

AC-DC POWER SUPPLIES

UNIVERSAL INPUT, UP TO 700 WATT

INDUSTRIAL APPLICATIONS

UIA700 SERIES



FEATURES

- Enclosed ITE Switching Power Supply
- Remote ON/OFF Function
- Standby 5V@1A
- High Efficiency up to 92%
- With P.F.C. Function >0.9
- Ultra Compact Size: 6.7" x 3.66" x 1.61"
- Chassis Mount With Terminal Strip
- UL /IEC/EN 62368

SELECTION GUIDE

All specifications are typical at 230Vac input, full load and 25°C, unless otherwise noted.

Output Wattage W	Output Voltage Vdc	Output Current A	Ripple & Noise mV (max)*	Max. Capacitive Load µF	Efficiency %	Model Number*
625	12	52.08	160	5,000	89	UIA700-12S
625	15	41.66	160	3,750	90	UIA700-15S
700	24	29.16	240	2,500	91	UIA700-24S
700	28	25.00	280	2,000	92	UIA700-28S
700	48	14.58	480	1,250	92	UIA700-48S

Input Specifications

Voltage range, Vac	90-264	
Input frequency, Hz	50/60	
Input current, A	< 8 Max.	115 Vac, Full load
	< 3.5 Max.	230 Vac, Full load
Input inrush current, A	< 55 Max.	< 2ms, 115 Vac, Cold start
	< 90 Max.	< 2ms, 230 Vac, Cold start
Leakage current, mA	< 0.1 Max.	Input to output
Power factor	> 0.9	at 230Vac, Full Load

Output Specifications

Output voltage, Vdc	12-48	
Voltage accuracy, %	±2	
Voltage adjustment, Vdc	±5	
Line regulation, %	±0.5	115-264 VAC
Load regulation, %	±1 Typ.	10-100%
Ripple and noise, mV	See Selection Guide for additional information.	
Hold-up time, ms	5 Min.	at 115 Vac

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General Specifications

Isolation voltage, Vac	Input-Output (V.AC)	4000VAC or 5656VDC
	Input-PE (V.AC)	2000V
	Output-PE (V.AC)	1500V
Over Power Protection	Auto recovery	
Over Voltage Protection	Auto recovery	
Overt Temperature Protection	Auto recovery	
Short Circuit Protection	Auto recovery or Latch	
Function	5V Stand by	5VSB: 5V@1A ; Tolerance $\pm 10\%$
	DC OK Signal (Power Good)	Turn ON: 3.7~5.7V ; Turn OFF: 0~1V
	Remote Control	+RC / -RC: Power ON=open ; Power OFF=short

Environmental Specifications

Operating Temperature, °C	With derating	-30 Min.	70 Max.
Storage Temperature, °C		-35 Min.	85 Max.
Temperature Coefficient, °C	$\pm 0.03\%/^{\circ}\text{C}$	0 Min.	50 Max.
	$\pm 0.06\%/^{\circ}\text{C}$	-30 Min.	0 Max.
Altitude During Operation, m		5,000	
Humidity	95% RH		
Atmospheric Pressure	56 kPa to 106 kPa		
MTBF	>100,000 h @ 25°C (MIL-HDBK-217F)		
Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)		
Shock	IEC60068-2-27		

Physical Specifications

Design meet safety standard	UL / IEC / EN 62368
Weight, g	890g (oz)
Dimensions, inches	6.7 x 3.66 x 1.61 (170.2 x 93.0 x 41.0 mm) Tolerance ± 0.5 mm
MTBF	4.093×10^5 hrs , MIL-HDBK-217F, Ta=25°C, Full load

EMC Specifications

Specifications	Conditions	Level
EMI ⁽¹⁾	EN55032 / EN55011	Conducted Class B
		Radiated Class A
EMS	EN55024 / EN60601-1-2	4th edition

