

S Series

Conventional Single-Output Enclosed Switching Power Supply

Conventional single-output enclosed switching power supply for general industrial and commercial applications. Available in **40W – 350W**, with **3V to 48V** output, selectable AC input by switch, fanless or fan-cooled models, complete protection functions, and cost-effective performance for basic industrial power supply needs.

DOCUMENT

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AT A GLANCE

40–350 W OUTPUT POWER	3–48 VDC OUTPUT VOLTAGE	Selectable AC INPUT BY SWITCH	Fanless / Fan COOLING OPTIONS
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S Series Overview

Conventional single-output enclosed switching power supply for general industrial and commercial applications.

The DAPPRA S Series is a conventional single-output enclosed switching power supply series designed for general industrial and commercial applications. It includes multiple power ratings from 40W to 350W with single-output configurations ranging from 3V to 48V DC.

The S Series uses an enclosed metal chassis with perforated ventilation and selectable AC input by switch. Small and medium power models (S-40, S-50, S-100, S-150) use free air convection cooling without a fan, while higher power models (S-240, S-320) use forced air cooling with built-in DC fan and Fan ON/OFF control.

CORE SPECIFICATIONS

Series	DAPPRA S Series
Product Type	Conventional Single-Output Enclosed Switching Power Supply
Output Power	40 / 50 / 100 / 150 / 240 / 320 / 350 W
Output Voltage	3 / 5 / 7.5 / 10 / 12 / 13.5 / 15 / 18 / 24 / 27 / 30 / 36 / 48 VDC
Input Voltage	85–132 / 170–264 VAC by switch · 240–370 VDC
Switching Frequency	25 kHz to 90 kHz (model dependent)
Cooling	Fanless (40–150W) · Forced air fan (240–320W)
Protection	Short circuit / Overload (S-240 / 320 also OVP / OTP)
Housing	Enclosed metal chassis with vents
Operating Temp.	-10 °C to +60 °C (derating above +50 °C)
Certification	UL1012 · FCC Part 15 J Class B · UL60950-1 · TUV EN60950-1

S Series Key Features

Engineered for conventional, cost-effective enclosed power supply applications.

SELECTABLE AC INPUT BY SWITCH

S Series uses selectable AC input 85–132 VAC / 170–264 VAC via an external switch. Some models also support 240–370 VDC input. S-240 uses auto-switch 88–132 VAC / 176–264 VAC.

ENCLOSED METAL CHASSIS WITH COOLING VENTS

Fully enclosed metal chassis with perforated ventilation holes provides heat dissipation and electrical safety. Suitable for standalone mounting inside industrial equipment and control cabinets.

FANLESS OR FAN-COOLED OPTIONS

S-40/50/100/150 use free air convection cooling without a fan. S-240/320 use forced air cooling with built-in DC fan and Fan ON/OFF control.

WIDE OUTPUT VOLTAGE RANGE

Available in 3V, 5V, 7.5V, 10V, 12V, 13.5V, 15V, 18V, 24V, 27V, 30V, 36V and 48V output options depending on the model.

COMPLETE PROTECTION FUNCTIONS

Short circuit protection and overload protection (105–150% rated output power) are built in. Higher power models (S-240, S-320) also provide over voltage and over temperature protection.

LED INDICATOR FOR POWER ON

Front-panel LED indicates power-on status for quick visual diagnosis.

FIXED SWITCHING FREQUENCY

Switching frequency varies by power rating: S-40 = 75 kHz, S-50 = 27 kHz, S-100 = 25 kHz, S-240 = 75 kHz, S-320 = 90 kHz.

DESIGNED FOR GENERAL INDUSTRIAL APPLICATIONS

Designed referring to UL1012 and FCC Part15 J Conduction Class B for smaller models. S-240 and S-320 approved to UL60950-1 and TUV EN60950-1.

S Series Model Code & Selection

Select the appropriate S model according to the required output power, output voltage and cooling requirement.

Model Code Structure

S - 100 - 24

FIELD	MEANING	AVAILABLE VALUES
S	Series prefix	S
100	Output Wattage — rated output power in Watts	40 / 50 / 100 / 150 / 240 / 320 / 350
24	Output Voltage — nominal DC output voltage	3 / 5 / 7.5 / 10 / 12 / 13.5 / 15 / 18 / 24 / 27 / 30 / 36 / 48 VDC

Example: S-100-24 = S Series, 100W output power, 24V DC output.

