

# HPS Series 480W Higher Performance AC-DC DIN Rail Power Supplies

# IMO

Technical Datasheet

## Key Features

- 24VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



## Technical Specification - 480W Output

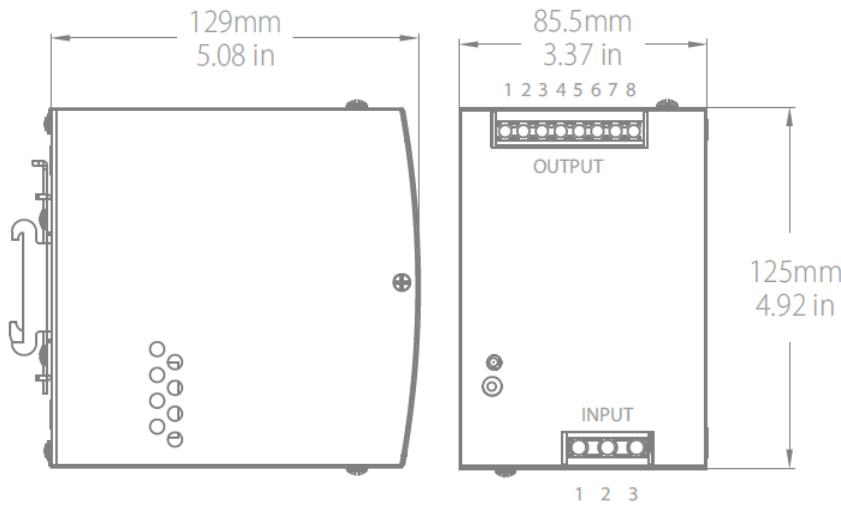
| Model                              | HPS-1-480-24DC  |
|------------------------------------|---|
| Input Voltage                      | 90-264VAC / 120-375VDC                                  |
| Output Wattage                     | 480W  |
| Peak Output Wattage                | 720W (for 3 secs)                                       |
| Output Voltage / Power Dissipation | 24VDC / 480W  |
| Output Current                     | 20A   |
| Efficiency                         | 94%   |
| <b>General Specification</b>       |   |
| Approval                           | cURus   |
| Isolation Voltage                  | 3000VAC/4242VDC   |
| Isolation Resistance               | 100MΩ @ 500VDC  |
| Ambient Temperature                | -20 to +70°C  |
| Derating                           | (55 to 70°C) 2.5%/°C                                    |
| Storage Temperature                | -40 to +85°C  |
| Relative Humidity                  | 10 to 95% RH  |
| Cooling                            | Free air convection                                     |
| Dimensions                         | L125 x W85.5 x D129 (142 inc. DIN rail mount) mm        |
| Weight                             | 1500g   |
| Case Material                      | Metal   |
| <b>Input Specifications</b>        |   |
| Rated Input Voltage                | 115 ~ 230VAC  |
| Input Voltage Range                | 90 to 264VAC, 127 to 375VDC                             |
| Line Frequency                     | 50/60Hz   |
| Power Factor @ 115VAC              | 0.99 Typical (0.99 Measured)                            |
| Power Factor @ 230VAC              | 0.94 Typical (0.94 Measured)                            |
| Inrush Current (115 / 230VAC)      | 40 / 80A  |
| <b>Output Specifications</b>       |   |
| Output Voltage Accuracy            | ±1%   |
| Minimum Load                       | 0%  |
| Line Regulation                    | ±0.5%   |
| Load Regulation                    | ±1%   |
| Turn On Time                       | 1000ms after AC applied to input at full resistive load |
| Voltage Fall Time                  | 150ms   |
| Voltage Rise Time                  | 150ms   |
| Hold Up Time (115 / 230VAC)        | 25 / 30ms   |
| Temperature Coefficient            | ±0.03%/°C   |
| Ripple & Noise                     | 150mVp-p  |
| Voltage Trim Range                 | 22.5-28.5VDC  |
| <b>Control &amp; Protection</b>    |   |
| Rated Overload Protection          | 110-150%  |
| Over Voltage Protection            | 29-33VDC  |
| Output Short Circuit               | Shutdown Output Voltage with Auto Recovery              |

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## Dimensions (mm)



## Pin Connections

| Input   |               | Output  |                    |
|---------|---------------|---------|--------------------|
| Pin No. | Description   | Pin No. | Description        |
| 1       | FG (⊕)        | 1, 2    | DC OUTPUT V+       |
| 2       | AC / N or DC- | 3, 4    | DC OUTPUT V-       |
| 3       | AC / L or DC+ | 5, 6    | Relay Contact      |
|         |               | 7       | P+ (current share) |
|         |               | 8       | P- (current share) |

## Installation

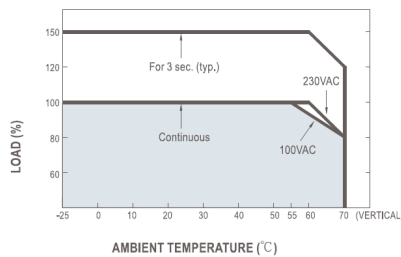
### Ventilation / Cooling

Normal convection  
All sides 25mm free space  
For cooling recommended

### Connector Size Range

AWG24-10 (0.2 ~ 4mm<sup>2</sup>) flexible / solid cable,  
- Input connector can withstand torque at maximum 9 pound-inches  
- Output connector can withstand torque at maximum 5.5 pound-inches  
8 m/m stripping cable end recommends  
Use copper conductors only, 60 / 75°C

## Derating Curve



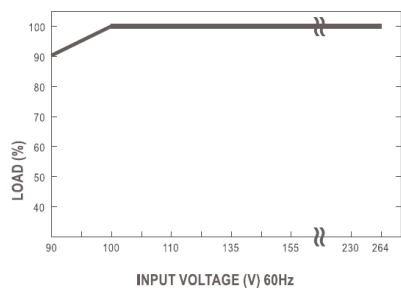
## Construction

Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safely and firmly on the rail.

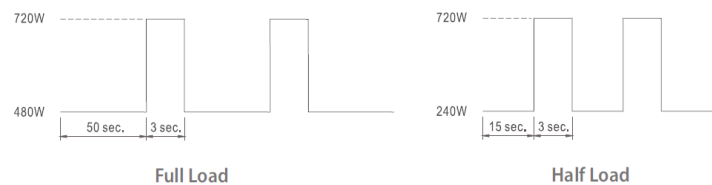
## DC OK Relay Contact

|                        |                         |
|------------------------|-------------------------|
| Contact Close          | PSU turns on / DC OK    |
| Contact Open           | PSU turns off / DC Fail |
| Contact Ratings (max.) | 30V / 1A resistive load |

## Minus Output & Input Voltage Curves



## Peak Loading



## Circuit Schematic

