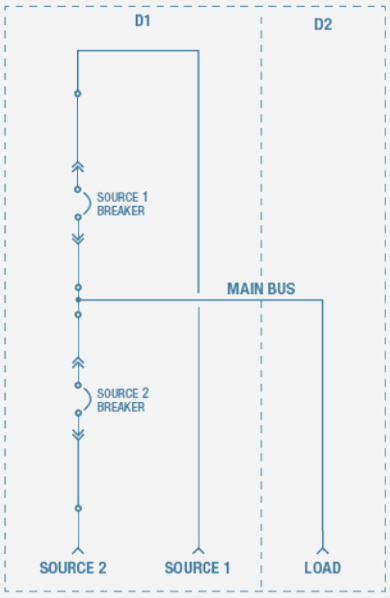
Seismic Tested to Worst Case Response Spectrum

Indoor and Outdoor Applications

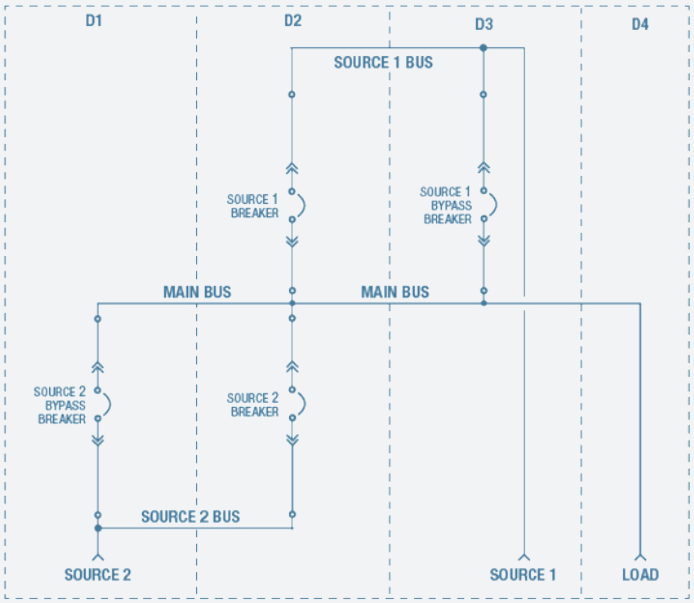
UL 1008A Listed, CSA Certified; Meets ANSI, IEEE, and NEMA Standards

