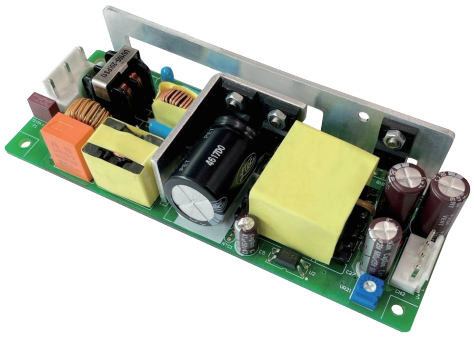
Under Development

UNOPT 50W Series

Industrial Power Supply
Standard Product
Compact 2"× 5.2"



▲ UNOPT3050 series

Safety Certificate | Reliability Guarantee | Energy Saving | ROHS 2 | EMC | LPS

PFC | Inrush Current | Voltage adjust

Please contact our sales department for safety standard of each model.

Model Name Definition

U N O P T 3 0 5 0 - ___

① ② ③ ④ ⑤

① Developed by UNIFIVE
② Series Code
③ Input Voltage (V)
④ Output Power (W)
⑤ Function Description (multiple digits)

Product Highlights

- Stability
- Energy and High Efficiency
- PCB Size 2"x 5.2"(inch)
- Appendix 8 of PSE : comply with dusty requirement
- SEMI F47
  Valid if VAC.input > 200V
- 5 years warranty
- Correspond to OVC Ⅲ (2000m)
- Operating altitude Up to 5,000m
- Suitable for industrial equipment

Protection

- Short Circuit Protection
- Over Voltage Protection
- Over Current Protection
- Over Temperature Protection (optional)

Safety Standard

- 62368-1
- PSE 別表第八
  100V-240V 基準に準拠

Efficiency

- Energy Efficiency Level VI (ErP / DoE)
- Meet Commission Regulation(EU) 2019/1782
- Meet DOE 10 CFR part 429 and 430

