ARTESYN ADN-C SERIES

120 to 960 W

Advanced Energy's Artesyn ADN-C series of single-phase DIN rail mounting AC-DC power supplies provides a compact, efficient and easy-to-use solution for industrial applications. Their slim form factor helps to maximize per-rail power density and front panel status LEDs facilitate diagnostics and trouble shooting. Features include active PFC, adjustable output, overvoltage with auto protection, parallel operation capability, and a five year warranty. This DIN rail power supply series is perfect for applications such as machine control, process control, conveying equipment, material handling, vending machines, and packaging equipment, as well as test and measurement and gaming applications.

SPECIAL FEATURES

- Five year warranty
- High efficiency > 90% typical
- Full power at 60°C
- Power Boost™
- Industrial grade design (metal case and mounting clip)
- 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
- Three status LEDs (Input, Output, Alarm)
- DC OK relay
- Parallel operation capability
- Screw terminal connections
- RoHS compliant
- 80 PLUS® compliant (ADN20-24-1PM-C model)
- No tools required for mounting

SAFETY

- UL508, cULus Listed
- UL 60950-1, cURus
- IEC60950-1
- Class I, Div 2 Hazardous Locations
- ATEX Certified on selected models
- IP20
- CE

DATA SHEET

Total Power

120 to 960 W

Input Voltage

85 to 264 VAC
90 to 375 VDC

of Outputs:

Single

80 PLUS SILVER INDUSTRIAL

ELECTRICAL SPECIFICATIONS

Input	
AC Input Range	Nominal: 100 to 240 VAC/115 to 230 VAC/85 to 264 VAC
DC Input Range	90 to 375 VDC
Frequency	47 to 67 Hz
Efficiency	> 90%
Inrush Current (typical)	< 15A or < 60A depending on model
PFC	Active, better than 0.92
Output	
Nominal Voltage	24 VDC (22.5 to 28.5 VDC Adj): ADN5-24-1PM-C & ADN10-24-1PM-C 24 VDC (24-28 VDC Adj): ADN20-24-1PM-C & ADN40-24-1PM-C
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	< 50 mVpp: ADN5-24-1PM-C & ADN10-24-1PM-C < 100 mVpp: ADN20-24-1PM-C & ADN40-24-1PM-C
Back EMF immunity	< 35 VDC
Power Boost™	1.5 x Nominal current for 2 or 4 seconds depending on model
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)
Ouput 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 Installation 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, continous open circuit. Protection Class 1 (IEC536), degree of protection IP20 (IEC60529) Safe low voltage: SELV (acc. IEC60950-1)
Status Indicators	Visual: Three (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 temperature	-40°C to + 85°C; All models
Operating temperature	From -25°C to 70 °C. Derate starting at 60 °C; All models
	Up to 50% load permissable 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 & ADN10-24-1PM-C: ADN20-24-1PM-C: ADN40-24-1PM-C:	15 mm in front, 25 mm above and below, 10 mm left and right 15 mm in front, 40 mm above and below, 10 mm left and right 15 mm in front, 25 mm above and below, 25 mm left and right
Connections	Input: Screw terminals, connector size range: 16-10 AWG (1.5 - 6 mm2) for solid conductors Output: Two terminals per output, connector size range: 16-10 AWG (1.5 - 6 mm2) for solid conductors One terminal per output for ADC40-24-1PM-C, connector size range: 7-6 AWG (10.6 - 13 mm2) for solid conductors	

ORDERING INFORMATION

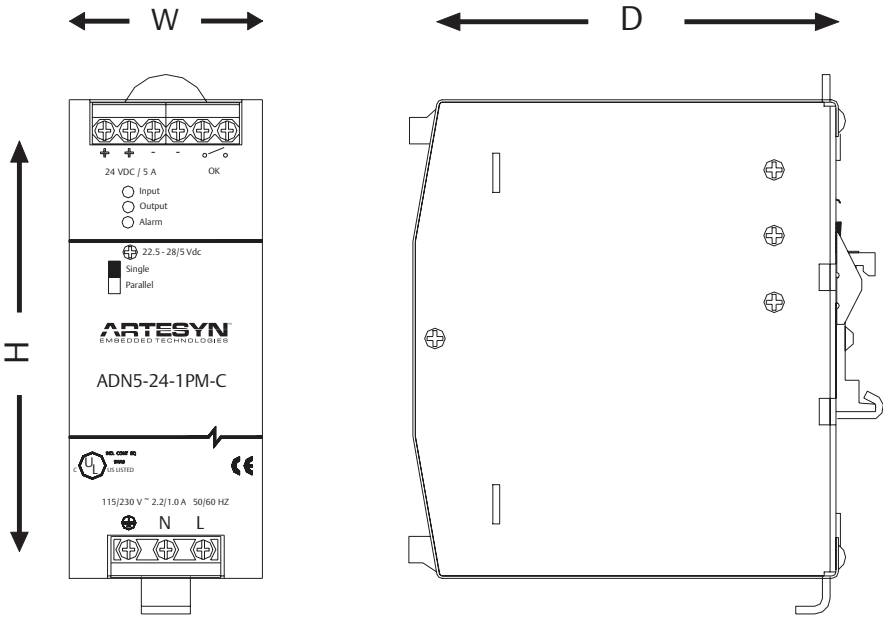
Model Number	Power	Input Voltage	Weight	Current	Case Type	MTBF
						Demonstrated at 40 °C
ADN5-24-1PM-C	120 W	85-264 VAC 90-375 VAC*	1.10 lbs (500 g)	5 A @ 24 VDC	Metal with mounting clip	550,000 hours
ADN10-24-1PM-C	240 W	85-264 VAC 90-375 VDC*	1.98 lbs (900 g)	10 A @ 24 VDC	Metal with mounting clip	550,000 hours
ADN20-24-1PM-C[1]	480 W	85-264 VAC 90-375 VDC*	2.6 lbs (1200 g)	20 A @ 24 VDC	Metal with mounting clip	450,000 hours
ADN40-24-1PM-C	960 W	100-240 VAC	6.0 lbs (2750 g)	40 A @ 24 VDC	Metal with mounting clip	500,000 hours

*No UL listed for DC input
[1] 80 PLUS certified

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	4.85 in (123 mm)	2.36 in (60 mm)	4.37 (111 mm)
ADN20-24-1PM-C	4.85 in (123 mm)	3.42 in (87 mm)	4.96 in (126 mm)
ADN40-24-1PM-C	4.85 in (123 mm)	7.09 in (180 mm)	4.81 in (122 mm)

MECHANICAL DRAWING



ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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