RoHS compliant

c UL us LISTED E206430

24V Industrial Power Supplies

FEATURES

- Supports 90-264 VAC / 127-370 VDC
- Protection against short circuit, overload, overvoltage, and over temperature
- Cooling by free air convection
- UL 508 approved (E206430)

OVERVIEW

ATCPWR Industrial 24 VDC DIN Rail-Mount Power Supply series comes complete with built-in active power factor correction. Compact space-saving design models ranging from 60 watts to 480 watts and available with AC universal supply voltage (90-264 VAC) are cULus listed / UL 508 approved. All models offer built-in protection against short-circuit, overload, overvoltage, and over-temperature conditions, with efficiencies ranging from 87% to 93.5% @ 230 VAC.

ORDERING INFORMATION

Model Number	Description
ATC60W24V	60 W, 24 V / 2.5 A DIN rail mounted Power Supply in Plastic Housing
ATC120W24V	120 W, 24 V / 5 A DIN rail mounted Power Supply in Plastic Housing
ATC240W24V	240 W, 24 V / 10 A DIN rail mounted Power Supply in Plastic Housing
ATC480W24V	480 W, 24 V / 20 A DIN rail mounted Power Supply in Plastic Housing

SPECIFICATIONS

	ATC60W24V	ATC120W24V	ATC240W24V	ATC480W24V
OUTPUT				
Nominal DC Voltage	24 V			
Rated Current	2.5 A	5 A	10 A	20 A
Current Range	0 - 2.5 A	0 - 5 A	0 - 10 A	0 - 20 A
Rated Power	60 W	120 W	240 W	480 W
Ripple & Noise (max)	< 1% of Vout			
Voltage Adj. Range	24 to 28 V			
Voltage Tolerance	± 1%			
Line Regulation	± 0.5%	± 1%		
Load Regulation	± 1%			
Turn On Time	< 1 sec at 230 VAC & < 3 sec at 115 VAC, Full load		< 2 sec; at Full load	
Hold Up Time	≥ 60 ms at 230 VAC & ≥ 15 ms at 115 VAC, Full load		> 25 mS at 24 V & > 16 mS at 28 V at 115 / 230 VAC, Full load	> 20 mS at 24 V & > 12 mS at 28 V at 115 / 230 VAC, Full load
Rise Time	< 100 ms			
INPUT				
Voltage Range*	90 - 264 VAC / 127 - 370 VDC		90 - 264 VAC / 127 - 370VDC De-rate output power linearly below 100 VAC from 100% at 100 VAC to 90% at 90 VAC	
Frequency Range	50 / 60 Hz			
Power Factor			> 0.95 at Full load over entire input range	
Efficiency @ 230V AC	Up to 87%	Up to 89%	> 93%	> 93.5%
AC Current	1.2 A at 115 VAC; 0.8 A at 230 VAC	2.2 A at 115 VAC; 1.5 A at 230 VAC	2.4 A at 115 VAC; 1.2 A at 230 VAC	4.8 A at 115 VAC; 2.4 A at 230 VAC

* Although power supply will work for the specified DC input voltage range, UL approval is only for the specified AC input voltage range.

SPECIFICATIONS (CONT.)

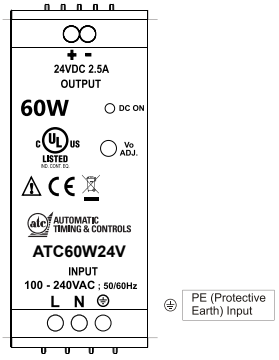
	ATC60W24V	ATC120W24V	ATC240W24V	ATC480W24V
INPUT (CONT.)				
Inrush Current	< 48 Amps; Measured at 264 VAC, 25°C Ambient, Cold start		< 60 Amps; Measured at 264 VAC, 25°C Ambient, Cold start	
Leakage Current	< 1 mA; 264 VAC input			
PROTECTION				
Overload	> 110% of rated output current; Hiccup type, Autorecovery		110% to 140% of rated output current; Hiccup type; Autorecovery	
Overvoltage	31.5 VDC ± 1 VDC		31 VDC ± 0.5 VDC	
	Latched type; Input AC power to be recycled to recover the power supply			
Output Short Circuit	Hiccup mode when output is shorted; Autorecovery type			
Over Temperature	Power supply shuts down when the temperature of PCB below main transformer reaches typically 120°C; Turns on only after the temperature falls below 90°C typically and AC power is recycled thereafter.		The power supply shuts down when the temperature of PCB below PFC choke reaches typically 120°C. It recovers automatically when temperature falls to typically 90°C	Power supply shuts down when the temperature of PCB below main transformer reaches typically 120°C; Turns on only after the temperature falls below 90°C typically and AC power is recycled thereafter.
FUNCTION				
DC OK Signal			Contact closes at 23.0V (typ.) Contact opens at 22.5V (typ.)	
			Contact Rating: 30 VDC 1 A; 60 VDC 0.5 A; 125 VAC 0.5 A; resistive load, min. current 1mA	
ENVIRONMENT				
Operating Temperature	- 25°C to + 70°C; De-rate linearly above 50°C from 100% load at 50°C to 50% load at 70°C, - 25°C to 0°C startup is guaranteed with specification deviation (Output ripple can be more than 10% of the output voltage.)			
Storage Temperature	- 40°C to + 85°C			
Cooling	Natural convection cooled			
Humidity	5 to 95% RH, Non condensing			
Altitude	2000 m			
Vibration	Component: 10 ~ 500 Hz, 2 G 10 min. / 1 cycle, period for 60 min. each along X, Y, Z axes			
SAFETY & EMC				
	I/P to Earth: 2500 VAC I/P to O/P: 4000 VAC O/P to Earth: 1500 VAC		I/P to Earth: 2500 VAC I/P to O/P: 4000 VAC	O/P to Earth: 1500 VAC O/P to DC-OK: 500 VAC
OTHERS				
Dimension	43 x 109.8 x 102.7 mm (W x H x D)	43 x 109.8 x 102.7mm (W x H x D)	50 x 136 x 135 mm (W x H x D)	60 x 154 x 158.55 mm (W x H x D)
Weight	285 gms	350 gms	645 gms	1050 gms
Mounting	35 mm DIN rail			