Emissions

- FCC
  - FCC Part15-B
- CE
  - EN(CISPR)55032-B
- BS EN 55032

Immunity

- EN55035
- BS EN 55035

The above specifications include the following test standards

✓ EN61000-4-2
✓ EN61000-4-3
✓ EN61000-4-4
✓ EN61000-4-5
✓ EN61000-4-6
✓ EN61000-4-8
✓ EN61000-4-11

more detail on next page

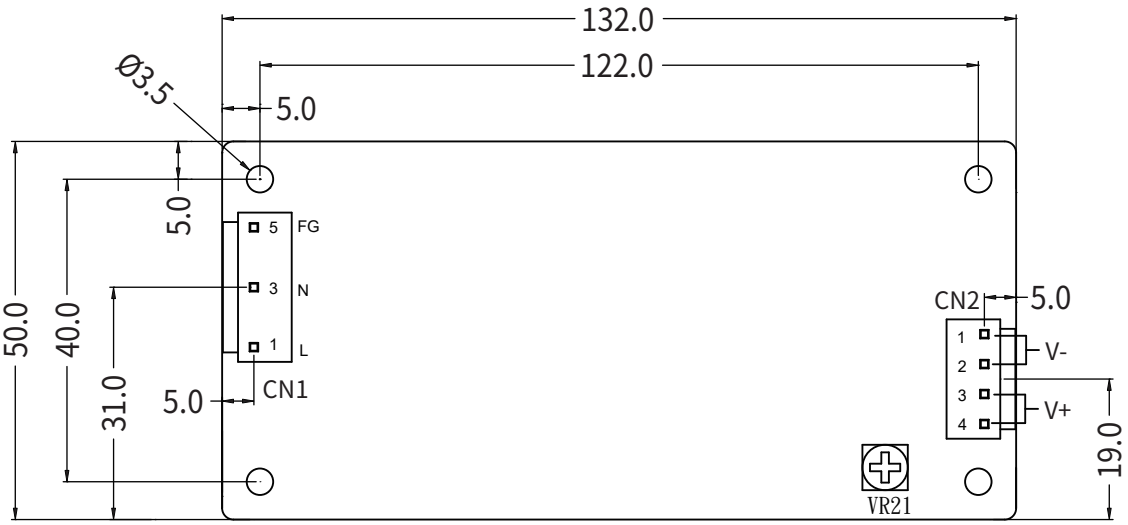
Electrical Spec

UNOPT 50W Series							
Model			UNOPT3050-033100SA	UNOPT3050-050100SA	UNOPT3050-120043SA	UNOPT3050-150035SA	UNOPT3050-240021SA	UNOPT3050-480011SA
Output			Output 1					
Output Wattage Max (W)			33	50	51.6	52.5	50.4	52.8
DC Output			3.3V / 10.0A	5.0V / 10.0A	12.0V / 4.3A	15.0V / 3.5A	24.0V / 2.1A	48.0V / 1.1A
Specification								
Input	Voltage (VAC)		85~265 1φ					
	Current (A)	ACIN 100V	0.42A Typical	0.62A Typical				
		ACIN 230V	0.19A Typical	0.27A Typical				
	Frequency (Hz)		50/60 (47-63)					
	Efficiency (%)	ACIN 100V	76.0 Typical	82.0 Typical	88.0 Typical	88.0 Typical	88.0 Typical	88.0 Typical
		ACIN 230V	78.0 Typical	84.0 Typical	88.0 Typical	88.0 Typical	88.0 Typical	88.0 Typical
	Power Factor (%)	ACIN 100V	0.96 Typical	0.97 Typical				
		ACIN 230V	0.85 Typical	0.9 Typical				
	Inrush Current (A)	ACIN 100V	14A Typical (Full Load, cold start, Ta=25°C)/Restart After More than 3sec.					
		ACIN 230V	32A Typical (Full Load, cold start, Ta=25°C)/Restart After More than 3sec.					
	Leakage Current (mA_{max})		0.5mA r.m.s or 0.707mA peak(ES1) (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368 Class Ⅰ)					
Output	Voltage (V)		3.3	5.0	12.0	15.0	24.0	48.0
	Current (A)		10.0	10.0	4.3	3.5	2.1	1.1
	Line Regulation (mVmax)		20	20	48	60	96	192
	Load Regulation (mVmax)		40	40	96	120	150	240
	Ripple (mVp-p) (0°C to +50°C) ※1		120	120	150	150	150	200
	Ripple (mVp-p) (-10°C to 0°C) ※1		160	160	180	180	180	240
	Noise (mVp-p) (0°C to +50°C) ※1		120	120	150	150	150	200
	Noise (mVp-p) (-10°C to 0°C) ※1		160	160	180	180	180	240
	Temperature Regulation (mVmax)	0 to +50°C	120	120	150	160	240	480
		-10 to +50°C	150	150	180	240	290	600
	Drift (mVmax) ※2		40	40	48	60	96	192
	Start-Up Time (mS)		3000 Typical (ACIN 100V, Full Load), at 25°C					
	Hold-Up Time (mS)		20 Typical (ACIN 100V, Full Load), at 25°C					
	Output Voltage Setting (V)		2.97 to 3.63	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4	39.5 to 52.8
	Output Voltage Variable Range (V)		2.97 to 3.63	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4	39.5 to 52.8
	Over Current Protection (Auto-Recovery)		10.5 Min	10.5 Min	4.51 Min	3.67 Min	2.2 Min	1.15 Min
	Over Voltage Protection (V) (Latch Off)		3.79 to 4.95	5.75 to 7.0	13.8 to 16.2	17.3 to 20.3	27.6 to 32.4	55.2 to 64.8
	Short Protection		Auto-Recovery					
Isolation	Input-Output		AC4,000V 1 minute, Cutoff Current = 10mA (at 25°C)					
	Input-FG		AC2,000V 1 minute, Cutoff Current = 10mA (at 25°C)					
	Output-FG		DC500V 1 minute, Cutoff Current = 25mA (at 25°C)					
Operating Temperature/Humidity/Altitude			-10°C~70°C / 20%RH~90%RH / 5000m max / Non condensing					
Storage Temperature/Humidity			-20°C~75°C / 20%RH~90%RH / Non condensing					
Vibration			10 - 55Hz, 19.6m/s² (2G), 3 minutes period, 60 minutes each along X, Y and Z axis					
Impact			JIS-C-0041 half sin wave, 300 m/s² , 6ms, 3 times each X, Y, and Z axis (196.1m/s² (20G), 11ms, Once Each X, Y and Z Axis)					
Safety			IEC/EN62368-1, BS EN 62368-1					
EMC			FCC Part15-B, EN(CISPR)55032-B, BS EN 55032					
Harmonic Attenuator			Complies with IEC61000-3-2					
Size			132(L)×50(W)×27(H)mm					
Cooling Method			Convection					

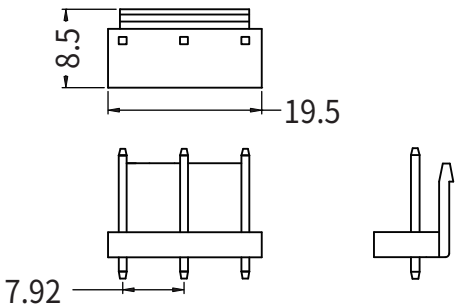
※1 Parallel a 22uF Aluminum Electrolytic Capacitor and 0.1uF ceramics capacitor at the test point. The position of test point is 150mm from output terminal to system load.
The bandwidth of oscilloscope is 20MHz. (Please refer to User Manual)
※2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25C, with the input voltage held constant at the rated input / output.
※ When the specification is exceeded, it may cause a possibility that the components be damaged.
※ Sound noise may be generated by power supply in case of pulse load.
※ When the output load is less than 10% of the rated current, the corresponding actions reduce energy loss, output ripples may occur in the pulse waves.
※ If you have question, please contact us.

Mechanical Spec

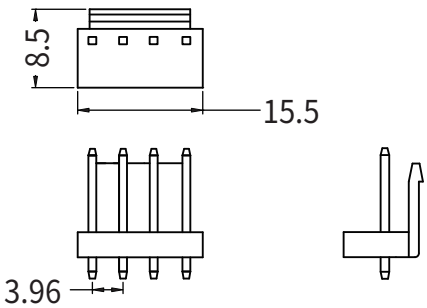
TOLERANCE:±0.5
Unit:mm



CN1



CN2



CN1

PIN NUMBER	INPUT
1	AC(L)
3	AC(N)
5	FG
CN1 : INPUT CONNECT Specifications are equivalent to models of JST B5P-VH	

CN2

PIN NUMBER	OUTPUT
1,2	V-
4,5	V+
CN2 : OUTPUT CONNECT Specifications are equivalent to models of JST B4P-VH	

Please contact our sales department for details of each model