

EDR Series

Economical Slim DIN Rail Power Supply

Economical slim metal-housing single-output DIN rail power supply for industrial control, factory automation and electromechanical applications. Available in **75W / 120W / 150W**, with **12 / 24 / 48 VDC** output, universal **90–264 VAC** input, up to **88.5%** efficiency, fanless natural convection cooling, **32–40 mm** slim housing, TS35 DIN rail mounting, and **UL508** approval.

DOCUMENT

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Datasheet Contents

EDR Series overview, key features, model code and model selection, dimensions, installation, wiring, safety, applications and FAQ.

01 · Product Overview	03
SERIES INTRODUCTION, POSITIONING AND CORE SPECIFICATIONS	
02 · Key Features	04
UNIVERSAL INPUT, SLIM HOUSING, EFFICIENCY, PROTECTION	
03 · Model Code & Model Selection	05
NAMING RULES, FIELD DEFINITIONS AND MODEL LIST	
04 · Dimensions	06
EDR-75 / EDR-120 / EDR-150-24 HOUSING DIMENSIONS	
05 · Installation	07
VERTICAL ORIENTATION, CLEARANCE AND TS35 RAIL MOUNTING	
06 · Wiring & Terminal	08
TB1 / TB2 PIN ASSIGNMENT AND TERMINAL DIAGRAM	
07 · Wiring Specification	09
WIRE GAUGE, TORQUE, FUSE AND CIRCUIT BREAKER	
08 · Safety & Compliance	10
SAFETY CAUTIONS AND COMPLIANCE NOTES	
09 · Applications	11
INDUSTRIAL CONTROL, FACTORY AUTOMATION AND PANELS	
10 · FAQ & Contact	12
FAQ AND CONTACT INFORMATION	

AT A GLANCE

75-150 W OUTPUT POWER	90-264 VAC UNIVERSAL AC INPUT	up to 88.5 % EFFICIENCY	32-40 mm SLIM HOUSING WIDTH
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EDR Series Overview

Economical slim metal-housing single-output DIN rail power supply for industrial control, factory automation and electromechanical applications.

The DAPPRA EDR Series is an economical slim metal-housing DIN rail power supply series designed for industrial control, factory automation and electromechanical applications. It is rated at 75W, 120W and 150W with single-output configurations of 12V, 24V and 48V DC.

The series features a universal AC input range of 90–264 VAC, fanless natural convection cooling and complete protection functions including short circuit, overload, over voltage and over temperature protection. All models are designed for standard TS35/7.5 or TS35/15 DIN rail mounting.



FIGURE 1 · EDR SERIES OVERVIEW

CORE SPECIFICATIONS

Series	DAPPRA EDR Series
Product Type	Economical Slim DIN Rail Power Supply
Output Power	75 / 120 / 150 W
Output Voltage	12 / 24 / 48 VDC (EDR-150: 24 VDC only)
Input Voltage	90–264 VAC (single phase) · 120–370 VDC
Efficiency	up to 88.5% (EDR-75 / EDR-120) · up to 87% (EDR-150)
Cooling	Fanless natural convection
Protection	Short circuit / Overload / Over voltage / Over temperature
Housing	Slim metal housing — 32 mm (EDR-75) / 40 mm (EDR-120 / EDR-150)
Mounting	TS35/7.5 or TS35/15 DIN rail
Operating Temperature	45 °C (EDR-75-12) · 50 °C (other models)
Certification	UL508 · EN61000-6-2 industrial immunity

EDR Series Key Features

Engineered for economical, space-saving industrial power supply applications.

UNIVERSAL AC INPUT 90–264 VAC

Full-range single-phase AC input supports global mains voltages without external selection switches. Also supports 120–370 VDC input.

SLIM METAL HOUSING FROM 32 MM

EDR-75 is only 32 mm wide, while EDR-120 and EDR-150 are 40 mm wide — saving valuable space inside control cabinets.

HIGH EFFICIENCY UP TO 88.5%

EDR-75 and EDR-120 achieve up to 88.5% efficiency; EDR-150 achieves up to 87%, reducing energy consumption and heat generation.

FANLESS NATURAL CONVECTION COOLING

No fan means no dust intake, no acoustic noise and no moving parts — ideal for dusty industrial environments and silent operation.

COMPLETE PROTECTION FUNCTIONS

Short circuit protection, overload protection (constant current limiting), over voltage protection and over temperature protection are built in.

TS35 DIN RAIL MOUNTING

Designed for standard TS35/7.5 or TS35/15 DIN rail mounting inside electrical panels, control cabinets and automation equipment.

