

Excellent Integrated System Limited

Stocking Distributor

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[Recom Power](#)
[REDIN45-12](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

Features

- Universal AC Input (85-264VAC)
- Long 7 Year Warranty
- Protections: SCP, OVP, OCP, OTP
- 100% Full Load burn-in test
- DC OK Indicator LED with Relay Contacts
- cooling by free air convection, 5000m operation
- UL, CSA & CE certified with CB Report

Description

This DIN-rail mounted power supply uses high reliability components to give a long, trouble-free life. The power supply can be end mounted to save space or side mounted for use in low-profile cabinets. Relay contacts simplify DC OK monitoring and the units can deliver 60W start-up power. The REDIN series is fully certified for industrial use and carries a 7-year warranty.

Selection Guide

Part Number	Input Voltage Range (VAC)	Output Voltage (VDC)	Output Trimming Voltage (VDC)	Rated Current (A)	Efficiency typ. (%)	Max. Capacitive Load (μF)
REDIN45-12	85-264	12	12-15	3.75	85	18800
REDIN45-24	85-264	24	24-28	1.875	86	4700

Specifications (measured at TA= 25°C, 230VAC, full load and after warm up)

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range	all operating conditions	85VAC		264VAC
max. Input Voltage	max. 1 second			300VAC 375VDC
Output Voltage Adjustment (Factory Setting) ⁽¹⁾	12Vout 24Vout		12-15VDC (12V±5%) 24-28VDC (24V±5%)	
Input Current	full load, 115VAC full load, 230VAC			1.35A 0.75A
Inrush Current	cold start at 25°C, 115VAC cold start at 25°C, 230VAC			40A 60A
No Load Power Consumption	standard (with Relay) /NR option (no Relay)			<1000mW <500mW
Start Up time	cold start, 230VAC		500ms	1000ms
Rise time	cold start, 230VAC		20ms	
Hold-up time	full load, 115VAC full load, 230VAC		20ms 50ms	
Input Frequency Range		47Hz		63Hz
Operating Frequency Range			65kHz	
Efficiency			see Selection Guide	
Output Ripple and Noise ⁽²⁾	12Vout 24Vout		60mVp-p 75mVp-p	
Over Load	all operating conditions		140% for 5 seconds max.	

Notes:

Note1: For more details refer to Vadj. Derating Graph

Note2: Ripple and Noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with 0.1μF & 47μF parallel capacitor.

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REDIN45

45 Watt DIN-Rail Power Supply



CB-Report
 UL-60950-1 Certified
 UL-508 Certified
 IEC-60950-1 Certified
 EN-60715 Compliant
 EN-50022 Compliant
 CSA G22.2 No. 60950-1-07 Certified