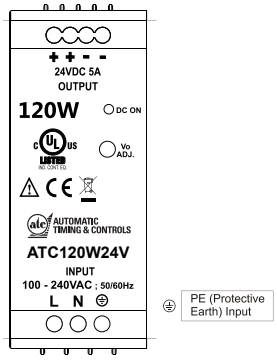
COMPLIANCE

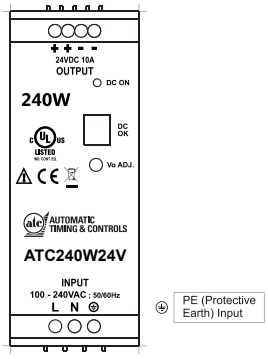
APPLICABLE EMI / EMC STANDARDS

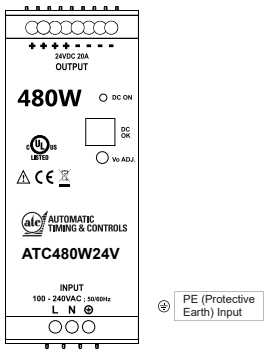
Conducted Emission	Reference Standards: CISPR11 Testing Level: ATC60W24V/ATC120W24V: CLASS A ATC240W24V/ATC480W24V: CLASS B
Radiated Emission	Reference Standards: CISPR22 Testing Level: CLASS A
Electrostatic Discharge	Reference Standards: IEC 61000-4-2 Testing Level: Level 4, Criteria A; Level 3, Criteria A
Radiated Susceptibility	Reference Standards: IEC 61000-4-3 Testing Level: Level 3, Criteria B
Electrical Fast Transient / Burst	Reference Standards: IEC 61000-4-4 Testing Level: Level 3, Criteria A
Surge	Reference Standards: IEC 61000-4-5 Testing Level: Level 3, Criteria A
Conducted Susceptibility	Reference Standards: IEC 61000-4-6 Testing Level: Level 3, Criteria B
Power Frequency Magnetic Field	Reference Standards: IEC 61000-4-8 Testing Level: Level 4, Criteria A
Voltage Dips & Interruption	Reference Standards: IEC 61000-4-11 Testing Level: Criteria A & B
Safety	UL 508 approved (E206430); Designed to meet IEC 62368-1

TERMINAL CONNECTIONS



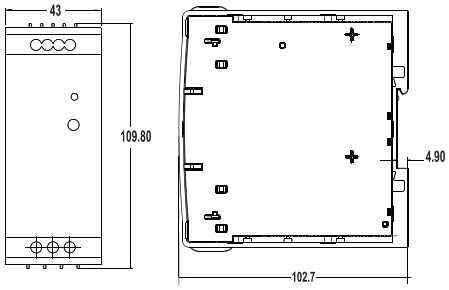




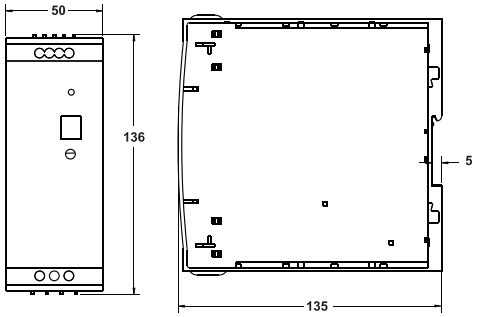


DIMENSIONS (MILLIMETERS)

ATC60W24V / ATC120W24V



ATC240W24V



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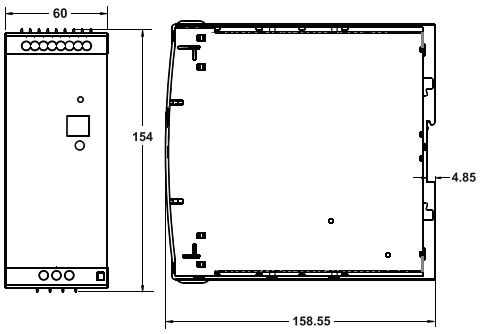
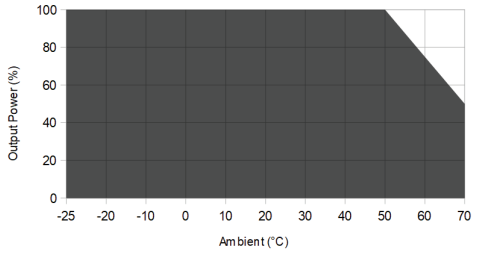


DERATING CURVE

POWER DERATING W. R. T. AMBIENT TEMPERATURE
(ALL MODELS)



POWER DERATING W. R. T. INPUT VOLTAGE
(ATC240W24V / ATC480W24V)