EDR Series Model Code & Selection

Select the appropriate EDR model according to the required output power, output voltage and current.

Model Code Structure

EDR - 120 - 24

FIELD	MEANING	AVAILABLE VALUES
EDR	Series prefix	EDR
120	Output Power — rated output power in Watts	75 / 120 / 150
24	Output Voltage — nominal DC output voltage	12 / 24 / 48 VDC (EDR-150: 24 only)

Example: EDR-120-24 = EDR Series, 120W output power, 24V DC output.

MODEL LIST

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	OUTPUT POWER	WIDTH
EDR-75-12	12 VDC	6.3 A	75 W	32 mm
EDR-75-24	24 VDC	3.2 A	75 W	32 mm
EDR-75-48	48 VDC	1.6 A	75 W	32 mm
EDR-120-12	12 VDC	10 A	120 W	40 mm
EDR-120-24	24 VDC	5 A	120 W	40 mm
EDR-120-48	48 VDC	2.5 A	120 W	40 mm
EDR-150-24	24 VDC	6.5 A (230 VAC) / 5.2 A (115 VAC)	150 W	40 mm

EDR-75 and EDR-120 offer 12V, 24V and 48V output options. EDR-150 is available in 24V only. Output current and output wattage must not exceed the rated value on the specification.

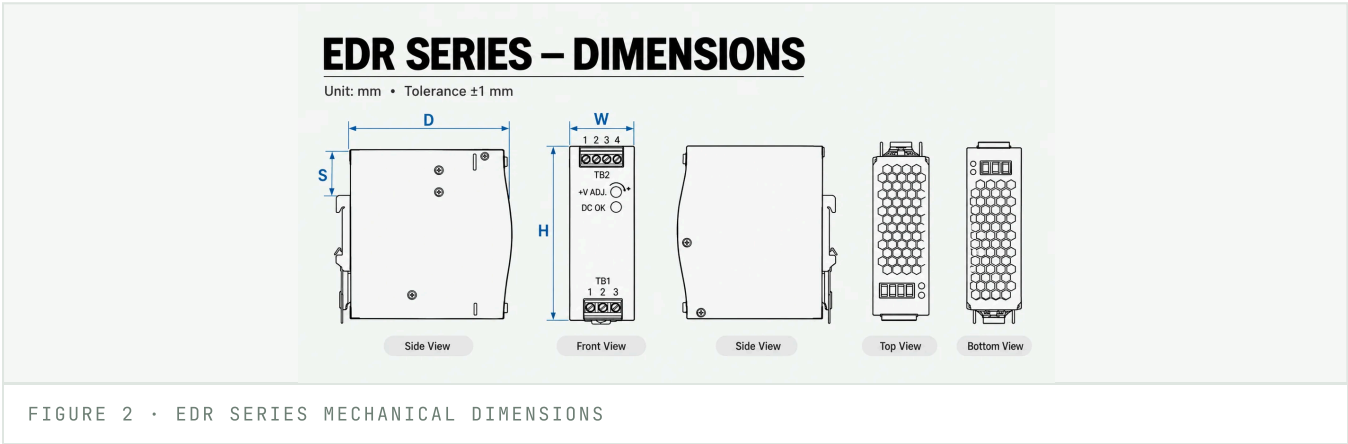
EDR Series Dimensions

Slim metal housing with a compact footprint designed for space-constrained control cabinets.
All dimensions in mm, tolerance ± 1 mm.

EDR-75	
Width (W)	32 mm
Depth (D)	102 mm
Height (H)	125.2 mm
Rail Slot to Top (S)	35 mm
Front Panel	DC OK indicator

EDR-120	
Width (W)	40 mm
Depth (D)	113.5 mm
Height (H)	125.2 mm
Rail Slot to Top (S)	35 mm
Front Panel	+V ADJ / DC OK

EDR-150-24	
Width (W)	40 mm
Depth (D)	113.5 mm
Height (H)	125.2 mm
Rail Slot to Top (S)	35 mm
Front Panel	+V ADJ / DC OK



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

EDR Series Installation

The EDR Series supports DIN rail mounting with specific ventilation clearance and orientation requirements for reliable operation.

01 / 06

Vertical Orientation Only

The appropriate mounting orientation is vertical — input terminals at the bottom and output terminals at the top. Upside-down, horizontal or table-top mounting is not allowed.

02 / 06

Ventilation Clearance

Always allow good ventilation clearances around the unit: 5 mm left and right, 40 mm above and 20 mm below, to prevent overheating.