Refer to Applications Notes

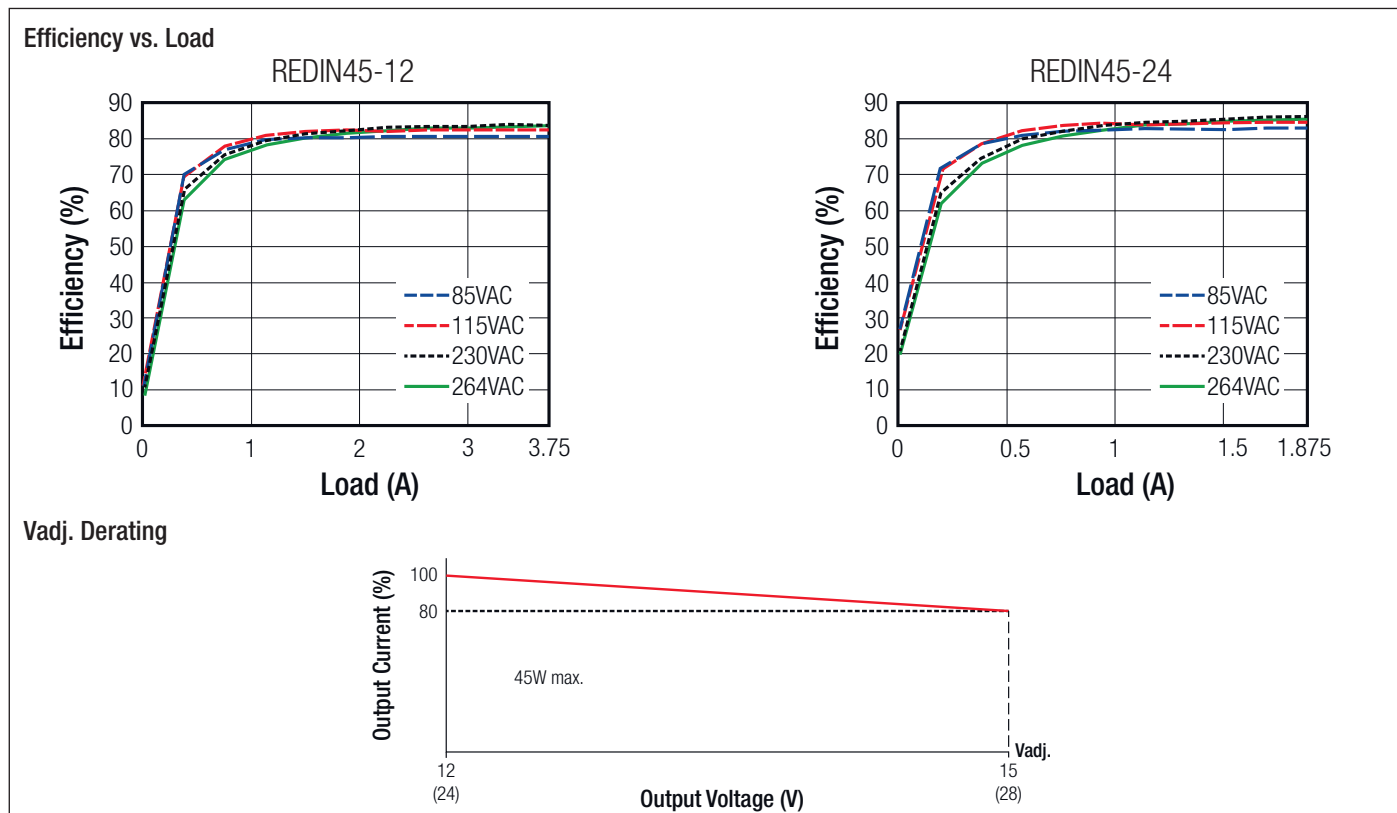
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AC/DC Converter

REDIN45

Series

Specifications (measured at TA= 25°C, 230VAC, full load and after warm up)



REGULATION		
Parameter	Condition	Value
Line Regulation		±0.1 typ. / ±1% max.
Load Regulation		±0.1 typ. / ±1% max.
Transient Response ⁽³⁾	12Vout (step load change: 1.875A - 3.75A) 24Vout (step load change: 0.937A - 1.875A)	±5% typ. ±5% typ.
Dwell Time		100Hz & 1kHz 50% duty
Slew Rate		0.5A / μs
Notes:		
Note3: Transient Response + E-CAP loading 3300μF. Other specs with resistive load only.		

PROTECTION		
Parameter	Condition	Value
Input Fuse		T2.5A, slow blow type
Short Circuit Protection (SCP)	Hiccup	auto-recovery after fault condition
Over Voltage Protection (OVP)	12Vout 24Vout	18VDC max., shut-down latch-off o/p voltage, re-power on to recover 35VDC max., shut-down latch-off o/p voltage, re-power on to recover
Over Current Protection (OCP)		150% typ., auto-recovery after fault condition
Over Temperature Protection (OTP)	detect on inside ambient	105°C±5%, shut-down latch-off o/p voltage, re-power on to recover
Isolation Voltage	I/P to O/P	3.75kVAC / 1 minute
	I/P to FG	1.88kVAC / 1 minute
	O/P to FG	0.5kVAC / 1 minute
Isolation Resistance	500VDC, 70% RH, I/P to O/P; I/P to FG; O/P to FG	100MΩ min.
Leakage Current	240VAC	<1.0mA
Power OK LED	Relay Contacts LED/Relay	1A, 30VDC / 120VAC ON if Vout = 11-16V (12V) / 22-30V (24V)

