

## 40-65W 90-305VAC AC-DC Power Supplies

<https://product.tdk.com/en/power/csw>  
<https://www.emea.lambda.tdk.com/csw65>



Industrial



Broadcast



Test



COMM



Accepting a very wide 90 to 305Vac input, the CSW65 series can operate from 115V, 230V and 277V nominal inputs. These models are available in a U-channel construction and have cover and/or DIN rail mounting clip options. All models are certified to IEC/EN/UL/CSA 62368-1 and with less than 150mW off-load power consumption, these units also comply with DOE Efficiency Level VI requirements.

Features	Benefits
• Accepts 115/230/277VAC Nominal Inputs	• Suitable for US Building Wiring
• <150mW Off-Load Power Consumption	• Energy Saving
• DOE Efficiency Level VI, ErP Tier 2	• Meets US and EU Energy Saving Legislation
• Class 2 24V Model to UL1310	• Suitable for Building Automation Requiring NEC Class 2
• DIN Rail Mount Option	• Easy to Mount

Model Selector						
Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage (V)	Average Efficiency (%)	*Ripple & Noise (mV)
CSW65-5	5	8.0	40	6 - 8	87.2	100
CSW65-12	12	5.42	65	13.2 - 15.6	89	120
CSW65-15	15	4.34	65	16.5 - 19.5	89	150
CSW65-18	18	3.62	65	19.8 - 23.4	89	180
CSW65-24	24	2.71	65	26.4 - 31.2	89	240
CSW65-28	28	2.33	65	30.8 - 36.4	89	280
CSW65-48	48	1.36	65	52.8 - 62.4	89	280
CSW65-54	54	1.21	65	59.4 - 64.8	89	280

\*Ripple and noise are measured at oscilloscope 20MHz bandwidth by a 10uF electrolytic capacitor and a 0.1uF ceramic capacitor in parallel at output connector.

CSW	65	-24	/A
	Output Power	5 5V Output Voltage 12 12V Output Voltage 15 15V Output Voltage 18 18V Output Voltage 24 24V Output Voltage 28 28V Output Voltage 48 48V Output Voltage 54 54V Output Voltage	Blank U-Channel /A U-Channel & Cover /D U-Channel, Cover & DIN Rail Bracket

Specifications		
Model	CSW65	
<b>Input</b>		
Input Voltage range	Vac	90 - 305
Input Frequency	Hz	47 - 63
Input Current (115/230VAC)	A	2 / 1
Inrush Current at 230Vac (Cold Start)	A	<65 (25°C ambient)
Harmonic Compliance	-	Meets IEC61000-3-2 Class A
No Load Power Consumption	W	<0.150
Hold Up Time (typ) at 115Vac Input	ms	10
Efficiency	-	See model selector table
Conducted & Radiated EMI	-	EN55032-B conducted and radiated, FCC Part 15 Class B
Immunity	-	EN55024
Safety Agency Certifications	-	UL/CSA/IEC/EN62368-1, 60950-1, UL1310 Class 2 (24Vout only), CE Mark
<b>Output</b>		
Output Voltage Accuracy	%	±1
Output Voltage Adjustment	-	None
Switching Frequency (Full Load)	kHz	65
Output Regulation	%	5-24V: ±3, 28-54V: ±2
Ripple & Noise (20MHz BW)	-	See Model Selector Table
Minimum Load	-	No minimum load required
Overcurrent Protection	%	105 - 160 (Auto-Recovery)
Overvoltage Protection	-	See Model Selector Table (Cycle AC to reset)
Parallel Operation	-	Not possible
Series Operation	-	Possible, contact Technical Support
<b>Environmental</b>		
Operating Temperature	°C	-10 to +70 derate linearly to 50% load from 50 to 70 (Note 2)
Storage Temperature	°C	-20 to +85
Humidity (non condensing)	%RH	5 - 95
Cooling	-	Convection
Altitude	m	5,000
Withstand Voltage (For 1 minute)	Vac	Input to Ground 1,500, Input to Output 3,000, Output to Ground 500Vdc
Isolation Resistance	MΩ	>20 at 25°C & 70%RH, Output to Ground 500Vdc
Vibration (non-operating)	m/s <sup>2</sup>	23.52 (10 - 55Hz: constant sweep 1 min X, Y, Z for 1 hour)
Shock	m/s <sup>2</sup>	<196.1 (20G)
<b>Other</b>		
Weight (Typ)	g	U channel: 250, /A: 270, /D: 290
Size (LxWxH)	mm	U channel and /A: 120.7 x 63.5 x 38.1 /D: 120.7 x 63.5 x 47.2
Size (LxWxH)	Inches	U channel and /A: 4.75 x 2.5 x 1.5 /D: 4.75 x 2.5 x 1.86
Connectors		Input: 3-Pole Terminal Block (9.5mm, 20A/300V) Output: 2-Pole Terminal Block (9.5mm, 20A/300V)
Warranty	yrs	3