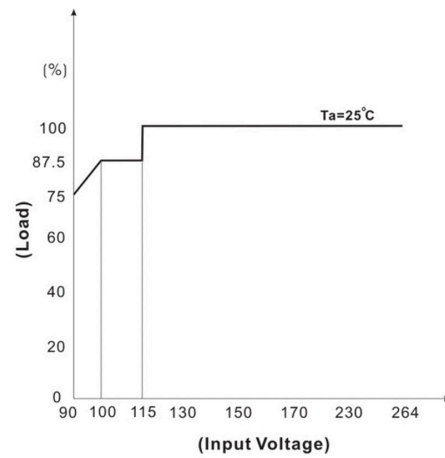
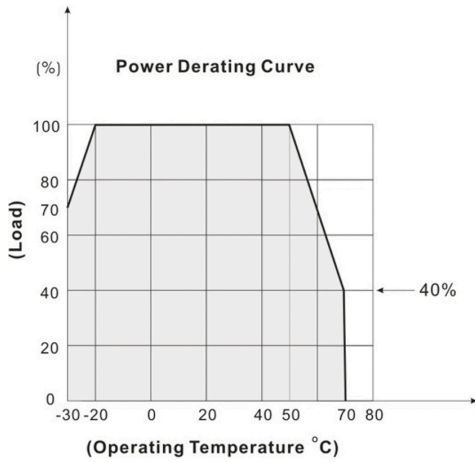
Note:

- Ripple & Noise are measured at 20MHz of bandwidth by using a 6" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
- Hold-up Time measured at 90% Vout.
- Strongly recommend to conduct this test with DC Voltage. If customer wishes to test with AC Voltage, please disconnect all Y-Capacitors.
- Please check the derating curve for more details.
- Double pole, neutral fusing. Disconnect mains before servicing.
- For further information, please contact Polytron Devices.

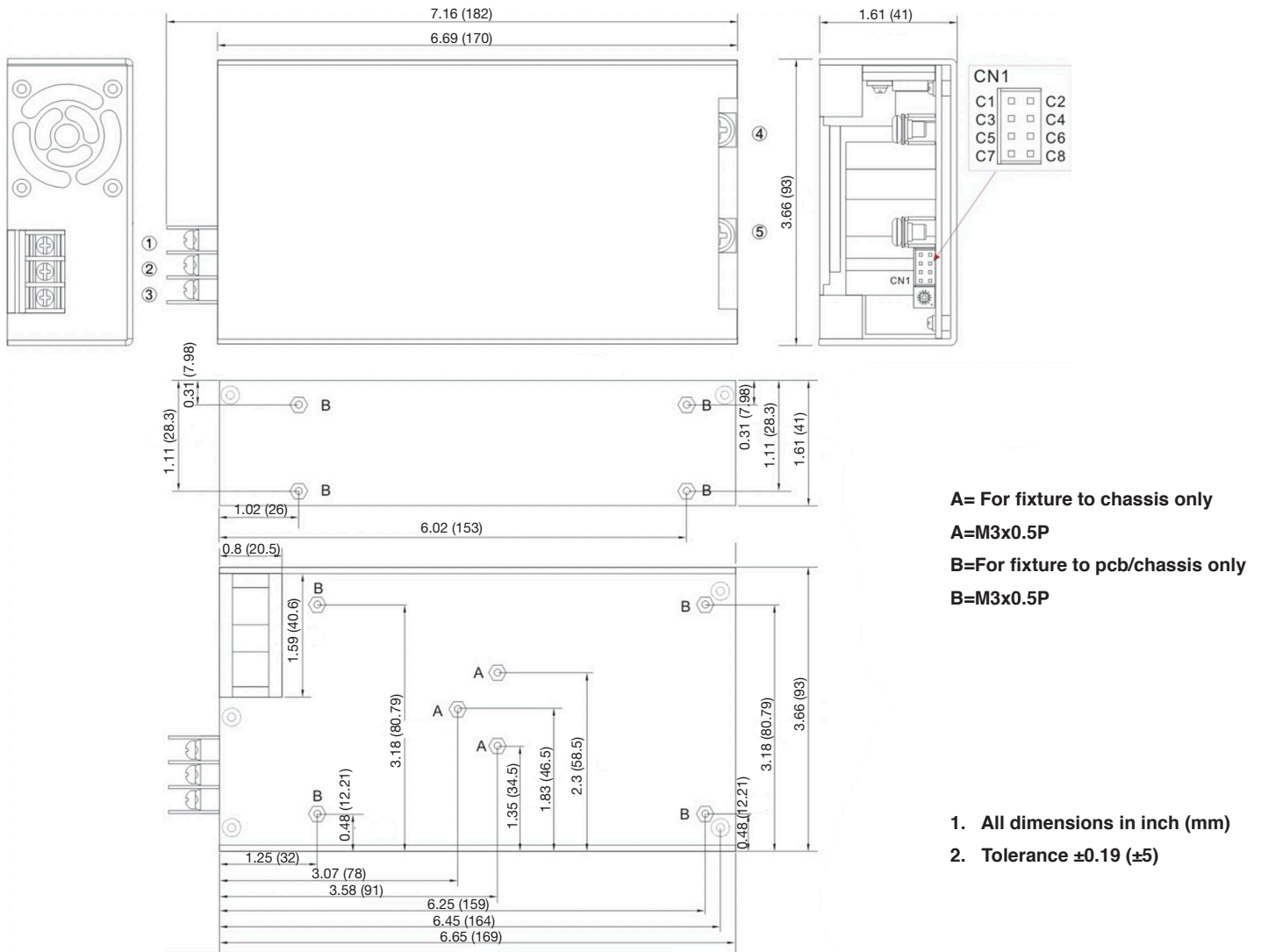
CAUTION: This power module is not internally fused. An input line fuse must always be used.

