

SY8800

Universal Multichannel Low Voltage Power Supply System



Features



- Factory configured modular system
- 5 free slots for power supply modules
- 3U x 19" x 35 cm crate size
- Floating channels
- Local and Remote Control
- Remote control via Ethernet, USB, CANBUS and RS232
- Max output power: 2.5kW @ 220Vac, 1.5kW @ 115Vac
- Up to 8 independent channels
- Low noise
- Available Modules:
 - 2÷7V 550W (110A @5V) 1 slot
 - 2÷7V 1100W (220A @5V) 2 slot
 - ±7÷16V 550W (23A @±12V) 1 slot
 - ±7÷16V 1100W (46A @±12V) 2 slot
 - ±20÷28V 550W (11A @±24V) 1 slot
 - ±20÷28V 1100W (22A @±24V) 2 slot
 - 10 mV Voltage Set/Monitor resolution
 - 100/200 mA Current Set/Monitor resolution (2÷7V)
 - 20/40mA Current Set/Monitor resolution (±7÷16V/±20÷28V)
 - Individual channel ON/OFF and TRIP
 - Sense wires for the voltage drop recovery
 - 4 Analog Input, 4 Digital Input, 4 Digital Output
 - Fans embedded for vertical cooling

Description

The **CAEN Mod. SY8800** is a high density floating low voltage power supply system, designed to power low noise electronics with medium and high currents. Six modules have been developed so far:

- 2÷7V 550W (typ. 110A @5V)
- 2÷7V 1100W (typ. 220A @5V)
- ±7÷16V 550W (typ. 23A @±12V)
- ±7÷16V 1100W (typ. 46A @±12V)
- ±20÷28V 550W (typ. 11A @± 24V)
- ±20÷28V 1100W (typ. 22A @± 24V)

The system is factory-configured. The system is provided with Remote Sensing Lines to compensate for the voltage drop over the connection cables.

Ethernet connector

TH 10Base-T female connector TTL signals (TCP/IP) for Mod.SY8800

USB connector

AMP 787780-2, USB Type B for Mod.SY8800

Consult our **connectors reference page** for technical information.

Module control can take place either locally, assisted by a Graphic colour display or remotely, via Ethernet, USB, CANBUS and RS232.

Safety features allows the module to perform as a current generator and includes:

Channels	can be enabled or disabled through the Interlock logic. The LV output Ramp-up and Ramp-down times may be selected independently for each channel in 5ms steps.
Overvoltage and Undervoltage protection	when the output voltage differs from the programmed value.
Overcurrent detection	if a channel tries to draw a current larger than its programmed limit, it enters TRIP status, keeping the maximum allowed value for a programmable time (TRIP), before being switched off.
Programmable maximum channel output	voltage limit (VOVP): the channel is tripped off when its output voltage exceeds VOVP.
Safety Board Interlock	this protection disables the HV generation when the HV outputs are not connected to their loads.

Technical Specifications

Mechanical Packaging

3U x 19" x 35 cm crate size; weight: 17kg

Mains input

- Auto range: 92 ÷ 264 Vac, 50 ÷ 60 Hz
- Inrush current: < 16 A @ 230 Vac
- Power Factor: > 0.98 @ Output Power > 1 kW

Maximum Total Output Power

1250 W @ 100 Vac, 2530 W @ 211 Vac

Interface

RS232, USB (2.0), CAN bus, Ethernet

Fuse

External 16 A, type B/C

Maximum currents

110/220 A @ +5 V, 23/46 A @ ±12 V, 11/28 A @ ±24V

Power Modules

Max 5 Modules of width = 1

Load Regulation

- < 10 mV for 0-100% load change @ 2V ÷ 7V
- < 15 mV for 0-100% load change @ ± 7V ÷ 16V
- < 15 mV for 0-100% load change @ ± 20V ÷ 28V

Efficiency

75% ÷ 85% @ 230 Vac configuration dependent

Temperature sensors

Power Supply Control: nr. 1

Voltage Protection

- Over Voltage: Trip Off when the output voltage > VOVP (programmable)
- Under Voltage: Trip Off when the output voltage < 90% of set voltage
- Over Current: Trip Off when the current > programmable Iset value

Over Temperature Protection

Trip Off when temperature of a single Power Supply block > 90° C
Signaled when temperature Power Supply Control > 65° C