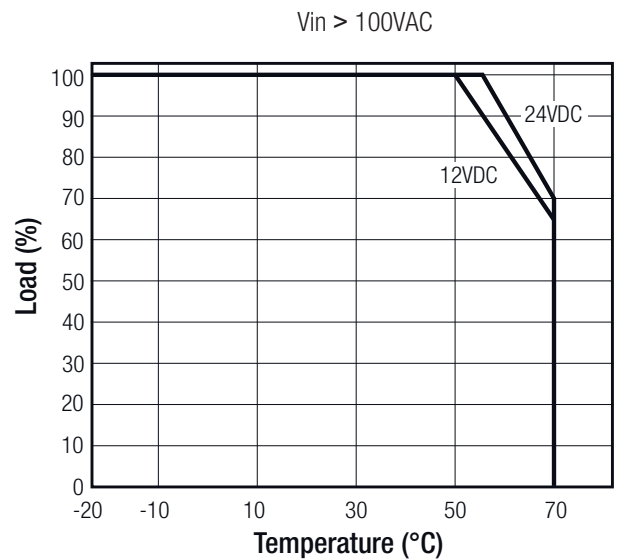
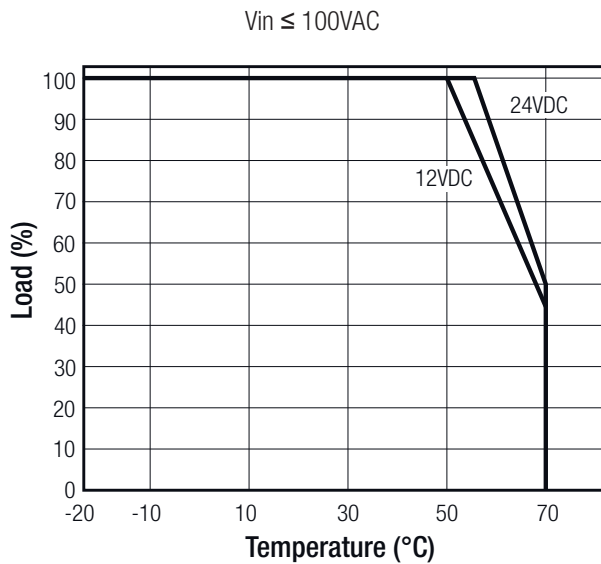
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Specifications (measured at TA= 25°C, 230VAC, full load and after warm up)

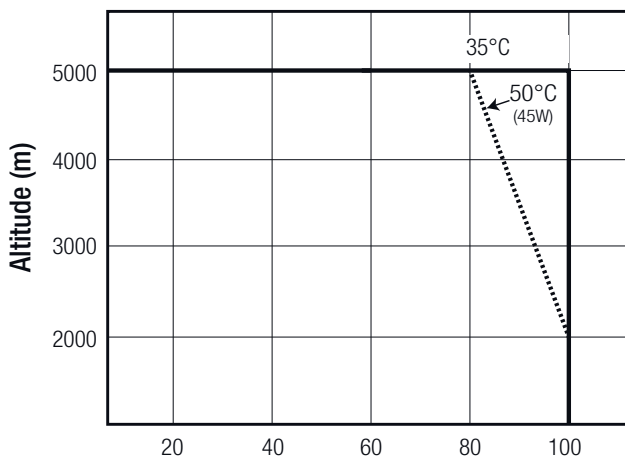
ENVIRONMENTAL		
Parameter	Condition	Value
Operating Temperature Range	with derating	-20°C to +70°C (see graph)
Operating Humidity	non-condensing	20% - 90%RH
Vibration		10-500Hz 2G, 60min.
Shock	3 times each axis	10G / 11ms, along X, Y and Z axis
Altitude	see derating graph	5000m
MTBF (+25°C)	MIL-HDBK-217F, 115VAC, 60Hz, 75% load	200 x 10 ³ hours
Design Lifetime (+40°C)		87.6 x 10 ³ hours

