

PSS Series



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PSS Series

Product Description

Eaton's PSS Series of power supplies is designed to work in a variety of applications, including the power supply to the **IT** line of power control products. They also work in most control applications that require 24 Vdc. All of the PSS power supplies are designed to provide the highest "outrush" current in the industry for units of their size.

Application Description

The PSS line of power supplies is specifically designed to work with the S801, S811, MV811 and **IT** electro-mechanical devices. They can also serve in a variety of other applications, including support of sensors, operator interfaces, PLCs, communication networks, heaters and lights, and in many other industrial applications where 24 Vdc power supplies are required.

Features

- High current outrush capability in all units
- Semiconductor F47 approved
- Long ride-through capability designed in
- Wide operating temperature range
- Multiple 24 Vdc terminals for easy wiring
- Removable terminal connections
- IP20 fingerproof design

Benefits

- 24 Vdc control enhances personnel and equipment safety
- IP20 design improves personnel safety
- Removable terminal connectors make installation and repair quick and easy
- High current outrush capability allows use of smaller power supplies in many applications and ensures stable output during high power demand cycles
- Due to long ride-through time, the power supply can maintain the control power system during brownout and blackout conditions

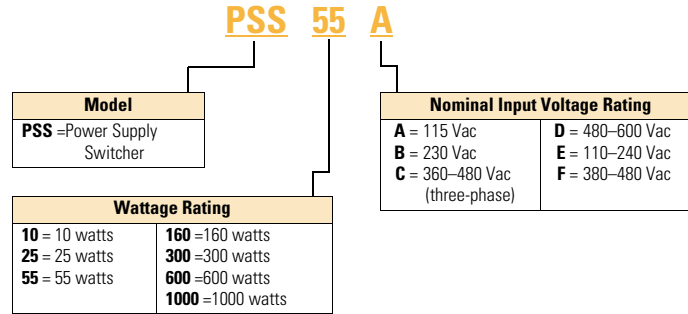
Standards and Certifications

- UL listed 508
- CSA certified
- CE marked
- F47 certified



Catalog Number Selection

PSS Series Power Supply



Product Selection

PSS55D



PSS Series Power Supply

Steady-State Current (Amps)	Steady-State Wattage	Input Voltage	Catalog Number
0.4	10W	110–240	PSS10E
		380–480	PSS10F
1	25W	110–240	PSS25E
		380–480	PSS25F
2.3	55W	480–600	PSS55D

PSS Sizing Chart

IEC Size	NEMA Size	Steady-State Current	Inrush Amps	Inrush Duration
A	N/A	0.83A	0.83A	30 ms
B	00, 0	0.13A	3.30A	50 ms
C	1	0.15A	3.80A	50 ms
D	2	0.21A	5.40A	65 ms
E	3, 4	0.23A	5.80A	85 ms
F	5	0.54A	8.30A	250 ms

