

PS2R AS-Interface Power Supply


AS-Interface Power Supply with Universal AC Input Voltage

- Input voltage range: 100 to 240V AC
- Two output ratings: 73W and 145W
- Slim housing style mountable on DIN rails
- IP20 finger-safe terminals
- CE marked (LVD, EMCD)
- UL listed (UL 508), CSA (C22.2 No. 950), TÜV (EN60950, EN61010-1)
- Noise standards EN55022, EN61000-6-2 compliant
- Input indicator (orange) and output indicator (green)
- IEC62026-2 compliant



Part Numbers

AS-Interface Power Supply

| | Output Capacity | Input Voltage | Output Voltage | Part Numbers |
|---|-----------------|----------------|----------------|--------------|
|  | 73W | 100 to 240V AC | 30.5V DC | PS2R-Q30ABL |
| | 145W | | | PS2R-F30ABL |

PLCs

Operator Interfaces

Automation Software

Power Supplies

Sensors

Communication & Networking

Specifications

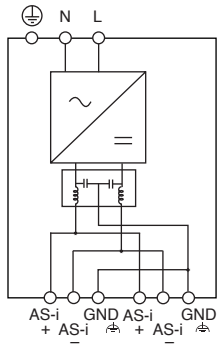
| Model | | PS2R-Q30ABL | PS2R-F30ABL | |
|--------------------------------|----------------------------------|--|--|----------------------------------|
| PLCs | Efficiency | 83% (typical) at the rated input/output | | |
| | Voltage | 100 to 240V AC (85 to 264V AC) | | |
| | Frequency | 47 to 63 Hz | | |
| | Input Current | 100V AC | 1.8A (typical) at the rated load | 3.0A (typical) at the rated load |
| | | 220V AC | 1.0A (typical) at the rated load | 2.0A (typical) at the rated load |
| | Leakage Current | 3.5mA maximum (UL, CSA, VDE) | | |
| Inrush Current | 30A maximum (25°C at cold start) | | | |
| Operator Interfaces | Rated Voltage | 30.5V DC | | |
| | Rated Current | 2.4A | 4.8A | |
| | Adjustable Voltage Range | N/A | | |
| | Ripple Noise Voltage | 300mV p-p maximum (0 to 10 kHz), 50mV p-p maximum (10 to 500 kHz) according to AS-Interface standard | | |
| | Input/Load Fluctuation | 3% | | |
| | Overall Fluctuation | 29.5 to 31.6V DC including input fluctuation, output fluctuation, temperature fluctuation and ripple voltage | | |
| | Delay Time | 2 sec maximum (delay in output voltage change from 5V to 26.5V) according to AS-Interface standard | | |
| | Startup Time | 1 sec maximum (output voltage change from 21.5V to 29.5V) according to AS-Interface standard | | |
| | Output Holding Time | 10ms minimum at 85V AC, rated load | | |
| | Automation Software | Overcurrent Protection | 110% (typical), automatic reset ¹ | |
| Overvoltage Protection | | 120% minimum ² | | |
| Undervoltage Protection | | 95% maximum, automatic reset | | |
| Input Indicator | | Orange | | |
| Output Indicator | | Green | | |
| Dielectric Strength | | Between inputs and outputs: Between inputs and ground: Between outputs and ground: | 3.0 kV AC, 1 minute 3.0 kV AC, 1 minute 0.5 kV AC, 1 minute | |
| Insulation Resistance | | Between inputs and outputs: Between inputs and ground: | 100 MΩ minimum (500V DC megger) 100 MΩ minimum (500V DC megger) | |
| Operating Temperature | | 0 to 60°C (See the derating curve.) Vertical mounting only | | |
| Storage Temperature | | -25 to +70°C (no freezing, non-condensation) | | |
| Operating Humidity | | 95% RH (non-condensation) | | |
| Vibration Resistance | | 10 to 57 Hz amplitude 0.075mm, 57 to 150 Hz acceleration 10 m/s ² (1G) 10 cycles per axis on each of three mutually perpendicular axes | | |
| Shock Resistance | | 147 m/s ² (15G), 11ms duration, 2 shocks per axis, on six mutually perpendicular axes | | |
| Terminal | | IP20 | | |
| Weight (approx.) | | 800g | 1300g | |
| Dimensions | | 120H x 54W x 120D mm | 120H x 81W x 120D mm | |
| Safety Standards | | UL 508 listed CSA C22.2 No. 950 EN60950, EN61010 | | |
| AS-Interface Standard | | EN50295 | | |
| EMC | (EMI) Radiated Emission | IEC61000-6-2 EN55022 class B | | |
| | Conducted Emission | EN55022 class B | | |