MODEL LIST - S-50 (50W)

MODEL	OUTPUT V	OUTPUT A	RATED POWER	EFFICIENCY	DIMENSIONS
S-50-5	5 VDC	10 A	50 W	71%	159×97×38 mm
S-50-12	12 VDC	4.2 A	50.4 W	78%	159×97×38 mm
S-50-15	15 VDC	3.4 A	51 W	78%	159×97×38 mm
S-50-24	24 VDC	2.1 A	50.4 W	82%	159×97×38 mm

S-50: 85–132 / 170–264 VAC by switch or 240–370 VDC. Fixed switching frequency 27 kHz. Operating temperature -10 to +60°C. Fanless. UL1012 / FCC Part 15 J Class B.

MODEL LIST - S-100 (100W)

MODEL	OUTPUT V	OUTPUT A	RATED POWER	EFFICIENCY
S-100-3	3 VDC	20 A	60 W	70%
S-100-5	5 VDC	20 A	100 W	78%
S-100-7.5	7.5 VDC	13.6 A	102 W	80%
S-100-10	10 VDC	10 A	100 W	80%
S-100-12	12 VDC	8.5 A	102 W	81%
S-100-15	15 VDC	6.7 A	100.5 W	81%
S-100-18	18 VDC	5.6 A	100.8 W	82%
S-100-24	24 VDC	4.5 A	108 W	84%
S-100-27	27 VDC	3.7 A	99.9 W	84%
S-100-36	36 VDC	2.7 A	97.2 W	84%
S-100-48	48 VDC	2 A	96 W	84%

S-100: 85–132 / 180–264 VAC by switch or 255–370 VDC. Fixed switching frequency 25 kHz. Fanless. Dimensions 199 × 98 × 38 mm. UL1012 / FCC Part 15 J Class B.

S-240 / S-320 / Other Ratings

High-power fan-cooled models. S-240 and S-320 include built-in DC fan with auto control.

MODEL LIST — S-240 (240W WITH FAN)

MODEL	OUTPUT V	OUTPUT A	RATED POWER	EFFICIENCY	COOLING
S-240-5	5 VDC	40 A	200 W	78%	Fan
S-240-7.5	7.5 VDC	30 A	225 W	80%	Fan
S-240-12	12 VDC	18 A	216 W	82%	Fan
S-240-15	15 VDC	15 A	225 W	83%	Fan
S-240-24	24 VDC	10 A	240 W	84%	Fan
S-240-30	30 VDC	8 A	240 W	85%	Fan
S-240-48	48 VDC	5 A	240 W	85%	Fan

S-240: 88-132 / 176-264 VAC auto-switch or 248-370 VDC. Passive PFC choke. Fixed switching frequency 75 kHz. Fan ON at RT1 ≥ 40°C, OFF at ≤ 35°C. Dimensions 190 × 93 × 65 mm. UL60950-1 / TUV EN60950-1 (except 7.5V).

MODEL LIST — S-320 (320W WITH FAN)

MODEL	OUTPUT V	OUTPUT A	RATED POWER	EFFICIENCY	COOLING
S-320-5	5 VDC	50 A	250 W	77%	Fan
S-320-7.5	7.5 VDC	36 A	270 W	80%	Fan
S-320-12	12 VDC	25 A	300 W	82%	Fan
S-320-13.5	13.5 VDC	22 A	297 W	83%	Fan
S-320-15	15 VDC	20 A	300 W	84%	Fan
S-320-24	24 VDC	12.5 A	300 W	86%	Fan
S-320-27	27 VDC	11 A	297 W	86%	Fan
S-320-48	48 VDC	6.5 A	312 W	86%	Fan

S-320: 88-132 / 176-264 VAC by switch. Fixed switching frequency 90 kHz. Fan ON/OFF auto control. Dimensions 215 × 115 × 50 mm. UL60950-1.

OTHER S SERIES POWER RATINGS

MODEL	COOLING	DESCRIPTION
S-40	Fanless	40W single-output enclosed power supply, 75 kHz switching frequency, 129 × 98 × 38 mm
S-150	Fanless	150W single-output enclosed power supply, 115/230 VAC selectable by switch, 199 × 110 × 50 mm
S-350	Fan	350W single-output enclosed power supply

Please refer to the specific model datasheet for complete specifications.