UIA700 SERIES

Characteristic Curve



Mechanical Drawing



UIA700 SERIES

Mechanical Drawing (Continued)

BRANDS

PIN #	Single	Terminal
A,B	PE	— — — —
1	FG	ANYTEK YK-301-3P
2	AC IN (N)	
3	AC IN (L)	
4	+DC OUT	Terminal : M5 Pan HD screw in 2 positions Torque to 8 lbs-in(90 cNm) max.
5	-DC OUT	

CONNECTOR PIN

Brands		Cherng Weei		JST	
PIN #	Single	Mating Housing	Terminal	Mating Housing	Terminal
C1	+S				
C2	-S				
C3	NC				
C4	-5V SB	PHD-H20-2X4P	PHD-T20	PHDR-08VS	SPHD-001T-P0.5
C5	GND / -RC				
C6	+RC				
C7	PG				
C8	+5V SB				

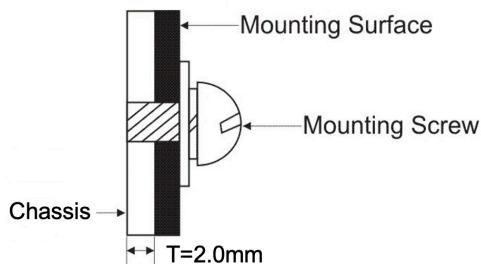
FUNCTION DESCRIPTION OF CN1

PIN #	Function	Description
C1	+S	Remote sensing (+)
C2	-S	Remote sensing (-)
C3	NC	
C4	-5V SB	This pin connects to the negative terminal(-V)
C5	GND / -RC	This pin connects to the negative terminal(-V). Return for DC-OK signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between pin C5 (GND / -RC), Short: Power OFF, Open: Power ON.
C7	+PG	DC-OK Signal is a DC output. (DC-OK)
C8	+5V SB	Stand by voltage output ground 4.5~5.5V, referenced to pin C4 or C5(GND). The maximum load current is 1A.

Assembly Instructions

U Case T=2.0mm

Customer is advised to screw into the threads no more than 2.0mm



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Block Diagram