Features & Benefits

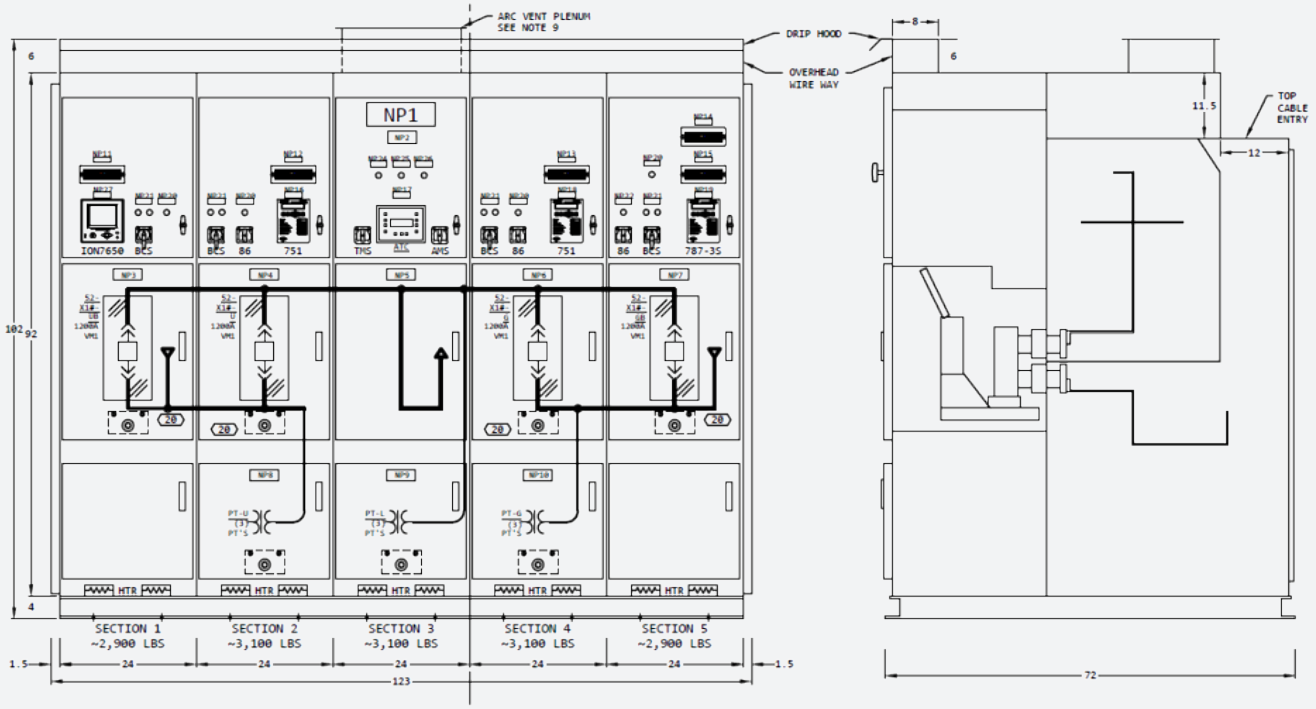
- Voltage: 2.4kV - 15kV
- Current: 1200A - 2000A
- Metal-Clad construction
- Arc-Resistant Option
- Bypass Isolation Optional Configuration
- IEM XFR-200 Transfer Switch Controller
- Open and Closed Transition Option
- Utility Metering Option
- Multitude of Protective Relaying Options
- Rear access for load and incoming connections
- Optional Front Access Only
- Compartmentalized construction with breaker compartment for each device
- Indoor, outdoor non walk-in and outdoor walk-in enclosures available
- Testing/Industry Standard:
  - ANSI/IEEE C37.20.2
  - ANSI/IEEE C37.20.7 (Arc Resistant Option)
  - UL 1008A
  - CSA C22.2 No. 31
  - CSA C22.2 No. 178.3



ATS Configuration



Bypass / Isolation Configuration



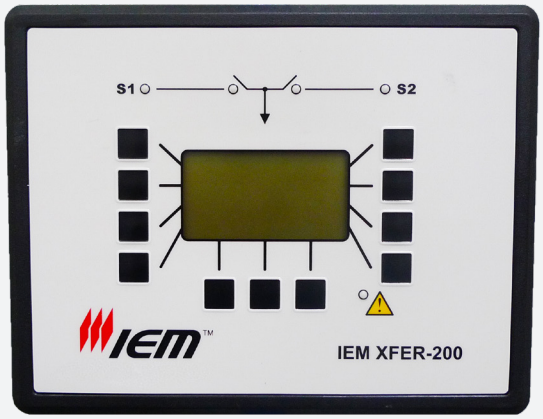
Arc-Resistant Bypass / Isolation Configuration

IEM's XFR-200 (Woodward DTSC-200) Transfer Switch Controller

IEM XFER-200 Transfer Switch Controller

The DTSC-200 is the ultimate control for new ATS (automatic transfer switch) builds and retrofits. A complete measurement and protection package, it easily configures to Utility-to-Generator, Generator-to-Generator, or Utility-to-Utility systems for open, delayed, or closed-transition transfer with synch-check to ensure the smoothest possible transfer.

High-end features like transfer inhibit, source priority selection, load shed, motor load disconnect, elevator pre-signal, and engine exerciser timers come standard in this incredibly versatile, cost-effective control.