Output current and output power must not exceed the rated value on its specification. S-240 and S-320 use forced-air fan cooling and include over voltage and over temperature protection.

S Series Dimensions

Enclosed metal chassis with perforated ventilation design. All dimensions in mm, tolerance ±1 mm.

S - 40	
Length (L)	129 mm
Width (W)	98 mm
Height (H)	38 mm
Housing	Enclosed metal chassis
Cooling	Free air (fanless)

S - 50	
Length (L)	159 mm
Width (W)	97 mm
Height (H)	38 mm
Housing	Enclosed metal chassis
Cooling	Free air (fanless)

S - 100	
Length (L)	199 mm
Width (W)	98 mm
Height (H)	38 mm
Housing	Enclosed metal chassis
Cooling	Free air (fanless)

S - 150	
Length (L)	199 mm
Width (W)	110 mm
Height (H)	50 mm
Housing	Enclosed metal chassis
Cooling	Free air (fanless)

S - 240	
Length (L)	190 mm
Width (W)	93 mm
Height (H)	65 mm
Housing	Enclosed metal chassis
Cooling	Forced air (fan)

S - 320	
Length (L)	215 mm
Width (W)	115 mm
Height (H)	50 mm
Housing	Enclosed metal chassis
Cooling	Forced air (fan)

Measurement unit: mm. Data is manually measured and may contain minor deviations — please refer to the actual product for final dimensions.

S Series Installation

The S Series uses an enclosed chassis design for standalone mounting inside industrial equipment. Adequate ventilation clearance is required.

01 / 06 Chassis Mounting Mount the unit on a flat metal surface using the mounting holes on the chassis base. Recommended mounting screws: M3 or M4 depending on the model. Ensure secure fixing to prevent vibration.	02 / 06 Ventilation Clearance Always allow good ventilation clearances around the unit: at least 5 mm left/right, 40 mm above and 20 mm below, to prevent overheating.	03 / 06 Airflow Direction For fan-cooled models (S-240, S-320), ensure airflow direction is not blocked. The built-in fan pulls air through the chassis from the vented sides.
04 / 06 FG Must Be Connected to PE The FG (Frame Ground) terminal must be connected to PE (Protective Earth) for safety and to ensure proper EMC performance.	05 / 06 Operating Temperature Limits All S Series models operate from -10 °C to +60 °C with derating above +50 °C. Do not install near fire sources or high ambient temperature locations.	06 / 06 Indoor Use Only Install only in dry, well-ventilated locations. Do not install near water or high moisture. The unit is designed for indoor industrial use.
The S Series requires adequate ventilation clearance. Ensure perforated ventilation openings and the fan intake/exhaust are not blocked. Do not install in orientations other than the recommended position.		

S Series Wiring & Terminal

The S Series uses screw-type terminal blocks for input and output connections. Use copper wire only and ensure all strands enter the terminal connection securely.

S-40 / S-50 – 5 PINS	
PIN NO.	ASSIGNMENT
1	AC/L
2	AC/N
3	FG (Frame Ground)
4	DC OUTPUT -V
5	DC OUTPUT +V
FG must be connected to PE.	

S-100 – 7 PINS	
PIN NO.	ASSIGNMENT
1	AC/L
2	AC/N
3	FG (Frame Ground)
4, 5	DC OUTPUT -V
6, 7	DC OUTPUT +V

S-150 / S-240 / S-320 – 9 PINS	
PIN NO.	ASSIGNMENT
1	AC/L
2	AC/N
3	FG (Frame Ground)
4, 5, 6	DC OUTPUT -V
7, 8, 9	DC OUTPUT +V
Multiple DC pins should all be connected to prevent excessive current stress on a single contact.	

WIRING SPECIFICATION	
MODEL GROUP	TORQUE
S-40 to S-100	5–6 kgf-cm (4.4–5.2 Lb-in)
S-150 to S-320	8–10 kgf-cm (7–9 Lb-in)
Use stranded copper wire, ≥80 °C rated. 3 mm or 4 mm slotted screwdriver.	

OUTPUT VOLTAGE ADJUSTMENT

+V ADJ Potentiometer	All S models include a front-panel DC output voltage adjustment potentiometer
Power LED	Green power-on indicator LED on all models
Adjustment Range	Typically ±10% of nominal (refer to specific model datasheet)
Output Current / Power	Must not exceed the rated value on the specification

Wiring Note: The FG pin must be connected to PE (Protective Earth). The number of output terminals varies by model — always verify the terminal label before wiring.

