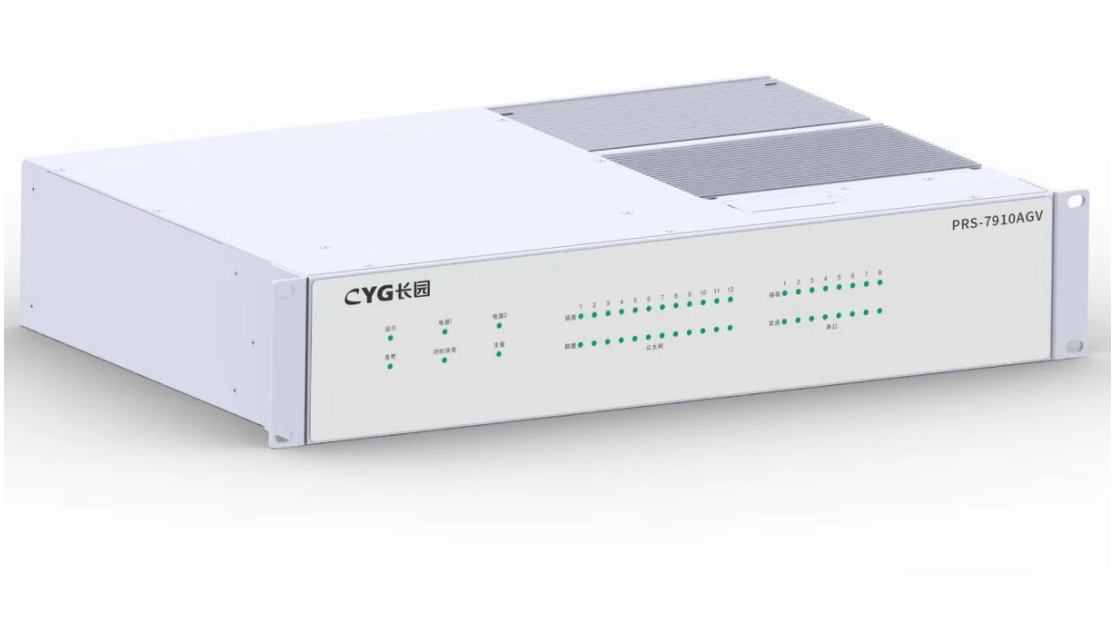
PRS-7910

General Application

The PRS-7910AGV has advanced AGC/AVC control technology in the industry, which can realize monitoring and control of active power, reactive power and voltage of grid connection point of power station and can maintain the global stability of the grid connected to the wind power plant and the PV electric field, improve the ability to absorb wind power and PV power generation and ensure the draught fan and inverter's continuous and stable operation without off-grid.



Feature

Item	Parameter
Performance	Advanced AGC/AVC technology, Flexible networking mode, effect communication protocol library
Hardware	AGC/AVC server +PRS-7910G power controller
Interface	Supports up to 10 network ports and 18 serial ports
Communication	Supporting several protocols, such as IEC 61850
Timing	Up provides GPS clock timing interface and supports IRIG-B (DC) code timing, differential pulse timing (need to be combined with GPS message timing); It receives network timing, including SNTP timing and IEEE1588 network precise timing support; In addition, it also receives timing information from dispatching
Incident Records	Provides a complete record for status auxiliary analysis when the system is normal or faulty; Tele-control operation record and device running record has power-off protection.

Functions

Subsystem	Description
Active automatic control (AGC)	AGC substation takes grid-connected active power of power station as control target. After comprehensively considering topological relationship, units that do not participate in regulation and various constraints, calculates active power target value of each unit and inverter, issues control commands and samples in real time data such as active power to form a closed-loop control.
Automatic voltage reactive control (AVC)	AVC substation takes grid-connected reactive power of station or busbar voltage as control target, receives reactive power or voltage target command. After comprehensively considering topological relationship, equipment that does not participate in regulation and various constraints, calculates reactive power target value of each unit, inverter, SVG and SVC, issues control commands and samples data in real time such as reactive power to form a closed-loop control.

Specifications

System performance index

System mean time between failures (MTBF)	≥40000h
Dual machine fault switching time	≤ 10 s
System annual availability	≥99.99%
Response time for calling real-time data screen	≤ 2 s
Response time for calling historical database screen generating	≤ 10 s
Accident push screen time	≤ 2 s
Remote metering over dead zone transmission	≤ 1 s
Remote signal transposition transmission	≤ 1 s
Control command (remote control, remote regulating, remote setting) transmission time	≤ 1 s
System alarm accuracy rate	100%
Control accuracy	100%
Accuracy of index analysis and calculation	＞96%
Completion time of single control (all equipment) command	≤1min
AVC control command accuracy	≤ 0.1kV, depend on the actual execution unit
AVC issuing speed of control command	Regulating 0.8kV time<60S
AGC control command accuracy	≤ 0.02MW, depend on the actual execution unit
AGC issuing speed of control command	Regulating 3MW time <30S

Specifications