

## ADN-C Series

120 - 480 Watts

**Total Power:** 120-480 Watts  
**Input Voltage:** 85-264 Vac,  
90-375 Vdc  
**# of Outputs:** Single



## Special Features

- Slim form factor
- **Five year warranty**
- High Efficiency > 90% Typ.
- Full Power at 60 °C
- Power Boost™
- Industrial Grade Design
  - Patented metal mounting clip
  - Metal case
- MTBF > 450,000h demonstrated at 40 °C
- Active PFC > 0.92
- Adjustable output
- Overvoltage protection with autorecovery
- Continuous short circuit and overload protection
- SEMI F47 Sag Immunity
- New visual diagnostic LED
- 3 Status LEDs
  - Input
  - Output
  - Alarm
- DC OK Relay
- Parallel Operation Capability
- Screw terminal connections
- RoHS Compliant
- No tools required for mounting

## Safety

- UL508, cULus Listed
- UL 60950-1, cURus
- IEC60950-1
- Class I, Div 2 Hazardous Locations
- IP20
- CE

## Electrical Specifications

Input	
AC Input range:	Nominal: 115 - 230 Vac 85 - 264 Vac
DC Input range:	90-375 Vdc
Frequency:	47-67 Hz, 400 Hz
Efficiency:	> 90%
Inrush current:	ADN5-24-1PM-C: < 15 A ADN10-24-1PM-C: < 30 A ADN20-24-1PM-C: < 40 A
PFC:	Active, better than 0.92
Output	
Nominal voltage:	ADN5-24-1PM-C & ADN10-24-1PM-C: 24 Vdc (22.5 - 28.5 Vdc Adj) ADN20-24-1PM-C: 24 Vdc (24-28 Vdc Adj)
Initial Voltage Setting:	24.5 V ± 1%
Hold-up time:	> 20 ms at full load (100 Vac Input @ Tamb = +25 °C)
Voltage regulation:	< ± 2% (combination line, load, time and temperature related changes)
Ripple:	ADN5-24-1PM-C & ADN10-24-1PM-C: < 50 mVpp ADN20-24-1PM-C: < 100 mVpp
Back EMF immunity:	< 35 Vdc
Power Boost™:	1.5 x Nominal current for 4 seconds.
Short circuit current:	1.5 x Nominal current at near zero volts at short circuit condition
Parallel operation:	Switch selectable single unit or parallel unit operation. Units will not be damaged by parallel operation (regardless of switch position setting)
Output Noise suppression:	Radiated EMI values below EN61000-6-2
Overvoltage protection:	> 30.5 Vdc but < 33 Vdc, auto recovery
Line and Load regulation:	< 0.5%
Time and Temperature Drift:	< 1%

## General Specifications

EMC Emissions:	EN61000-6-2:2001, EN61000-6-3:2001, Class B EN55011, EN55022 Radiated and Conducted including Annex. A, EN61000-3-2
EMC Immunity:	EN61000-6-1:2001, EN61000-6-2:2001, EN61000-4-2 Level 4, EN61000-4-3 Level 3, EN61000-4-6 Level 3, EN61000-4-4 Level 4 input and level 3 output. EN61000-4-5 Isolation class 4, EN61000-4-11, IEC 61000-4-34 voltage dip immunity standard
Warranty:	5 Years
General protection safety:	Protected against continuous short-circuit, continuous overload, continuous open circuit. Protection Class 1 (IEC536), degree of protection IP20 (IEC60529) Safe low voltage: SELV (acc. IEC60950-1)
Status Indicators:	Visual: 3 status LEDs (Input, Output, Alarm) Relay: N.O. contact rated 200 mA/50 Vdc

## LED Diagnostics

LED	OK	Loss of Ac	Low Ac	No Dc	High Load	Overload	Hot	Too Hot
• Input	Green	---	Yellow	Green	Green	Green	Green	Green
• Output	Green	---	Green	---	Yellow	Yellow	Green	---
• Alarm	---	---	---	Red	Yellow	Red	Yellow	Yellow

## Environmental Specifications

Storage/shipment:		-25 °C to + 85 °C
Operation (convection):	ADN5-24-1PM-C & ADN10-24-1PM-C:	Full Load -10 °C to + 60 °C derate to 50% load at +70 °C
	ADN20-24-1PM-C:	Full Load -25 °C to + 60 °C derate to 50% load at +70 °C
	Up to 50% load permissible with horizontal or on top mounting orientation	

