



# PRRS-7916

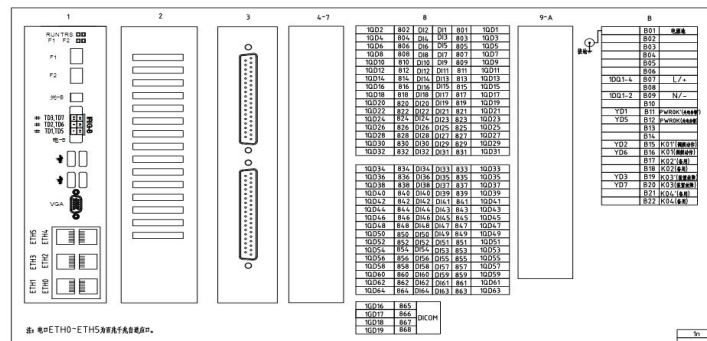


## General Application

PRRS-7916 primary frequency control system meets State Grid Corporation of China Primary FM Management Provisions and new energy-related technical standards. It can be widely used in all kinds of new energy wind plants and photovoltaic power plants. Through the collection of grid connection point PT, CT signals and frequency signals and coordination with the AGC system, the power control commands are sent to the energy management platform of the wind turbine or the power generation unit of the photovoltaic power plant, thus achieving fast frequency modulation.



❖ Front Panel



❖ Rear Panel

## Feature

Item	Parameter
Performance	32-bit high performance dual-core processor, internal high speed bus and intelligent I/O ports
Hardware	Modularized hardware design, flexibly configurable, easy extension
Interface	VGA port and USB ports for the external human machine interface (HMI)
Communication	Ethernet and RS485. Communication protocol: IEC60870-5-103/104, IEC61850
Time Synchronization	IRIG-B
Analog	Support the protocol IEC60044-8, constantly measures and calculates voltage, current, and power.
Recording	Transient and stable state recording, Sequence of Events Recording.

## Functions

Item	Parameter
Measurement	Conventional CT/VT sampling method (up to 32 analog inputs) with AC AI module in using electrical cable
Configurable	Programmable analog input Programmable binary input Programmable software function
Function	Transient and stable state recording Active-frequency sag characteristic curve control function AGC coordination and control function Anti-disturbance function Primary FM locking function Self-diagnostic Device power supply supervision
Recorder	The 1TB hard disk provides ample storage for all your data. which can store 3000 transient state fault files and 2500 stable state fault files.
Synchronization	Supporting IRIG-B and SNTP

## Specifications

### Measurement Range and Accuracy

Metering Item	Range	Accuracy
Phase range	0° ~ 360°	≤ 0.5% or ±1°
Frequency	35.00Hz ~ 70.00Hz	≤ 0.01Hz
Current(three phase 3lp)	0.05In<I<4.00In	±0.1%In, 0.05In~1.00In±0.1%, 1.00In~4.00In
Voltage(Phase 3Up, Phase-to-Phase 3Upp)	0.05Un<U<1.50Un	±0.1%Un, 0.05Un~1.00Un;±0.1%U, 1.00Un~1.50Un

### Auxiliary Power Supply

Reference	IEC 60255-1, IEC 60255-26
Rated voltage	88V~250VDC, 88V~250VAC
Variation	80% ~ 120%
Frequency	50/60Hz, ± 5Hz
Maximum interruption time in the auxiliary DC voltage without resetting the IED	0%Un,100ms; 40%Un,200ms; 70%Un,500ms; At the Un=DC220V
Gradual shut down / Start up	Class C (60s shut down ramp, 5 min power off, 60s start up ramp)
Ripple in the DC auxiliary voltage	Class A (15% of rated @200Hz, 220VDC)
Maximum load of auxiliary voltage supple	≤50W (normal state)

### Binary input

Reference	IEC 60255-1, Clause:6.10.5
Binary input number	Up to 64
Rated voltage	110VDC/125VDC/220VDC
“ON” value voltage	70% ~ 120% rated voltage
“OFF” value voltage	< 55% rated voltage
Maximum permitted voltage	120% rated voltage
Resolution of binary input signal	≤ 1ms
Resolution of SOE	≤ 1ms

## Specifications

### Binary output

Reference	IEC 60255-1
Max system voltage	380Vac, 250Vdc
Voltage across open contact	1000V RMS for 1min
Continuous carry	5.0A @ 380Vac; 5.0A @ 250Vdc
Short duration current	30A, 1s
Breaking capacity	0.60A @ 48Vdc, L/R=40ms 0.10A @ 110Vdc, L/R=40ms 0.05A @ 220Vdc, L/R=40ms
Pickup time	< 10ms
Dropout time	< 8ms
Dropout time	< 8ms