ATC30 Series

30 W Switching Power Module for PCB Mounting

CoolPower Solutions

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-305VAC
- High Efficiency up to 90%
- Isolation Class II
- <0.3W No Load Input Power
- Very Small 1.77" x 2.52" x 0.92 " Package
- Screw Terminal For Optional
- CE, CB and UL Approval
- 3-Years Product Warranty



E199779 LEVEL3

ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Single Output)		ATC30-3.3S	ATC30-5S	ATC30-12S	ATC30-15S	ATC30-24S
Max Output Wattage (W)		16.5W	25W	30W	30W	30W
Input	Voltage (Note1)	90-305 VAC or 120-430 VDC				
	Frequency (Hz)	47-63 Hz				
	Current (Full load)	600 mA max. (115 VAC) /400 mA max. (230 VAC)				
	Inrush Current (<2ms)	30 A max. (115 VAC) / 60 A max. (230 VAC)				
	Leakage Current	0.25 mA max.				
	No Load Input Power (<240 VAC)	<0.3W				
	External Fuse (recommend)	3.15 A slow blow type				
Output	Voltage (V.DC.)	3.3V	5V	12V	15V	24V
	Voltage Accuracy	±2%				
	Current (mA) max	5000	5000	2500	2000	1250
	Line Regulation (LL-HL) (typ.)	±0.5%				
	Load Regulation (10-100%) (typ.)	±1.5%	±1%			
	Maximum Capacitive Load	8200 uF	8200 uF	2200 uF	1500 uF	560 uF
	Ripple & Noise (max.) (Note2)	100mVp-p	100mVp-p	150mVp-p	150mVp-p	240mVp-p
	Efficiency (at 230 VAC)	80%	84%	89%	87%	86%
	Hold-up Time	10 ms min.				
Protection	Over Power Protection	Hiccup technique, auto-recovery				
	Over Voltage Protection	Zener diode clamp				
	Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)				
Isolation	Input-Output (V.AC)	3000V				
	Input-FG (V.AC)	1500V				
	Output-FG (V.AC)	500V				
Environment	Operating Temperature	-40°C…+70°C (with derating)				
	Storage Temperature	-40°C…+85°C				
	Max Case Operating Temperature	Under 115 VAC 78°C , others 85°C				
	Temperature Coefficient	±0.02%/°C				
	Humidity	95% RH				
	MTBF	>250,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)	2.52 x 1.77 x 0.92 Inches (64.0 x 45.0 x 23.5 mm) Tolerance ±0.5 mm				
	Case Material	Plastic resin with Fiberglass (flammability to UL 94V-0)				
	Weight	130 g				
	Cooling Method	Free air convection				
Safety	Agency Approvals	CE, UL/cUL, CB				
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B				
	EMS (Noise Immunity)	EN 55024				

Note:

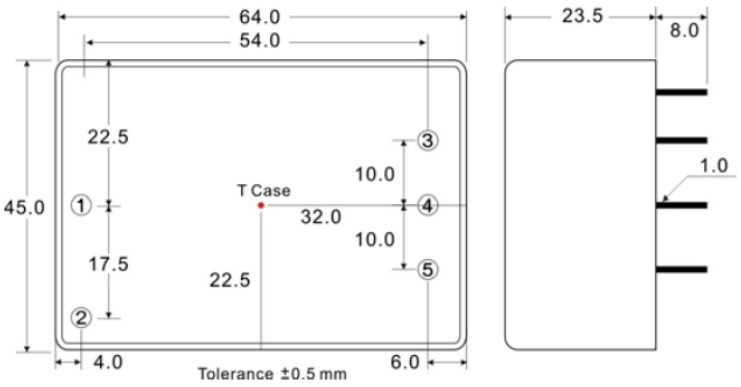
1. Please check the derating carve for more details
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

