

# 70W AC-DC Din Rail Mounted Power Supplies

**multicomp**PRO

**RoHS  
Compliant**



## Features

- Compact DIN rail mounting package
- Single phase input voltage
- Universal AC input voltage range from 90V AC to 264V AC
- High performance and reliability
- 100% full load burn-in test
- Free Air Convection Cooling
- LED indicator for DC power on and DC low
- Short circuit, over voltage, over current and over temperature protection

## Applications

- Process Control
- Factory Automation
- Traffic & Transportation System
- Other industrial Applications

## Electrical

| Part Number | Nominal Input Voltage | Output Voltage | Output Current | Ripple (Max.) | Efficiency (Typ.) | Certificate          |
|-------------|-----------------------|----------------|----------------|---------------|-------------------|----------------------|
| MP003281    | 100V AC to 240V AC    | 12V            | 5A             | 100mV         | 84%               | CE, FCC, CB, UL, CUL |
| MP003282    |                       | 24V            | 3A             | 120mV         | 86%               |                      |

### NOTE:

1. The ripple values are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with 0.1uF & 47uF parallel capacitor under ambient temperature 25°C at rated input voltage and rated load;
2. The efficiency values are measured under ambient temperature 25°C at rated input voltage and rated load.

## Input

| Parameter                  | Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MIN | TYP | MAX        | Units  |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------------|--------|
| Input voltage              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 90  |     | 264        | V AC   |
| Input frequency            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 47  |     | 63         | Hz     |
| Input current              | Full load, Vin=115V AC<br>Full load, Vin=230V AC                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     | 1.6<br>0.8 | A<br>A |
| Inrush current             | Cold start, Vin=115V AC<br>Cold start, Vin=230V AC                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |     | 30<br>60   | A<br>A |
|                            | 1. This product is built in inrush limiting circuit to protect the circuit from surge current damages when the power is turned on. Malfunction can occur by repeating the input voltage on and off rapidly. Therefore, sufficient interval should be given between turning on and off the power;<br>2. To avoid connecting the switch or fuse to input terminal (outside of the power supply), more consideration should be given when selecting the parts that can endure the inrush current |     |     |            |        |
| Stand-by power consumption | Vin=230V AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |     | 4          | W      |
| Surge voltage              | L-N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |     | 2          | KV     |

Newark.com/multicomp-pro  
Farnell.com/multicomp-pro  
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## Output

| Parameter                                                                                                                                                                                                                                                                                                                                                  | Conditions                  | MIN | TYP   | MAX | Units |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----|-------|-----|-------|
| Output voltage accuracy                                                                                                                                                                                                                                                                                                                                    |                             |     |       | 2   | %     |
| Output voltage adjustment range                                                                                                                                                                                                                                                                                                                            | MP003281                    |     | 11-14 |     | V     |
|                                                                                                                                                                                                                                                                                                                                                            | MP003282                    |     | 23-28 |     | V     |
| Output voltage can be adjusted within above range by V-ADJ. Variable resistance inside of the power supply. When output voltage exceeds the range, the power supply will be in failure or get into over voltage protection mode. To avoid the case that the output voltage is higher than rated voltage, output current should be used under rated current |                             |     |       |     |       |
| Minimum load                                                                                                                                                                                                                                                                                                                                               |                             | 0   |       |     | A     |
| Line regulation                                                                                                                                                                                                                                                                                                                                            | Vin from 100V AC to 240V AC |     |       | 2   | %     |
| Load regulation                                                                                                                                                                                                                                                                                                                                            | Vout from min. to 24V       |     |       | 3   | %     |
| Turn-on delay time                                                                                                                                                                                                                                                                                                                                         | Full load, Vin=115V AC      |     | 560   |     | ms    |
| Hold up time                                                                                                                                                                                                                                                                                                                                               | Full load, Vin=115V AC      |     | 20    |     | ms    |

## Protection

|                  |                                                                                                                                                                                                                                                                                     |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Short circuit    | Shut off output voltage, the power supply will recover after the power is turned on again                                                                                                                                                                                           |
| Over voltage     | MP003281: over voltage protection value 20V<br>MP003282: over voltage protection value 33V                                                                                                                                                                                          |
|                  | (1) When output voltage exceeds above over voltage protection value or reversal voltage occurs, the protection will be started and the output voltage will be cut off in order to protect the power supply;<br>(2) The power supply will recover after the power is turned on again |
| Over current     | MP003281: over current protection value 8A<br>MP003282: over current protection value 4A                                                                                                                                                                                            |
|                  | (1) When output voltage exceeds above over current protection value, the protection will be started and the output voltage will be cut off in order to protect the power supply;<br>(2) The power supply will recover automatically after the fault condition is removed            |
| Over temperature | Over temperature protection value: 100 ±10°C                                                                                                                                                                                                                                        |
|                  | (1) When the ambient temperature exceeds above over temperature protection value, the protection will be started and the output voltage will be cut off in order to protect the power supply;<br>(2) The power supply will recover after the power is turned on again               |