Notes

- 1) See website for detailed specifications, test methods and installation manual
- 2) Derate linearly to 90% load from 0°C to -10°C

Immunity				
Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	2 / 3	A	Contact Discharge / Air Discharge
Radiated Susceptibility	EN61000-4-3	2	A	80-1000MHz
Electrical Fast Transient Burst	EN61000-4-4	2	A	(AC Port, 5kHz)
Surge	EN61000-4-5	2 / 3	A	Line to Neutral / Line and Neutral to Ground
Conducted Susceptibility	EN61000-4-6	2	A	3V (0.15 - 80MHz)
Magnetic fields	EN61000-4-8	1	A	-
Voltage Dips and Input Interruptions	EN61000-4-11	>95% for 1/2 cycle 30% for 25/30 cycles >95% for 250/300 cycles	A A/B B	A for 230Vac, B for 115Vac Input

### CN1: Input Connector

(T) 3-Pole Terminal block pitch: 9.5mm (20A/300V)

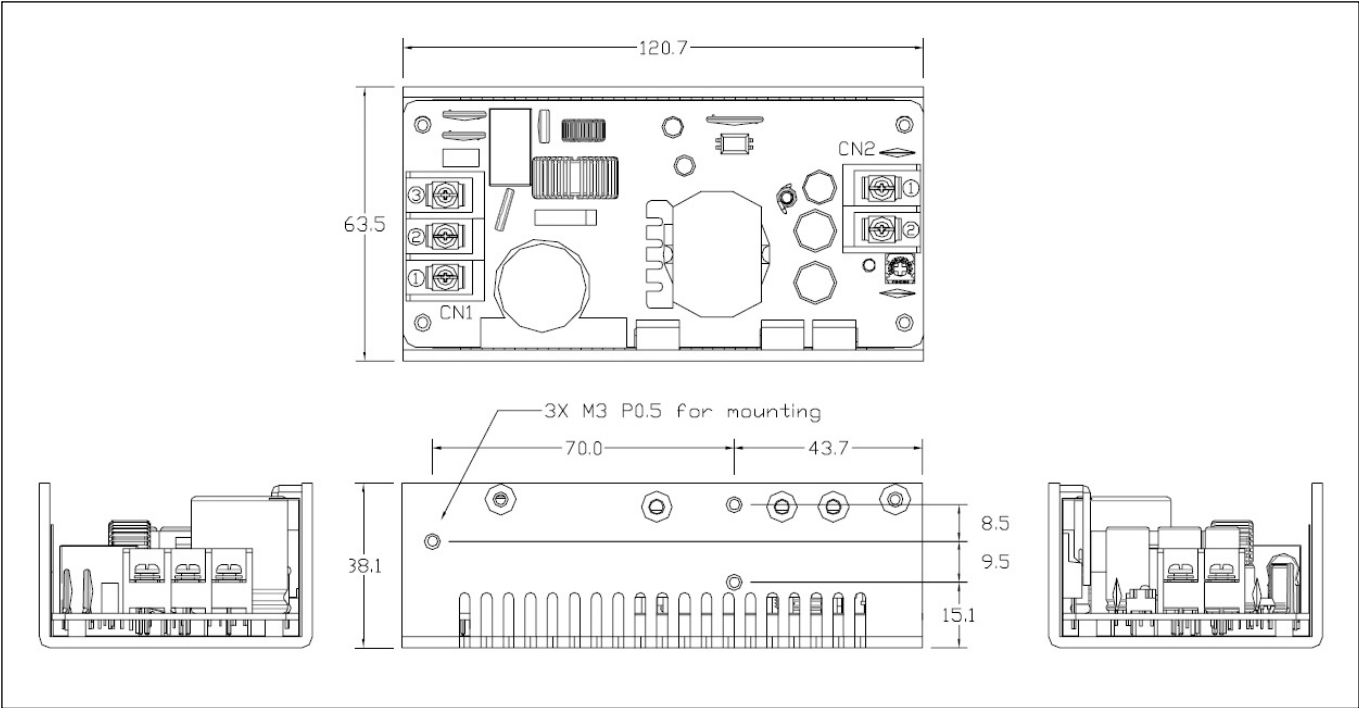
Pinout	
PIN	Function
1	AC Ground
2	AC Neutral
3	AC Line