Derating Graph

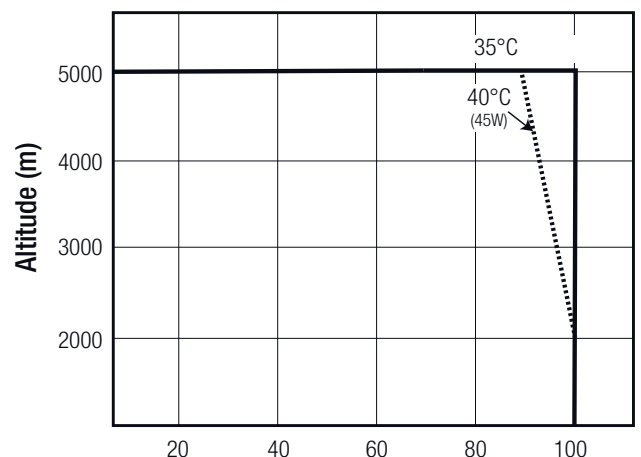


Typical Characteristics

REDIN45-12



REDIN45-24



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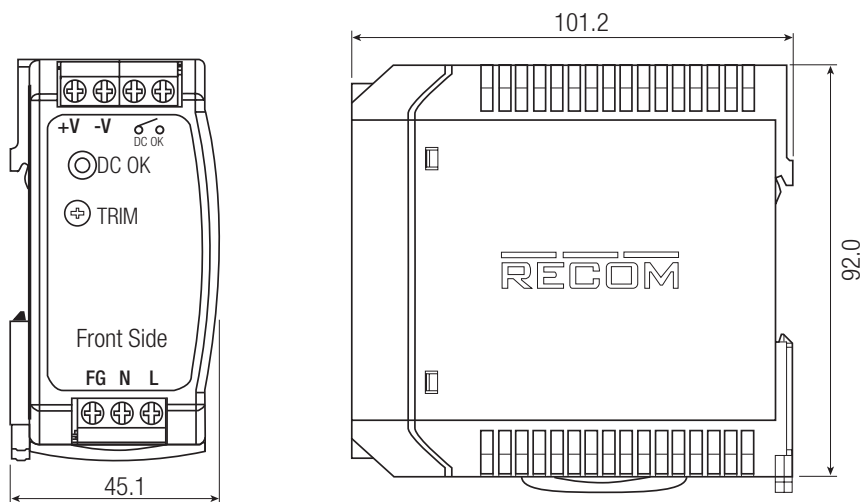
Series

Specifications (measured at TA= 25°C, 230VAC, full load and after warm up)

SAFETY AND CERTIFICATIONS		
Certificate Type (Safety)	Report / File Number	Standard
UL General Safety	E224736	UL-60950-1, 2nd Edition
CSA General Safety		UL-1310
Industrial Control Equipment General Use Power Supplies	E470721	C22.2 No. 60950-1-07, 2nd Edition
IEC/EN General Safety	E224736	UL-508 C22.2 No. 107.1
Chinese Safety Standard	E224736	IEC/EN-60950-1, 2nd Edition GB 4943.1-2011
EMC Compliance		
EMC Compliance	Report / Condition	Standard / Criterion
EMI Standard	Report: HA150146	EN-55022, Class B
		EN-55024, Class B
		FCC15, Class B
ESD	±8kV Contact & Air Discharge 10V/m, 80-300MHz, 80% AM at 1kHz Level 2	EN-61000-4-2, Criteria A
Radiated Immunity		EN-61000-4-3, Criteria A
Fast Transient	±2kV / L-N, ±4kV / L, N-FG 10Vrms, 0.15-80MHz, 80% AM at 1kHz	EN-61000-4-4, Criteria A
Surge		EN-61000-4-5, Criteria A
Conducted Immunity	40% reduction, 200ms 70% reduction, 500ms 90% reduction, 5s	EN-61000-4-6, Criteria A
Power frequency magnetic field immunity test		EN-61000-4-8, Criteria A
Noise Immunity		EN-61000-4-11, Criteria A
Harmonic Immunity	not applicable input below 75W	EN-61000-4-11, Criteria B
Voltage Flicker		EN-61000-3-2 EN-61000-3-3