## Other Features

External fusing:	Not required. Unit provides internal fuse (not accessible)	
Mounting orientation:	Standard: Vertical, Optional: Horizontal or on Top Simple snap-on to DIN TS35/7.5 or TS35/15 rail system	
Ventilation:	Normal convection, No fan required	
Cooling Spacing	ADN5-24-1PM-C & ADN10-24-1PMC:	15 mm in front, 25 mm above and below, 10 mm left and right
	ADN20-24-1PMC:	15 mm in front, 40 mm above and below, 10 mm left and right
Connections:	Input: Screw terminals, connector size range: 16-10 AWG (1.5-6 mm <sup>2</sup> ) for solid conductors	
	Output: Two terminals per output, connector size range: 16-10 AWG (1.5-6 mm <sup>2</sup> ) for solid conductors	

## Ordering Information

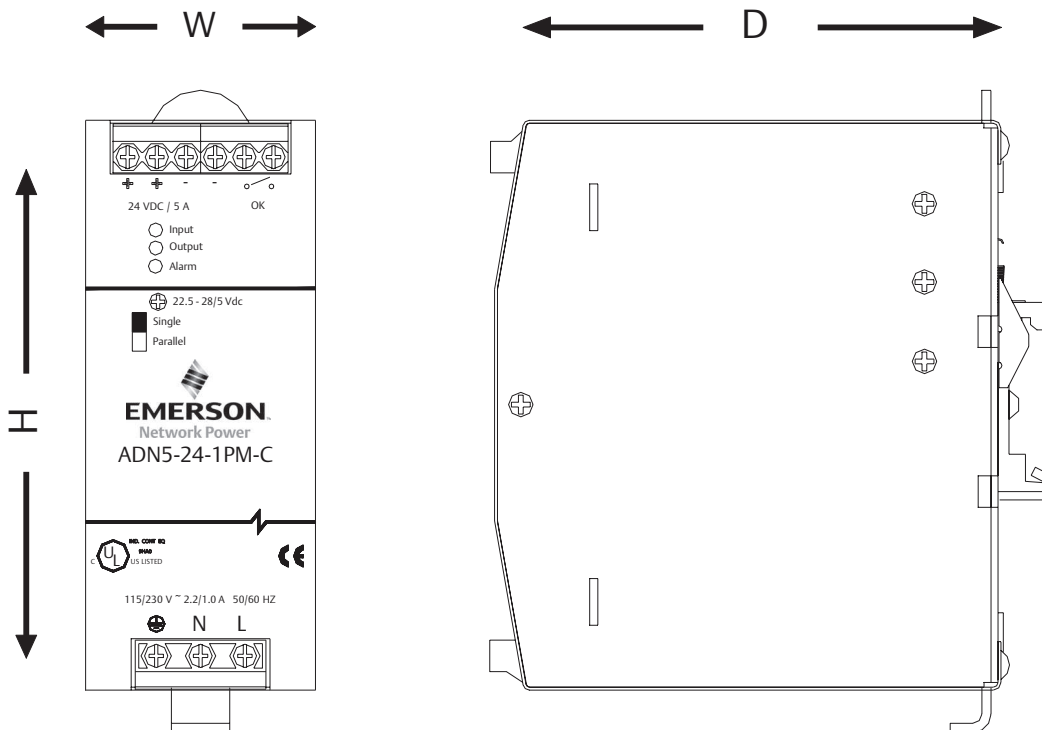
Model Number	Power	Input Voltage	Weight	Current	Case Type	MTBF
						Demonstrated at 40 °C
ADN5-24-1PM-C	120 W	85-264 Vac 90-375 Vdc*	1.65 lbs (750 g)	5A @ 24 Vdc	Metal with patented mounting clip	550,000 hours
ADN10-24-1PM-C	240 W		1.98 lbs (900 g)	10 A @ 24 Vdc		450,000 hours
ADN20-24-1PM-C	480 W		2.6 lbs (1200 g)	20 A @ 24 Vdc		

\*No UL listed for DC input

## Dimensions

	Height	Width	Depth
ADN5-24-1PM-C	4.85 in (123 mm)	1.97 in (50 mm)	4.37 (111 mm)
ADN10-24-1PM-C		2.36 in (60 mm)	
ADN20-24-1PM-C		3.42 in (87 mm)	4.96 in (126 mm)

## Mechanical Drawing



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