

# Single Output Industrial DIN Rail Power Supply

## Catalog Numbers - ICO-PS6012, ICO-PS6024

### General Description

These power supplies can be used with SoftPLC Hardbooks, Web Studio HMI's, I/O, and Gatecraft products. The ICO-PS6012 provides 12VDC up to 60W. The ICO-PS6024 provides 24VDC up to 60W.

### Features

- ◆ Universal AC input/Full range
- ◆ Protections:  
Short circuit / Overload / Over voltage
- ◆ Cooling by free air convection
- ◆ Can be installed on DIN Rail TS-35/7.5 or 15
- ◆ Built in DC OK relay contact  
Active signal (max.) 30V/1A resistive
- ◆ NEC class 2 / LPS compliant (ICO-PS6024 only)
- ◆ LED indicator for power on
- ◆ No load power consumption ,0.75W
- ◆ 100% full load burn-in test

### General

- ◆ **MTBF:** 299.2K hrs min.  
MIL-HDBK-217F (25°C)
- ◆ **Dimension (WxHxD):** 40x90x100mm
- ◆ **Packing:** 0.33Kg;  
42pcs/14.8Kg/0.82CUFT
- ◆ **Overload:** 105 ~ 150% rated output power
- ◆ **Overload Protection Type:**  
Constant current limiting, recovers automatically after fault condition is removed
- ◆ **Over Voltage:**  
ICO-PS6012: 15.6 ~ 18V  
ICO-PS6024: 31.2 ~ 36V
- ◆ **Over Voltage Protection Type:**  
Shut down o/p voltage, re-power on to recover



ICO-PS60xx

### Safety & EMC<sup>4</sup>

- ◆ **Safety Standards:**  
UL508, TUV EN60950-1 approved  
UL508, TUV EN60950-1 approved,  
NEC class 2/LPS compliant
- ◆ **Withstand Voltage:** I/P-O/P:3KVAC  
I/P-FG:1.5KVAC O/P-FG:0.5KVAC
- ◆ **Isolation Resistance:** I/P-O/P, I/P-FG,  
O/P-FG:100M Ohms/500VDC 25°C  
70%RH
- ◆ **EMI Conduction & Radiation:**  
Compliance to EN55011, EN55022  
(CISPR22), EN61204-3 Class B
- ◆ **Harmonic Current:** Compliance to  
EN61000-3-2, -3
- ◆ **EMS Immunity:** Compliance to  
EN6100-4-2, 3, 4, 5, 6, 8, 11, ENV50204,  
EN55024, EN61000-6-2, EN61204-3,  
light industry lever, criteria A

### Environmental

- ◆ **Working Temp:**  
-20 ~ +70°C  
(Refer to output load derating curve)
- ◆ **Working Humidity:**  
20 ~ 90% RH non-condensing
- ◆ **Storage Temp., Humidity:**  
-40 ~ +85°C,  
10 ~ 95 RH non-condensing
- ◆ **Temp. Coefficient:**  
±0.03%/°C (0 ~ 50°C)
- ◆ **Vibration:** Component:: 10 ~ 500Hz,  
2G 10min./1cycle, 60min. each along X,  
Y, Z axes  
Mounting: Compliance to IEC60068-2-6

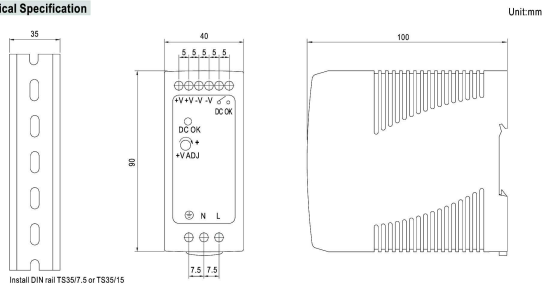
# Specifications

	ICO-PS6012	ICO-PS6024
<b>Output</b>		
DC Voltage	12V	24V
Rated Current	5A	2.5A
Current Range	0 ~ 5A	0 ~ 2.5A
Rated Power	60W	
Ripple & Noise (max.) <sup>2</sup>	120mVp-p	150mVp-p
Voltage Adj. Range	12 ~ 15V	24 ~ 30V
Voltage Tolerance <sup>3</sup>	±1.0%	
Line Regulation	±1.0%	
Load Regulation	±1.0%	
Setup, Rise Time <sup>5</sup>	500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load	
Hold Up Time (Typ.)	50ms/230VAC 20ms/115VAC at full load	
<b>Input</b>		
Voltage Range	85 ~ 264VAC 120 ~ 370VDC	
Frequency Range	47 ~ 63Hz	
Efficiency (Typ.)	86%	88%
AC Current (Typ.)	1.8A/115VAC 1A/230VAC	
Inrush Current (Typ.)	Cold Start 30A/115VAC 60A/230VAC	
Leakage Current	<1mA/240VAC	

**NOTES:**

1. All parameters NOT specifically mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of band width by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

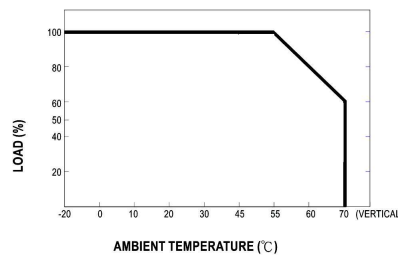
**Mechanical Specification**



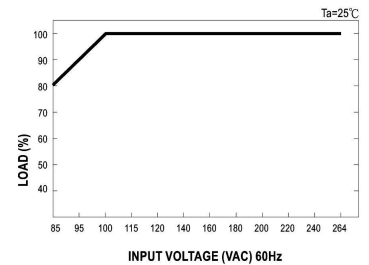
**DC OK Relay Contact**

Contact Close	When the output voltage reaches the adjusted output voltage.
Contact Open	When the output voltage drop below 90% output voltage.
Contact Ratings (max.)	30V/1A resistive load

**Derating Curve**



**Output Derating VS Input Voltage**



**Block Diagram**