Operation

0÷50°C without derating

Firmware

SY8800 firmware can be upgraded via Ethernet

Power Factor Correction Module

- Input voltage: 92 ÷ 264 Vac
- Frequency 50 ÷ 60 Hz
- Inrush Current: <16 A @ 230 Vac, Fuse External 16A type B/C, Power Factor > 0.98 @ Output Power > 1 kW
- Fuse External: 16A type B/C, Power Factor > 0.98 @ Output Power > 1 kW
- Power Factor: > 0.98 @ Output Power > 1 kW
- Maximum Total Output Power: 1200 W @ 100 Vac, 2530 W @ 211 Vac
- Turn on Delay: 50 ms to 100% of voltage, monotonic rise
- Efficiency: 75% ÷ 85% @ 230 Vac configuration dependent

Power Module (2V÷7V)

- Voltage: 2V ÷ 7V
- Current: 115 A / 230 A
- Ramp Up/Down & Trip time: Max 5s; 10 ms step
- Ripple: Max: < 10 mVpp, Typ: 6.0 mVpp
- Voltage Accuracy: ± 20 mV
- Load Regulation: < 10 mV (sense) for 0-100% load change
- Transient Response Recovery:
 - < 100 mV @ ±25A current step change
 - 6 ms for recovery to ±1% of set voltage @ 25A to 0A current step change
 - 0.5 ms for recovery to ± 1% of set voltage @ ±25A current step change
 - 0.7 ms for recovery to ± 0.1% of set voltage @ ±25A current step change
- Flicker immunity: <50 ms

Power Module (+/- 7V-16V)

- Voltage: ±7V ÷ ±16V
- Current: 23 A / 46 A
- Ramp Up/Down & Trip time: Max 5s; 10 ms step
- Ripple: Max < 10 mVpp, Typ: 4.5 mVpp
- Voltage Accuracy: ± 20 mV
- Load Regulation: < 15 mV for 0-100% load change
- Transient Response Recovery:
 - < 100 mV @ ±5A current step change
 - 8 ms for recovery to ±1% of set voltage @ 5A to 0A current step change
 - 1.0 ms for recovery to ± 1% of set voltage @ ±5A current step change
 - 1.8 ms for recovery to ± 0.1% of set voltage @ ±5A current step change
- Flicker immunity: <30 ms

Power Module (+/- 20V-28V)

- Voltage: $\pm 20V \div 28V$
- Current: 23 A / 46 A
- Ramp Up/Down time; Trip time: Max 5s; 10 ms step
- Ripple: Max < 10 mVpp, Typ: 4.5 mVpp
- Voltage Accuracy: ± 20 mV
- Load Regulation: < 15 mV for 0-100% load change
- Transient Response Recovery:
 - < 100 mV @ $\pm 5A$ current step change
 - 8 ms for recovery to $\pm 1\%$ of set voltage @ 5A to 0A current step change
 - 1.0 ms for recovery to $\pm 1\%$ of set voltage @ $\pm 5A$ current step change
 - 1.8 ms for recovery to $\pm 0.1\%$ of set voltage @ $\pm 5A$ current step change
- Flicker immunity: < 30 ms

Ordering Options

Code	Description	
WPERS8800B01	B01 - 2 Ch. LV Floating Power Module $\pm 7V \div 16V / 23A$ (550W)	RoHS
WPERS8800B02	B02 - 2 Ch. LV Floating Power Module $\pm 20V \div 28V / 11A$ (550W)	RoHS
WPERS8800B21	B21 - 2 Ch. LV Floating Power Module $\pm 7V \div 16V / 46A$ (1100W)	RoHS
WPERS8800B22	B22 - 2 Ch. LV Floating Power Module $\pm 20V \div 28V / 22A$ (1100W)	RoHS
WPERS8800M01	M01 - 1 Ch. LV Floating Power Module $2V \div 7V / 110A$ (550W)	RoHS
WPERS8800M21	M21 - 1 Ch. LV Floating Power Module $2V \div 7V / 220A$ (1100W)	RoHS
WSY8800XXXXX	SY8800 - Universal Multichannel Low Voltage PowerSupply System (1250W US - 2500W EU)	RoHS

Related Software Libraries

CAEN HV Wrapper Library



Library for CAEN Power Supply Control

Gallery



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