Cool Power Solutions Oy
Vanha Rajamäentie 173
FI-05200 Rajamäki
FINLAND

Tel: +358-9-2906 1990
Fax: +358-9-2906 1991

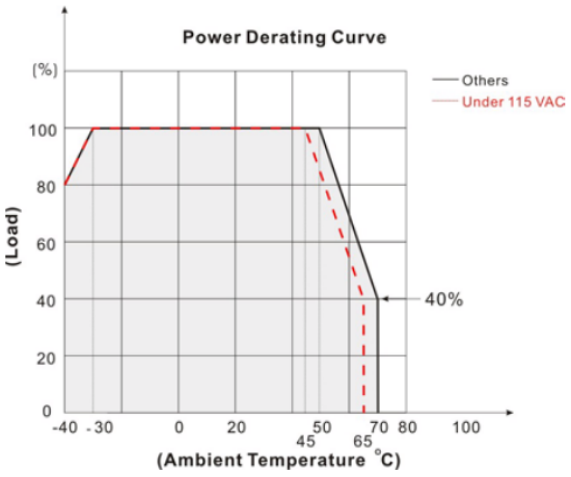
Email: info@cps.fi
Web: www.cps.fi

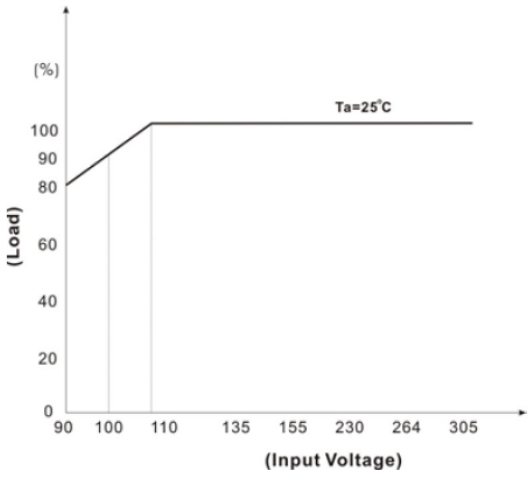
MECHANICAL DIMENSION (Top View)



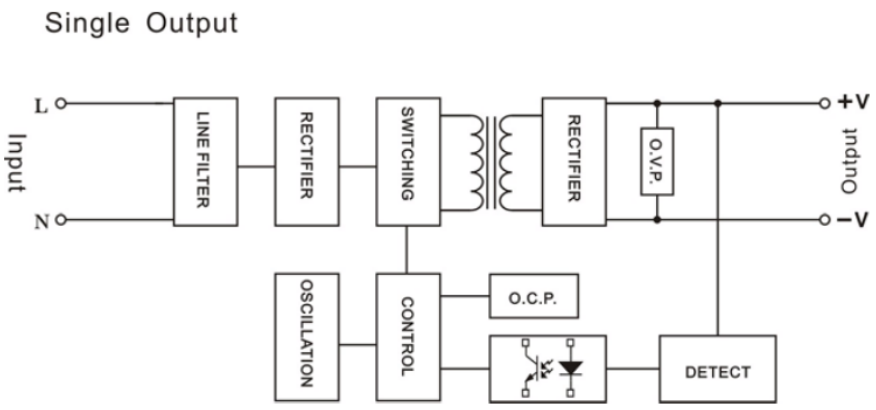
PIN#	SINGLE
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	NO PIN
5	+DC OUT

DERATING





BLOCK DIAGRAM



Cool Power Solutions Oy
Vanha Rajamäentie 173
FI-05200 Rajamäki
FINLAND

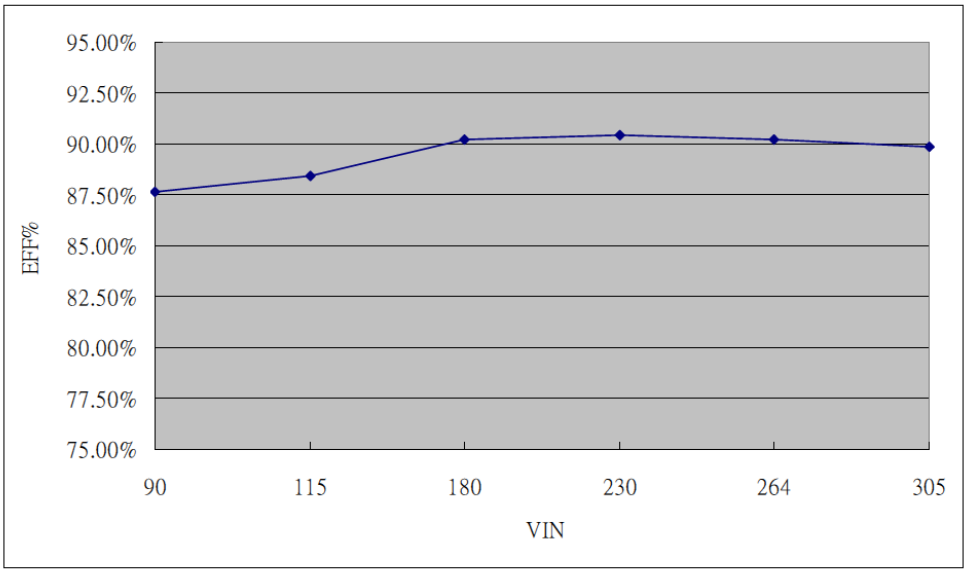
Tel: +358-9-2906 1990
Fax: +358-9-2906 1991