DIMENSION and PHYSICAL CHARACTERISTICS		
Parameter	Type	Value
Case Material		UL94V-0 plastic
Package Dimension (WxHxD)		45.1 x 92.0 x 101.2mm
Package Weight		332g

Dimension Drawing (mm)



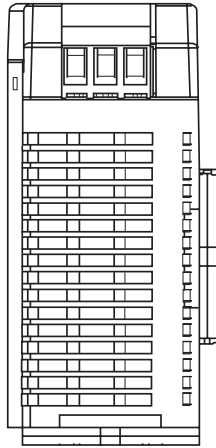
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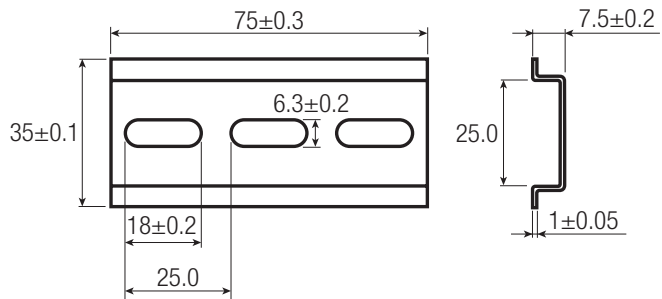
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Dimension Drawing (mm)