Accessories

DIN Rail Mounting Kit

Description	Catalog Number
DIN rail mounting	PSSDIN

Technical Data and Specifications

PSS Series, PSS10E–PSS55D

Capacity	PSS10E 10W	PSS10F 10W	PSS25E 25W	PSS25F 25W	PSS55D 55W
Input					
Voltage	110–240 Vac	380–480 Vac	110–240 Vac	380–480 Vac	480–600 Vac three-phase
Input current (rms)	0.19A	0.1A	0.45A	0.17A	0.07A/phase
Frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Voltage range	± 10%	± 10%	± 10%	± 10%	± 10%
Inrush current	25A	25A	35A	35A	15A
Overvoltage	330 Vac	550 Vac	330 Vac	550 Vac	Varistor
Internal input fuse	T2A at 250V	T2A at 250V	T4A at 250V	T2A at 250V	—
External fusing	Not required 2A 250 Vac slow blow	Not required 2A 250 Vac slow blow	Not required 2A 250 Vac slow blow	Not required 2A 250 Vac slow blow	3 x 1A 600 Vac slow blow
Output					
Voltage nominal	24 Vdc	24 Vdc	24 Vdc	24 Vdc	24 Vdc
Voltage regulation	± 10%	± 10%	± 10%	± 10%	± 3.5%
Current nominal	0.4A	0.4A	1.0A	1.0A	2.3A
Voltage adj. range	None	None	None	None	None
Current surge	1A	1A	6.8A	6.8A	10A
Current surge time	35 ms	35 ms	85 ms	85 ms	180 ms
Hold up time	100 ms	100 ms	100 ms	100 ms	30 ms
Max. load capacitance	10,000 µF	10,000 µF	10,000 µF	10,000 µF	10,000 µF
Switching frequency	60k Hz	60k Hz	100k Hz	100k Hz	61k Hz
Efficiency at max. load	80%	75%	80%	80%	85%
Output ripple	± 1%	± 1%	± 1%	± 1%	± 1%
Protection					
Short circuit	Auto restart	Auto restart	Auto restart	Auto restart	Auto restart
Overvoltage	No	No	No	No	No
Undervoltage	No	No	No	No	No
Overtemperature	None. Software in micro controller	None. Software in micro controller	None. Software in micro controller	None. Software in micro controller	None. Software in micro controller
Overcurrent	0.8A typical at 24V for >100 ms	0.8A typical at 24V for >160 ms	6.8A typical at 24V for >160 ms	6.8A typical at 24V for >160 ms	10A typical 24V for >300 ms
Galvanic Isolation					
Input to output	1.5 kV	2 kV	1.5 kV	2 kV	4 kV
Input/output to rail	1.5 kV	2 kV	1.5 kV	2 kV	4 kV
Input to ground	1.5 kV	2 kV	1.5 kV	2 kV	2.0 kV
Output to ground	200V	200V	200V	200V	250V
Special Features					
Cooling	Convection	Convection	Convection	Convection	Convection
Load sharing	None	None	None	None	None
Redundancy	None	None	None	None	None
Analog outputs	None	None	None	None	None
Fault relay	None	None	None	None	None

PSS Series, PSS10E–PSS55D, continued

Capacity	PSS10E 10W	PSS10F 10W	PSS25E 25W	PSS25F 25W	PSS55D 55W
Wire Size					
Input	20–14 AWG	20–14 AWG	20–14 AWG	20–14 AWG	20–14 AWG
Output	20–14 AWG	20–14 AWG	20–14 AWG	20–14 AWG	20–14 AWG
I/O	None	None	None	None	None
Indications					
Indicators	Green LED (DC on)	Green LED (DC on)	Green LED (DC on)	Green LED (DC on)	Green LED (DC on)
Physical Data					
Dimensions					
Length x Width x Depth in Inches (mm)	4.49 x 1.97 x 4.49 (114 x 50 x 114)	4.49 x 1.97 x 4.49 (114 x 50 x 114)	4.49 x 1.97 x 4.49 (114 x 50 x 114)	4.49 x 1.97 x 4.49 (114 x 50 x 114)	2.32 x 6.19 x 6.00 (59 x 157 x 154)
Weight (kg)	0.57 (0.26)	0.64 (0.29)	0.73 (0.33)	0.81 (0.37)	2.45 (1.1)
Mounting and recommended clearance	TS35 rail or chassis; leave 4 in. (10 cm) free space on venting sides.	TS35 rail or chassis; leave 4 in. (10 cm) free space on venting sides.	TS35 rail or chassis; leave 4 in. (10 cm) free space on venting sides.	TS35 rail or chassis; leave 4 in. (10 cm) free space on venting sides.	—
Environmental Performance					
Storage temperature	–25 to 80°C	–25 to 80°C	–25 to 80°C	–25 to 80°C	–40 to 85°C
Operating temperature	–5 to 50°C	–5 to 50°C	–5 to 50°C	–5 to 50°C	–25 to 50°C
Storage humidity	5 to 95%	5 to 95%	5 to 95%	5 to 95%	5 to 95%
Operating humidity	<95% RH noncondensing	<95% RH noncondensing	<95% RH noncondensing	<95% RH noncondensing	20 to 85% noncondensing
Approvals/Certifications					
	UL, IEC, CSA	UL, IEC, CSA	UL, IEC, CSA	UL, IEC, CSA	cCSAus