



# PRRS-7973



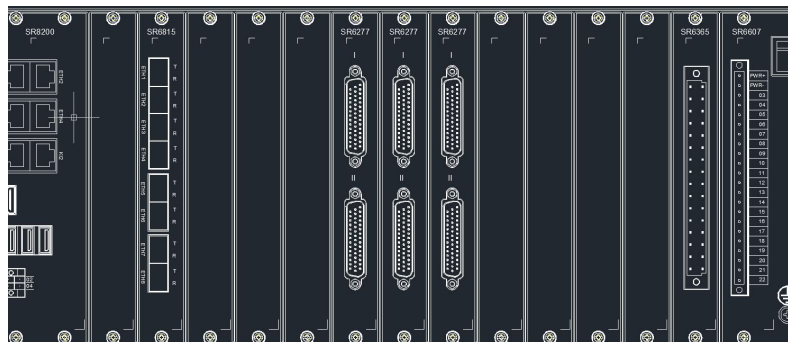
## General Application

The PRRS-7973 multifunction fault recorder is mainly used for recording the dynamic fault processes of power system anomalies. It is mainly designed to capture and diagnose the changing process of relative electrical parameters of the power system.

PRRS-7973 multifunction fault recorder integrates multiple functions into one unit, providing transient recording, continuous disturbance recording, phasor measurements, power quality monitoring and sequence of event recording.



❖ 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	HDMI port and USB ports for the external human machine interface (HMI)
Communication	Ethernet and RS485. Communication protocol: IEC60870-5-103, IEC61850, DNP3.0
Analog	This device can sample the analog values from the traditional instrument transformers, or receive the sampled values from the electronic transformers.
Recording	The 1TB hard disks and 4GB RAM provides ample storage for all your data. which can store 3000 transient state fault files and 2500 stable state fault files

## Functions

Item	Parameter
Measurement	Conventional CT/VT sampling method (up to 96 analog inputs) with AC AI module in using electrical cable (512 samples per cycle) Transducer input in DC for temperature, humidity, etc.
Configurable	Programmable analog input Programmable binary input Programmable software function
Function	Transient and disturbance trigger Digital Channels trigger Power Quality Fault Locator Waveform analysis Self-diagnostic Device power supply supervision
Recorder	Have Fast-Scan triggered recording mode, Slow-Scan recording mode and continuous recording modes Transient and disturbance recording, Power Quality Recording, Sequence of Event Recording.
Synchronization	Supporting PPS, IRIG-B, PPM and SNTP etc.

## Specifications

### 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 supply	≤50W (normal state)

### Binary input

Reference	IEC 60255-1, Clause:6.10.5
Binary input number	Up to 192
Rated voltage	110VDC/125VDC/220VDC
Pickup voltage	55% ~ 70% rated voltage
“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
Contact input debounce	1ms
Event element	during off contact: continuous line during on contact: broken line

## 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

### Current Transformer Ratings

Reference	IEC 60255-1, IEC 60255-27	
Rated frequency (fn)	50Hz, 60Hz	
Nominal range	fn ± 5Hz	
Rated current (In)	1/5A	
Thermal withstand capability	continuously	3×In
	for 10s	20×In
	for 1s	40×In
	fault	100×In
Burden	< 0.05VA/phase @1A, < 0.2VA/phase @5A	

### Voltage Transformer Ratings

Reference	IEC 60255-1, IEC 60255-27	
Rated frequency (fn)	50Hz, 60Hz	
Nominal range	fn ± 5Hz	
Rated voltage (Un)	100V ~ 120V (phase-to-phase voltage)	
Thermal withstand capability	continuously	240V
	1s	400V
Burden at rated voltage	< 0.03VA/phase @57.7V	

## 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 3Ip)	0.05In<I<4.00In	±0.1%In, 0.05In~1.00In ±0.1%I, 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
Current unbalance	full range	0.2%
Voltage unbalance	full range	0.3%
P & Q Accuracy		0.2%

### Ambient Temperature and Humidity Range

Standard	IEC 60255-1:2009
Operating temperature range	-20°C ~ +55°C
Transport and storage temperature range	-40°C ~ +70°C
Damp heat steady	+40°C 93%humidity 16h
Damp-heat test, cyclic	6 cycles, +25°C to +55°C, Humidity 97% to 93%

## Specifications