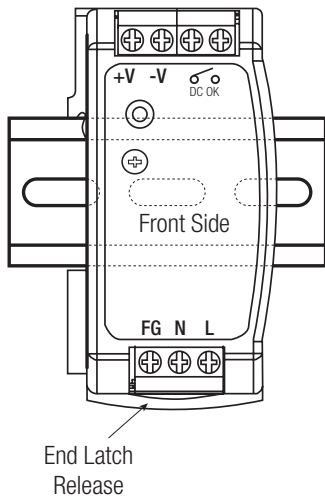


DIN-RAIL mounting bracket
(75mm) included

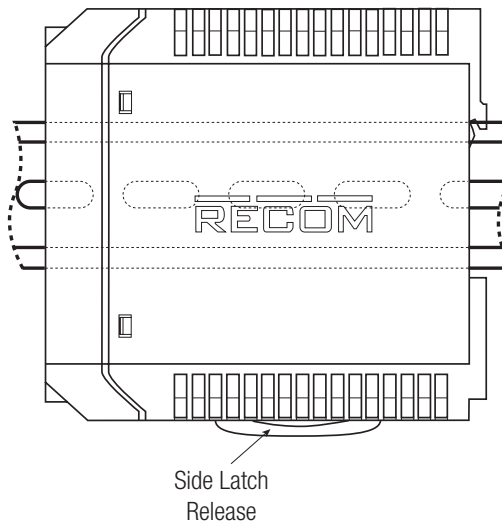


INSTALLATION

END MOUNTING



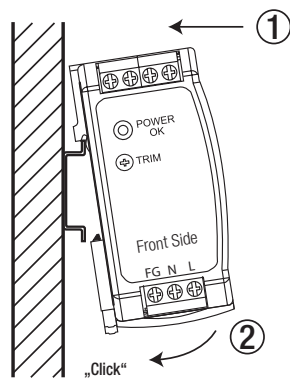
SIDE MOUNTING



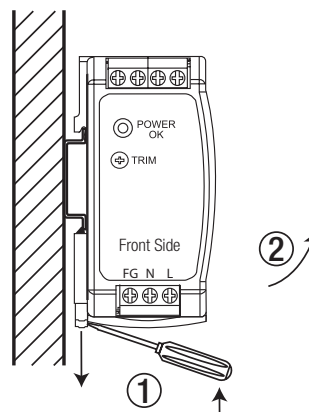
Tolerance: ±0.5mm

Mounting Instruction

Mounting



Releasing



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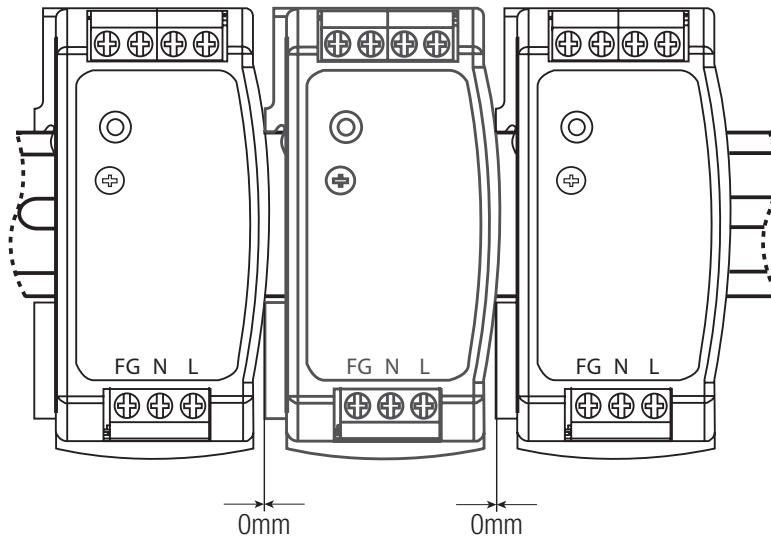
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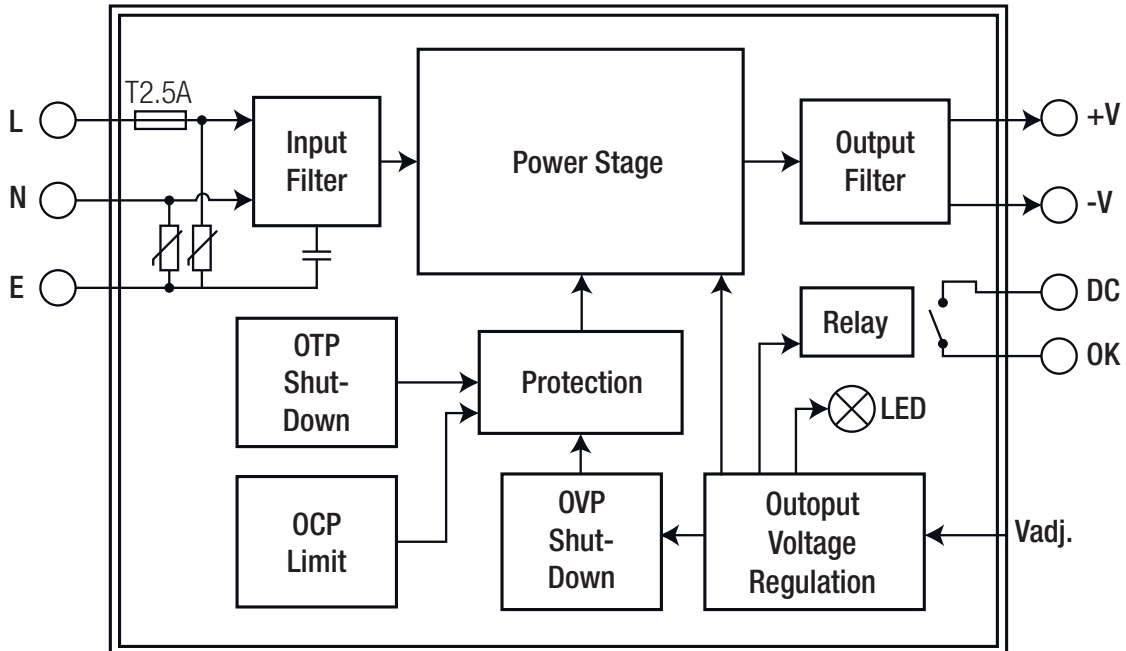
Specifications (measured at TA= 25°C, 230VAC, full load and after warm up)

Mounting Multiple Power Supplies



no spacers between
supplies required

Functional Diagram



PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	Cardboard Box	310 x 285 x 252mm
Packaging Quantity		30pcs
Storage Temperature Range		-30°C to +85°C
Storage Humidity		10% - 90% RH