03 / 06

TS35 DIN Rail Mounting

Admissible DIN rail: TS35/7.5 or TS35/15. Fit over the top hat rail, slide downward until it hits the stop, press against the bottom for locking.

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

Maximum operating temperature is 45 °C for EDR-75-12; 50 °C for EDR-75-24/48, EDR-120-12/24/48 and EDR-150-24.

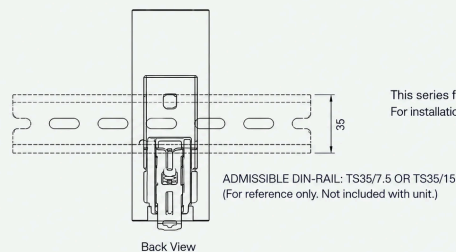
06 / 06

Pollution Degree 2 Environment

Install the unit only in a pollution degree 2 environment — typically dry, well-ventilated locations such as control cabinets.

EDR SERIES — INSTALLATION

DIN-Rail Mounting



This series fits DIN rail TS35/7.5 or TS35/15.
For installation details, please refer to the Instruction Manual.

FIGURE 3 • EDR SERIES INSTALLATION AND MOUNTING

EDR Series Wiring & Terminal

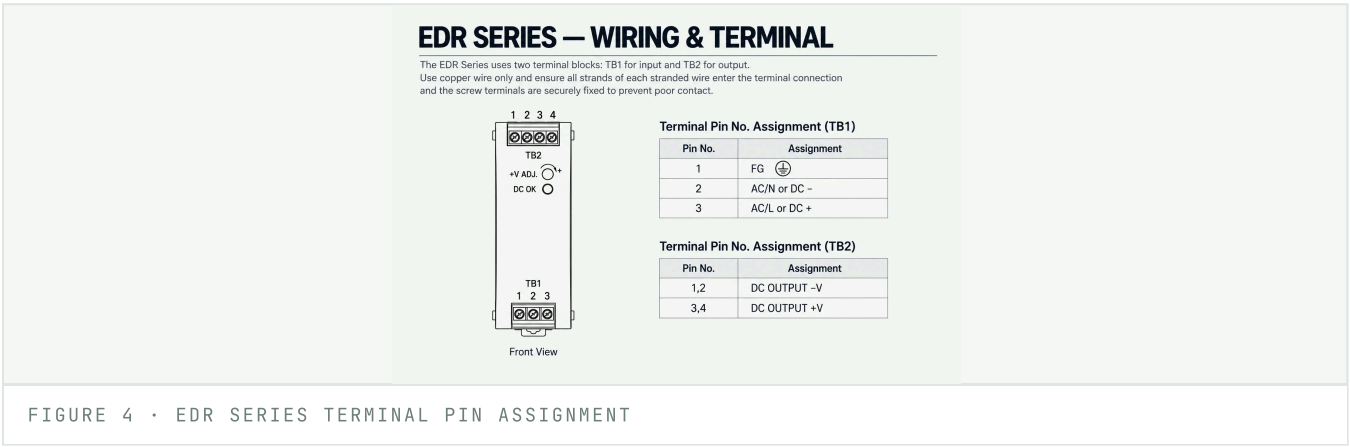
The EDR Series uses two terminal blocks: TB1 for input and TB2 for output. Use copper wire only and ensure all strands of each stranded wire enter the terminal connection.

TB1 — Input Terminal

PIN NO.	ASSIGNMENT
1	FG (Frame Ground)
2	AC/N or DC-
3	AC/L or DC+

TB2 — Output Terminal

PIN NO.	ASSIGNMENT
1, 2	DC OUTPUT -V
3, 4	DC OUTPUT +V



The FG pin must be connected to PE (Protective Earth). Both -V pins (1, 2) and both +V pins (3, 4) should be connected to their respective output wires to prevent excessive current stress on a single contact.

The actual wiring should follow the wiring diagram provided in the EDR Series installation manual. Use copper wire only and ensure all strands enter the terminal connection securely.

EDR Series Wiring Specification

Recommended wire gauge, terminal torque settings, and fuse / circuit breaker selection for the EDR Series.

Recommended Wire

AWG	RATED CURRENT	CROSS-SECTION
18	7 A	0.8 mm ²
16	10 A	1.3 mm ²
14	15 A	2.1 mm ²
12	20 A	3.3 mm ²

Current each wire carries should be de-rated to 80% of the current suggested above when using 5 or more wires connected to the unit. Use wires that can withstand temperatures of at least 80 °C, such as UL1007.

