



# PCS-9655

## High Speed Transfer Device

The PCS-9655 high speed transfer device is used in power plants to ensure the continuous and reliable power supply for busbars.

In normal operation, the power supply of busbar is provided by the main power supply branch, and the standby power supply is ready for switching. If the circuit breaker CB3 is closed, the standby power supply is in hot standby state; if the circuit breaker CB3 is opened, the standby power supply is in cold standby state.

If the main power supply has fault, the PCS-9655 will trip circuit breaker “CB1”, and the voltage of busbar is lost. Due to

the mechanical inertia of motor load of busbar, the composite feedback voltage of busbar is decaying gradually. In this procedure, if the standby power supply is put into service at an improper moment, the voltage difference between busbar residual voltage and standby power supply voltage will have a greater impact on other equipment in the power plant. Then the switching operation is failed, and the busbar voltage is absolutely lost.

The PCS-9655 high speed transfer device can select the optimal moment for switching the standby power supply into service to ensure the safety and reliability of switching operation.

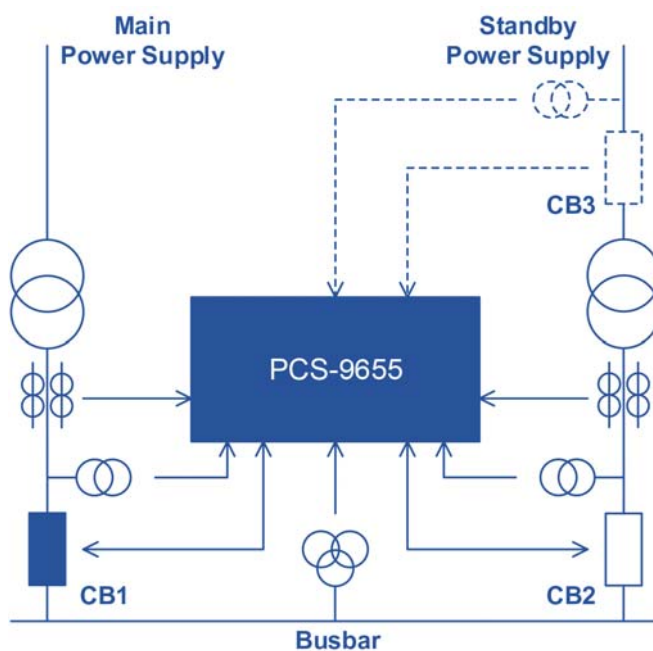


Figure 1 PCS-9655 Functional Block Diagram

## Functions

- Normal manual switching function
- Accident switching function
- Loss-of-busbar voltage switching function
- Circuit breaker unexpected tripping switching function
- Undervoltage load shedding switching function
- Switch-onto fault protection
- Voltage and current drift auto adjustment
- Self supervision
- Voltage transformer supervision
- Circuit breaker status monitoring
- Circuit breaker control
- 64 Fault records and 64 Disturbance records
- 1024 SOE records, latest records of following elements state changing: operating abnormality alarm elements, selfcheckalarm elements, protection elements and binary inpulements.

## Features

- This device can provide all kinds of switching functions: normal manual switching, accident switching, loss-of-busbar voltage switching and circuit breaker maloperation switching.
- This device also provides useful auxiliary functions such as two stages of undervoltage load shedding protection and the SOTF overcurrent protection.
- The PCS-9655 adopts automatic frequency tracking technology in the busbar voltage measurement to calculate the frequency and the phase of busbar voltage fast and accurately.
- The PCS-9655 supports different GPS clock synchronization, including SNTP, pulse per second, and IRIG-B synchronization.
- The PCS-9655 can communicate with SAS or RTU using IEC60870-5-103 or Modbus.
- Fault and disturbance recording function: 64 latest fault reports and 64 fault waves are provided and the duration of a fault wave is up to 25s. The fault wave format is compatible to COMTRADE.
- The PCS-9655 can record 1024 Self-check alarm, 1024 Operating alarm and 1024 binary input change during operation.