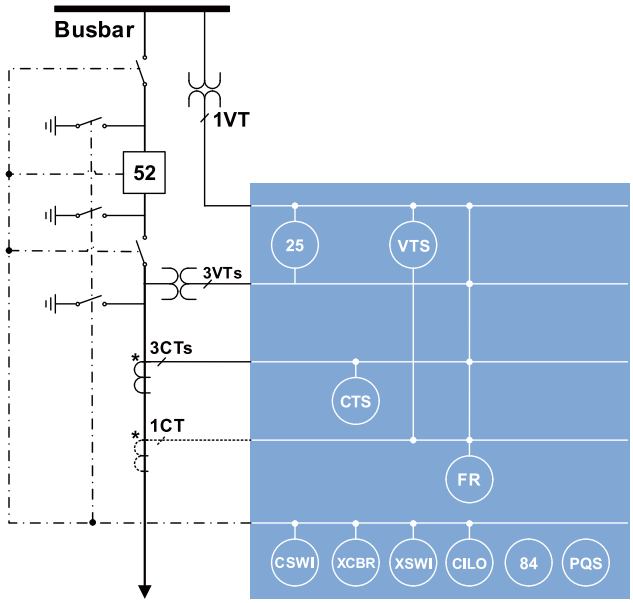
PCS-9705S Bay Control Unit

PCS-9705S bay control unit is a general-purpose control and automation device in all substations, power plants and industrial domain applications. The modular conception permits the hardware adaption exact to client requirements.



Features

- High applicability for all voltage levels and to be used in all fields of energy generation, transmission and distribution chain. Various applications for single circuit breaker (double or single bus) configuration, double circuit breakers configuration, switchgear with breaker-and-a-half configuration for a complete diameter, max. 4 buses supervision, 2 or 3-windings transformer configuration and I/O-box, etc.
- Support max 15th harmonics, energy metering and Power Quality Supervision(Total Harmonic Distortion (THD) and current/voltage total demand distortion (TDD))
- Rich control functions, optional synchronization, etc.
- Friendly HMI and easy to operate, support display and control of the diagram.
- DC analog input
- High flexible configuration, all control and measurement elements are user oriented and configurable. All slots can configured with IO modules, just as IO box.

Applications

- Single circuit breaker(double or single bus) configuration
- Double circuit breakers configuration
- Switchgear with breaker-and-a-half configuration for a complete diameter
- Max. 4 buses supervision
- 2 or 3-windings transformer configuration
- IO box (all slots IO modules)

Functions

- Control, synchrocheck and switchgear interlocking
- On load tap changing for transformer
- DC analog input channel (ranges 4~20mA, ±5V are optional)
- 10 setting groups
- Flexibly configurable binary inputs (max. 284)
- Flexibly configurable binary outputs (max. 83)
- Setup of max.40 users and allow each user to own different password and access authority
- Function shortcuts key, which can be configured by software tool and be fulfilled by key combination from devices' keypad, to execute express operations.
- Clock synchronization using IRIG-B, SNTP (Simple Network Time Protocol), PPS (Pulse-Per- Second) and PPM (Pulse-Per-Minute) , IEEE1588
- Auxiliary functions for simple tests and commissioning

Measurement and Metering

- U, I, P, Q, Cos
- Positive, negative and zero sequences
- Max.15th harmonics
- Energy metering (active and reactive energies for import and export)
- Power Quality Supervision (PQS) with Total Harmonic Distortion (THD) and current/voltage total demand distortion (TDD)

PCS S Series

Monitoring

- CT circuit failure Supervision (CTS)
- VT circuit failure Supervision (VTS)
- Self diagnostic
- Powerful faults recording (max. buffer for 10,000 sampled points at 4.8 or 9.6 kHz)
- Event recorder including 1024 change-of-state events, 1024 supervision events, 256 control logs and 1024 device logs
- Disturbance recorder including 32 disturbance records with waveforms (format compatible with COMTRADE)
- Single line diagram representation in display

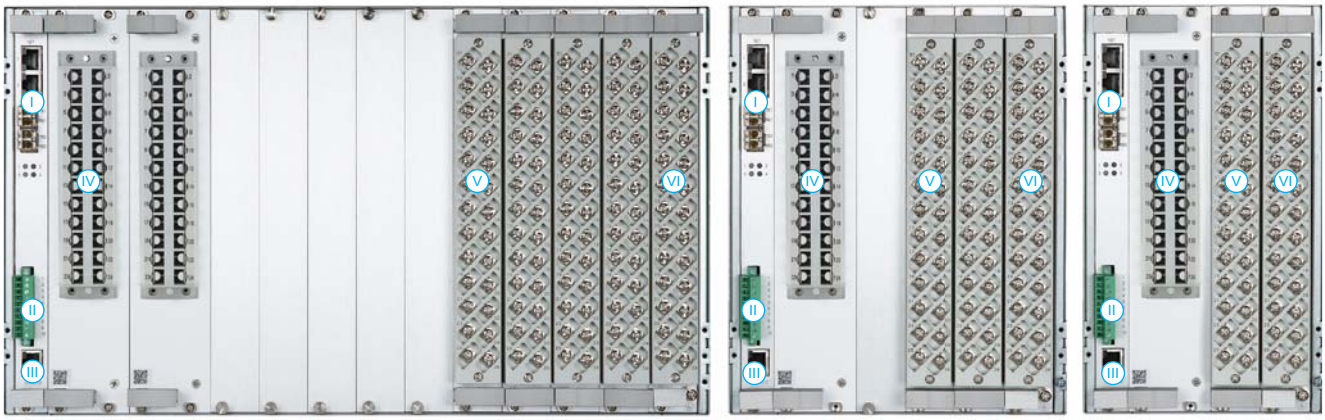
Communication

- Support of various protocols
- Modbus, DNP3.0, IEC 60870-5-103, IEC 61850 ed1 & ed2, IEC 61850-8-1 (MMS GOOSE), IEC 62439 Parallel Redundancy Protocol, IEC 62439 HSR Ring Redundancy Protocol
- Up to four 10Base-T/100Base-TX copper Ethernet ports
- Up to four 100Base-FX optical Ethernet ports
- Two RS-485 serial ports for communication or printer
- One RS-485/TTL serial port for clock synchronization
- RJ-45 debugging ports for both front and rear sides

Front Panel

1. LCD for device status and information display
2. Easy-to-use keypad aids simple navigation and set-point adjustment
3. Push buttons for open/close operation and selection of local/remote control mode
4. User login/logout authority management
5. Programmable push buttons with configurable labels
6. Front RJ45 debugging port
7. Push button for target reset
8. Two LED indictors for device running status
9. Programmable LED indicators with configurable labels (18 for 6U 1/1 or 1/2 variants, 15 for 6U 1/3 variant)

Rear Panel



I. Copper and optic Ethernet ports

II. RS-232 and RS-485 serial ports

III. Rear debugging port

IV. AC current and voltage analog inputs

V. Binary inputs and outputs, DC current and voltage analog inputs

VI. Power supply and standard I/O