Terminal Torque Setting

MODEL	I / P	O / P
EDR-75	6.9 kgf-cm (6 Lb-in)	6.9 kgf-cm (6 Lb-in)
EDR-120	10.35 kgf-cm (9 Lb-in)	10.35 kgf-cm (9 Lb-in)
EDR-150	6.3 kgf-cm (5.5 Lb-in)	8 kgf-cm (7 Lb-in)

Recommended wire strapping length: 5 mm (0.197"). Recommended screwdriver: 3 mm, slotted type.

Fuse & Circuit Breaker (230 V)

MODEL	FUSE	C16	D16
EDR-75	T3.15A / L250V	4	9
EDR-120	T4A / L250V	5	9
EDR-150	T4A / L250V	5	8

Maximum number of EDR PSUs that can be connected to a circuit breaker at 230 V. For continued protection against risk of fire, replace only with the same type and rating of fuse.

DC Output Voltage Adjustment: All EDR models include a front-panel DC output voltage adjustment potentiometer (+V ADJ). EDR-120 and EDR-150 also include a DC OK indicator LED. Output current and output wattage must not exceed the rated value on the specification.

EDR Series Safety & Cautions

Read and follow all safety instructions before installing, wiring, maintaining or modifying the EDR 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 of the power supply yourself.

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 wattage must not exceed the rated value on the specification.

07 • BEFORE SERVICING

Before commencing any installation, maintenance or modification work, disconnect the system from supply voltage.

08 • FUSE REPLACEMENT

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

09 • BSMI-CERTIFIED MODELS

Flammability of V1 or above is required for surrounding equipment. Class A equipment should not be installed or used in a residential environment.

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, such as control cabinets.

EDR Series Industrial Applications

The EDR Series is suitable for industrial control systems, factory automation equipment, electrical panels, semiconductor manufacturing equipment and electromechanical devices.

Industrial Control Systems	Factory Automation	Electrical Panels
Semiconductor Equipment	Electromechanical Devices	Machine Control
Building Automation	Process Control	Test & Measurement

TYPICAL USE CASES

CONTROL CABINETS Slim 32–40 mm housing and DIN rail mounting make the EDR Series ideal for space-constrained control cabinets and electrical panels.	FACTORY AUTOMATION Reliable single-output DC power with full protection functions for PLC, sensor, relay and actuator circuits in automation equipment.
ELECTROMECHANICAL DEVICES Fanless cooling and wide operating temperature range support continuous operation in electromechanical and machine control applications.	TEST & MEASUREMENT High efficiency up to 88.5% and stable DC output support precision test, measurement and process control equipment.

FAQ & Contact Information

Frequently asked questions and DAPPRA contact details.

What is the DAPPRA EDR Series?

The DAPPRA EDR Series is an economical slim metal-housing DIN rail power supply series designed for industrial control, factory automation and electromechanical applications. It is rated at 75W, 120W and 150W with 12V, 24V or 48V single output.

What output voltages are available in the EDR Series?

The EDR-75 and EDR-120 offer 12V, 24V and 48V output options. The EDR-150 is available in 24V only.

What is the maximum operating temperature of the EDR Series?

The maximum operating temperature is 45 °C for EDR-75-12 and 50 °C for EDR-75-24/48, EDR-120-12/24/48 and EDR-150-24.

Does the EDR Series support DC output voltage adjustment?

Yes. All EDR models include a front-panel DC output voltage adjustment potentiometer (+V ADJ). EDR-120 and EDR-150 also include a DC OK indicator LED.

How do I choose the right EDR Series model?

Select the EDR model according to the required output power (75W, 120W or 150W), output voltage (12V, 24V or 48V) and available DIN rail mounting space in the control cabinet.

What is the input voltage range of the EDR Series?

The EDR Series supports a universal AC input range of 90–264 VAC (single phase) or 120–370 VDC.

What is the efficiency of the EDR Series?

The EDR Series achieves efficiency up to 88.5% for EDR-75 and EDR-120, and up to 87% for EDR-150.

What is the terminal pin assignment of the EDR Series?

TB1 (Input): Pin 1 = FG, Pin 2 = AC/N or DC–, Pin 3 = AC/L or DC+. TB2 (Output): Pin 1, 2 = DC OUTPUT –V; Pin 3, 4 = DC OUTPUT +V.

What certifications does the EDR Series have?

The EDR Series is certified to UL508 (industrial control equipment) and complies with EN61000-6-2 industrial immunity level.

Contact DAPPRA

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

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PRODUCT CATEGORY

dappra.com/product-category/industrial-control-components/industrial-power-supply/

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. EDR Series Datasheet · Doc No. EDR-DS-001 · Rev. 1.0 · 2024-01.