

# MC4U Power Supplies



PSM3U-48V-0.7kW | PSM3U-28V-0.5kW



PSM3U-320V-8kW | PSM3U-560V-7kW | PSM3U-320V-4kW



PSM3U-320/48V-8/0.7kW



PSM3U-48V-1.4kW



PSM3U-320V-11kW

The PSM3U line of power supplies generates all drive and control voltages for a MC4U system.

## Available Power Supplies:

- 4kW, 8kW and 11kW power supplies. 120Vdc to 320Vdc nominal drive voltage generated by rectifying 85 to 265Vac input. Each supply include an internal 100W shunt/regeneration resistor. If required, an external shunt resistor of 600W can be connected to absorb more energy.
- 7kW, with nominal voltage of 560Vdc, generated by rectifying 400Vac. All above supplies include an internal 100W shunt/regeneration resistor. If required, an external shunt resistor of 600W can be connected to absorb more energy.
- 0.5kW, 28Vdc regulated supply.
- 0.7kW, 1.4kW, 48Vdc regulated supply.

The 24Vdc and 48Vdc supplies are fed by 85 to 265Vac, include Power Factor Correction (PFC). They are suitable for applications with demanding constant speed regulation and low position jitter requirements. These power supplies do not include regeneration resistor.

The MC4U can accommodate one or two supplies, to provide two voltage levels for different motors or to increase the total power.

The PSM3U are fed from a single or three-phase AC source and from a 24Vdc. The supply derives the DC voltage for the motor drives from the AC input and all logic and control voltages from the 24Vdc input. During emergency conditions it is sufficient to remove only the AC input, thus keeping all the logic and control circuitry alive.

When using high current encoders (such as SIN-COS encoders), it is recommended to feed the encoders from a separate power supply.

## Logic Supply Input Specification

Nominal input voltage: 24 Vdc

Maximum input power: 144W

Maximum input current: 5.5A

## Environment Specification

### Ambient Temperature

Operating range: 0 to + 40°C

Storage and transportation range: -25 to +60°C

Humidity (operating range): 20% to 95% non-condensing



# Specifications

The following table summarizes power supplies characteristics

Ordering part Number	PSM3U-28V/0.5kW	PSM3U-48V/0.7kW	PSM3U-48V-1.4kW	PSM3U-320V-4kW	PSM3U-320V-8kW	PSM3U-320V-11kW	PSM3U-320/48V/0.7/8kW	PSM3U-560V-7kW
Certification Type		CE/UL	CE/UL	CE/UL	CE/UL	CE/UL	CE	UL
Input voltage [Vac] range Single phase Three phase								
Input frequency, nominal [Hz]				50 - 60				
Drive bus voltage @ nominal load [Vdc]		@ 110Vac 1φ / 230Vac 1φ			@ 110Vac 1φ / 230Vac 1φ / 230Vac 3φ		Two outputs @ 110Vac 1φ / 230Vac 1φ / 230Vac 3φ	@ 400Vac
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	28/28	51/51	51/51	133/302/313	133/302/313	133/302/313	(51 & 133)/(51 & 302)/(51 & 313)	543
Output power, cont. (nominal load) [kW]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	0.5/0.5	0.5/0.7	1/1.4	1.1/2.8/3.6	2.1/4.7/7.2	2.6/5.5/10.2	2.6/5.4/7.9	2.6/4.4/7.9
Output power, peak for 1 second (peak load) [kW]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	0.5/0.5	0.7/0.7	1.4/1.4	1.8/4.4/9.2	3.6/8.8/18.4	7.2/17.5/36.7	4.3/9.5/19.1	27.8
Output current, cont [A]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	18/18	10/14	20/28	8/7.5/12	16.0/15.5/23	16/15/23	20/18/32	16/15/26
Output current, peak for 1 second [A]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	18/18	14/14	28/28	16/15/31	32.0/31/62	64/62/124	(14 & 32)/(14 & 31)/(14 & 62)	60
Input current at nominal load [Arms]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	6.2/3.2	5.7/3.1	11.4/6.2	12/13/11	24.2/25.4/21.3	24/24/21.3	30/30/30	24/24/24
Input current at peak load [Arms]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	6.2/3.2	8/3	16.0/6.2	20/29/27	40.7/47.7/54.2	81.5/95.4/108.4	48.7/50.8/57.3	47
Input power at nominal load [kW]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	0.6/0.6	0.6/0.9	1.3/1.8	1.4/3/4.2	2.7/5.9/8.5	2.6/5.6/8.5	3.3/6.9/12.0	2.6/5.5/9.6
Input power at peak load [kW]								
@ 110Vac 1φ/230Vac 1φ / 230Vac 3φ/400Vac 3φ input	0.6/0.6	0.9/0.9	1.8/1.8	2.3/5.5/11	4.5/11.0/21.6	9/22/43	5.4/11.8/22	32.6
Efficiency								
Single phase input Three phase input	81% 81%	81% 81%	81% 81%	80% 85%	80% 85%	80% 85%	80% 85%	80% 85%
Power Supply Dissipation at nominal load [W]								
Single phase input Three phase input	130W -	160 -	320 -	48 70	95 135	131 186	255 295	95
Dimensions: Height, Width, Length [mm]								
Weight [gram]								
Internal Regeneration resistor								
Power supply protection types								
Power supply missing Temperature too high Over current protection Over voltage protection Power supply not ready Regeneration fault Phase lost (for 3 phase input only)		YES YES YES YES -	YES YES YES YES -	YES YES -	YES YES -	YES YES -	YES YES YES YES YES YES YES	YES YES -

## Warranty

The warranty of this product is according to the Terms and Conditions of Sale and is effective for one year from date of shipment from ACS Motion Control. For further warranty information, please see the hardware guide.  
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