Serial Interface 1

RS-232

LeoPC 1 Protocol

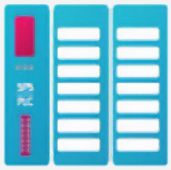
Modem (RS-232)

PC Modem

DPC

Serial Interface 2

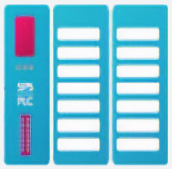
RS-485



Modbus RTU Slave

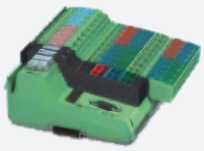
CAN Interface

CANopen Protocol



PLC

IKD 1 IO Module



IKD 1 IO Module

CAN Interface

CAN CAL Protocol

GW 4 Gateway to

- LeoPC1
- Profibus (PLC)

IEM's XFR-200 Transfer Switch Controller

- Configurable for open, delayed, and closed transition transfer
- Configurable for Utility-to-Gen, Generator-to-Generator, and Utility-to-Utility applications
- Closed transition transfers can be accomplished in times < 100ms
- In-phase monitoring (sync-check)
- Load/no load test functionality
- Engine exerciser (load/no load test) routine with fully adjustable interval
- Peak shaving mode
- Load shedding
- Extended parallel time (for closed transition transfers that take longer than 100ms)
- Transfer and/or re-transfer inhibit
- Source priority selection
- Elevator pre-transfer and motor load disconnect timers
- Event/Alarm log system with real time clock
- Internal breaker interlock utilizing discrete inputs for breaker position detection
- Freely configurable discrete I/O with support for external I/O expansion units (e.g. Woodward IKD 1)
- RS-232, RS-485 and CAN bus interfaces for remote control and visualization purposes
- Supports CAN open and Modbus RTU protocols
- PC and/or front display configuration
- 128x64 pixels graphic LCD display
- LogicsManager provides programmable logic functions that eliminate relay logic or PLC`s
- True RMS voltage, current and power sensing
- LEDs for source availability and breaker status

Accessories

A Time delay of engine start signal to prevent transfer in the event of momentary Source 1 power outage.

B Time delay on retransfer to Source 1.

C Time delay on transfer to Source 2.

D Time delay to control contact transition time from neutral to Source 2.

E Time delay to control contact transition time from neutral to Source 1.

F Engine overrun to provide unloaded engine operation after retransfer to Source 1 (delay for engine cooldown).

G Elevator pre-signal contacts open prior to transfer in either direction, can be configured in one of the following ways: CONTACT

- **1** Once transfer is initiated, contacts close after an adjustable time delay (0 seconds to 60 minutes);
- **2** After time delay (0 seconds to 60 minutes), transfer is initiated. Contacts close immediately after transfer;
- **3** After time delay (0 seconds to 60 minutes), transfer is initiated. Contacts close after an adjustable time delay (0 seconds to 60 minutes).

H The mode of operation of the exerciser function can be selected with a time base of 1 day, 7 days, 14 days, 28 days, or 365 days. With a time base of 365 days, up to 24 events can be scheduled. With all other time bases, the number of exercise events is limited to 7.

I Programmable function to bypass time delay on retransfer to Source 1.

J 2-position lever-operated preferred source selector switch to select either Source 1 or Source 2 supply as the preferred source.

- **1** Legend plate marked: "SOURCE 1" - "SOURCE 2".
- **2** Nameplate marked: "PREFERRED SOURCE SELECTOR SWITCH".

K (1) Auxiliary contact closed in Source 1 position, wired to terminal strip for customer connection.

L (1) Auxiliary contact closed in Source 2 position, wired to terminal strip for customer connection.

M Form "C" contact to initiate engine starting or other customer functions.

N (1) Source 1 status relay with Form "C" contact to indicate Source 1 availability.

O (1) Source 2 status relay with Form "C" contact to indicate Source 2 availability.

P Green LED on Operator Interface Panel to indicate switch in Source 1 position.

Q Red LED on Operator Interface Panel to indicate switch in Source 2 position.

R Green LED on Operator Interface Panel to indicate Source 1 power available.

S Red LED on Operator Interface Panel to indicate Source 2 power available.

T Red LED on Operator Interface Panel to indicate transfer inhibit.

U Red LED on Operator Interface Panel to indicate alarm condition.

V Lamp test function to test all LEDs or Operator Interface Panel.

Version: 2025_01_03_RevO1. Specifications subject to change without notice.