S Series Safety & Cautions

Read and follow all safety instructions before installing, wiring, maintaining or modifying the S Series power supply.

01 • ELECTRICAL SHOCK HAZARD

Risk of electrical shock and energy hazard. All failures should be examined by a qualified technician. Do not remove the case.

02 • PRIMARY / SECONDARY ISOLATION

Connecting both the primary and the secondary sides together is not allowed — risk of electric arcs and electric shock (danger to life).

03 • BURN HAZARD

Do not touch the unit in operation and shortly after disconnection.

04 • FIRE & SHORT CIRCUIT

The openings should be protected from foreign objects or dripping liquids.

05 • PROTECTIVE EARTH

The FG (Frame Ground) must be connected to PE (Protective Earth).

06 • RATED OUTPUT

Output current and output power must not exceed the rated value on its specification.

07 • BEFORE SERVICING

Disconnect the system from supply voltage before any installation, maintenance or modification work.

08 • FUSE REPLACEMENT

For continued protection against risk of fire, replace only with the same type and rating of fuse.

09 • EMC DIRECTIVE

The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

Pollution Degree 2: Applies where there is only non-conductive pollution that might temporarily become conductive due to occasional condensation. Generally refers to dry, well-ventilated locations.

S Series Industrial Applications

The S Series is suitable for general industrial and commercial applications requiring a single fixed DC output.

Industrial Control Systems	Factory Automation	Mechanical Equipment
Electrical Equipment	Electronic Instruments	LED Lighting
Communication Equipment	Security Systems	Test & Measurement

TYPICAL USE CASES

BASIC INDUSTRIAL EQUIPMENT Fanless S-40 to S-150 offer quiet, low-maintenance operation for basic industrial equipment in dust-free cabinets.	COMMERCIAL & LED Cost-effective single-output design suits commercial displays, LED lighting drivers, and general-purpose DC loads.
HIGH-POWER APPLICATIONS S-240 and S-320 with built-in fan deliver up to 320W continuous output in a compact enclosed chassis.	TEST & MEASUREMENT Wide output voltage selection (3V to 48V) supports various test fixtures and instrument power needs.

FAQ & Contact Information

Frequently asked questions and DAPPRA contact details.

What is the DAPPRA S Series?

The DAPPRA S Series is a conventional single-output enclosed switching power supply series designed for general industrial and commercial applications requiring a single fixed DC output. It covers 40W to 350W with 3V to 48V output configurations.

What is the input voltage range of the S Series?

The S Series uses selectable AC input 85–132 VAC / 170–264 VAC by switch, or 240–370 VDC on smaller models. The S-240 uses auto-switch 88–132 VAC / 176–264 VAC. The S-320 uses 88–132 VAC / 176–264 VAC by switch.

What is the switching frequency of the S Series?

The switching frequency varies by model: S-40 = 75 kHz, S-50 = 27 kHz, S-100 = 25 kHz, S-240 = 75 kHz, S-320 = 90 kHz.

Which S Series models use a built-in cooling fan?

The S-40, S-50, S-100 and S-150 models use free air convection cooling without a fan. The S-240 and S-320 models use forced air cooling with built-in DC fan and Fan ON/OFF control.

What protections does the S Series provide?

The S Series provides short circuit protection and overload protection. The higher power models (S-240, S-320) also provide over voltage protection and over temperature protection.

What is the operating temperature range of the S Series?

The S Series operates from –10 °C to +60 °C with derating above +50 °C, depending on the model.

What certifications does the S Series have?

The S Series is designed referring to UL1012 and FCC Part15 J Conduction Class B for smaller models. The S-240 and S-320 are approved to UL60950-1 and TUV EN60950-1.

How do I choose the right S Series model?

Select the S model according to the required output power (40W to 350W), output voltage, whether fan cooling is required, and available mounting space.

Contact DAPPRA

For product selection, technical support, samples or quotation, please contact us through the channels below.

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Notice: Specifications, dimensions and model availability in this datasheet are subject to change without prior notice. Please refer to the latest DAPPRA official documentation or contact DAPPRA for the most current information. S Series Datasheet · Doc No. S-DS-001 · Rev. 1.0 · 2024-01.