### CN2: Output Connector

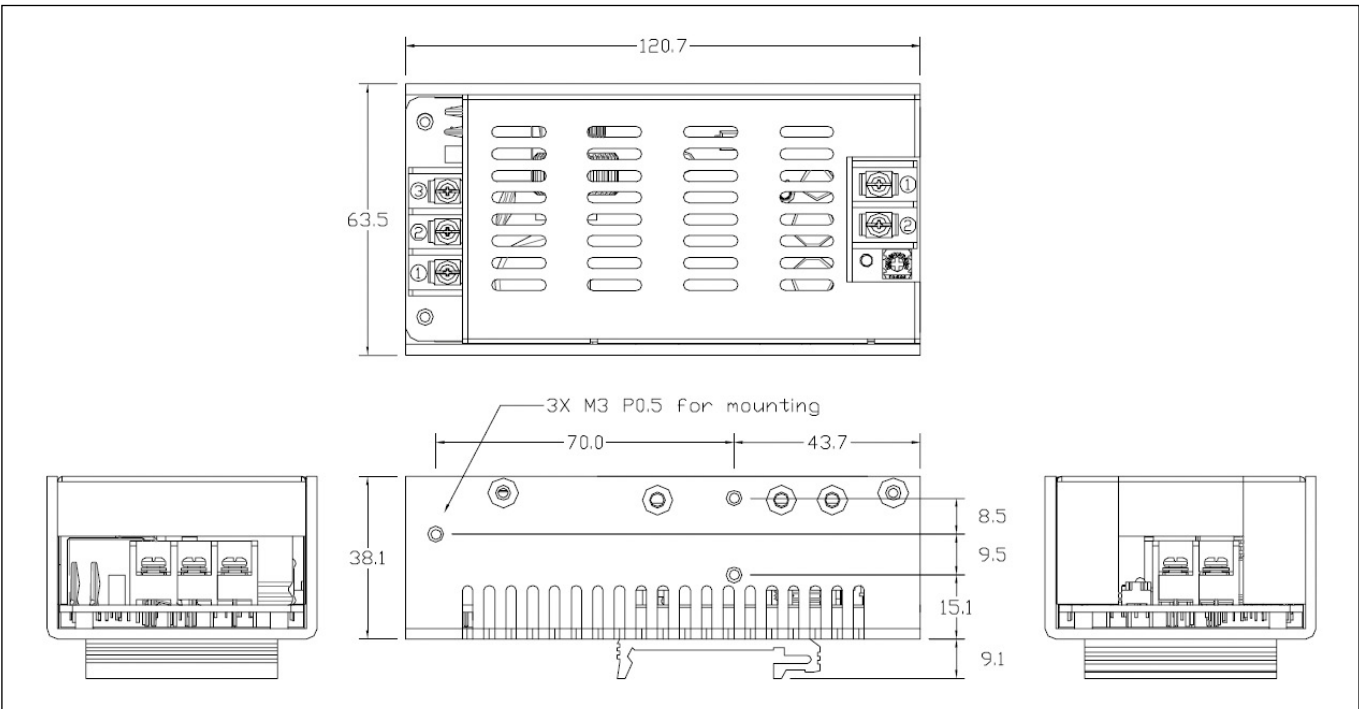
(T) 2-Pole Terminal block pitch: 9.5mm (20A/300V)

Pinout	
PIN	Function
1	+Vout
2	Ground

**No Suffix (U-Channel) Outline Drawing**



**/D (U-Channel, Cover & DIN Rail Bracket) Outline Drawing**





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