Email: info@cps.fi
Web: www.cps.fi

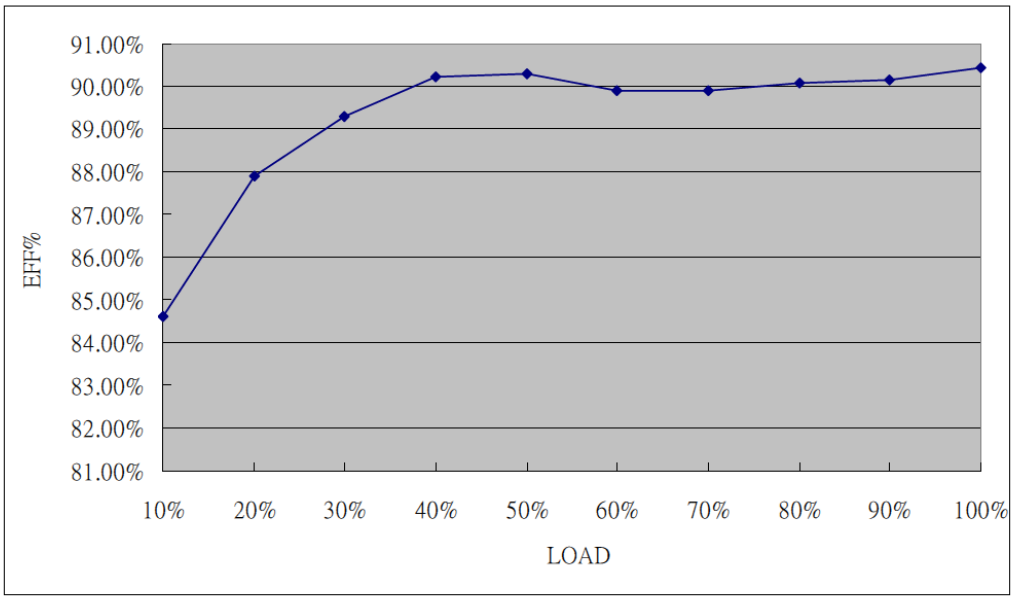
EFFICIENCY VERSUS LOAD

ATC30-12S

VIN VS Efficiency						
Input Voltage (V)	90	115	180	230	264	305
Efficiency (%)	87.6	88.4	90.2	90.4	90.2	89.9



LOAD VS Efficiency										
Load (%)	10	20	30	40	50	60	70	80	90	100
230V (%)	84.6	87.9	89.3	90.2	90.3	89.9	89.9	90.1	90.1	90.4



Cool Power Solutions Oy
Vanha Rajamäentie 173
FI-05200 Rajamäki
FINLAND

Tel: +358-9-2906 1990
Fax: +358-9-2906 1991

Email: info@cps.fi
Web: www.cps.fi

ATC30 Series

30 W Switching Power Module for PCB Mounting

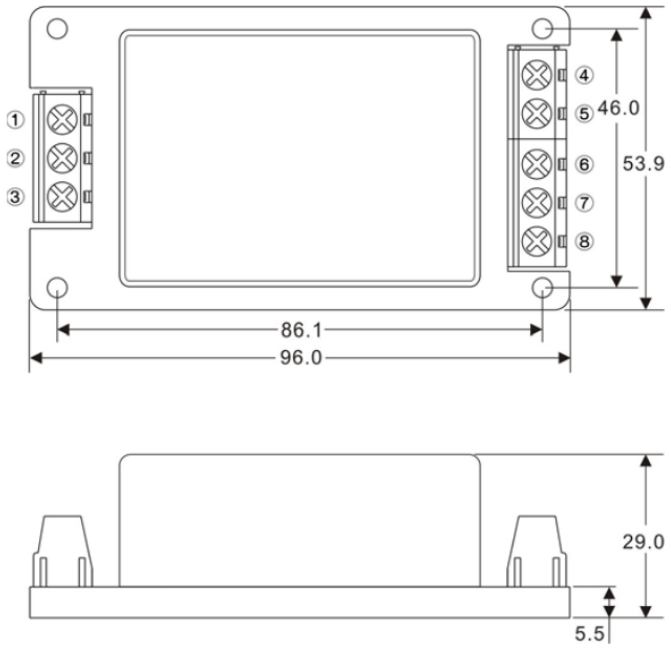
CoolPower Solutions

SCREW TERMINAL

ATC30-A2



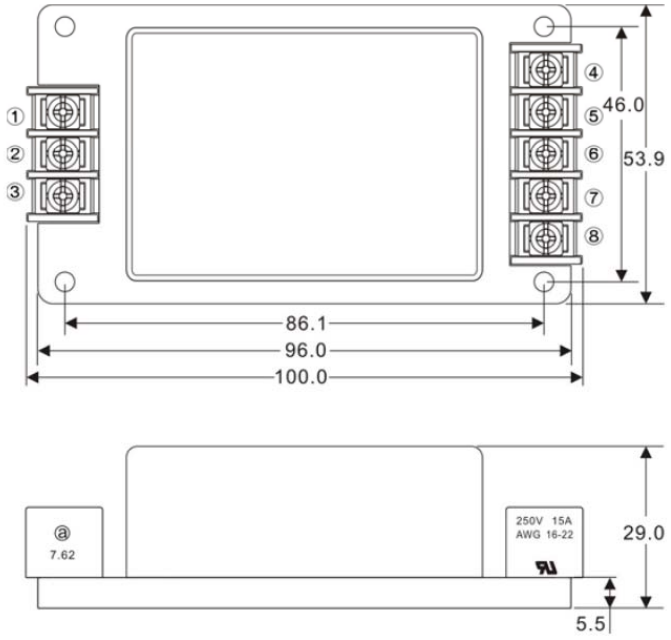
PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4.	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT



ATC30-A5



PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4.	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT



Cool Power Solutions Oy
Vanha Rajamäentie 173
FI-05200 Rajamäki
FINLAND

Tel: +358-9-2906 1990
Fax: +358-9-2906 1991

Email: info@cps.fi
Web: www.cps.fi