1. The AS-Interface power supply is provided with an overvoltage protection circuit, but a long period of overload and short-circuit should be avoided.
2. After turning off the input voltage, allow more than 10 seconds before turning on again.

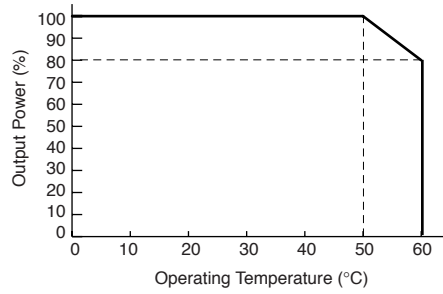
Block Diagram

PS2R-Q30ABL
PS2R-F30ABL



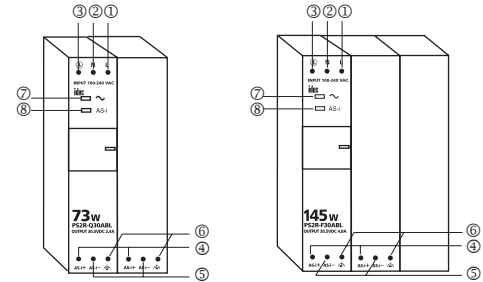
Output Derating

(Operating temperature is the temperature around the power supply)



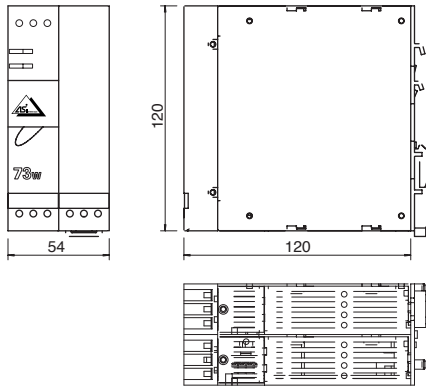
Terminal Names

- ① (L) AC input terminal
- ② (N) AC input terminal (ground side)
- ③ (⊕) Ground terminal (protective ground)
- ④ (AS-+) AS-Interface + output terminal
- ⑤ (AS-) AS-Interface - output terminal
- ⑥ (⊖) Ground terminal (output side)
- ⑦ (-) Input indicator (goes on when AC input is on)
- ⑧ (AS-i) Output indicator (goes on when DC output is on)

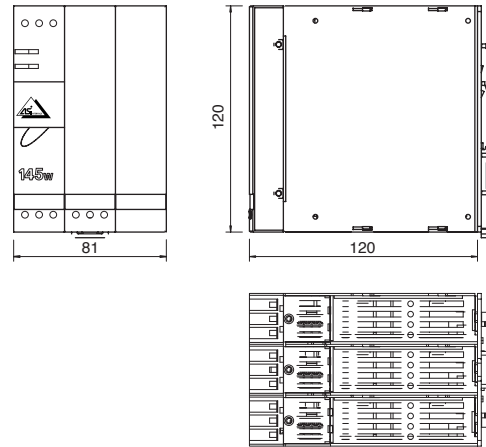


Dimensions

PS2R-Q30ABL



PS2R-F30ABL

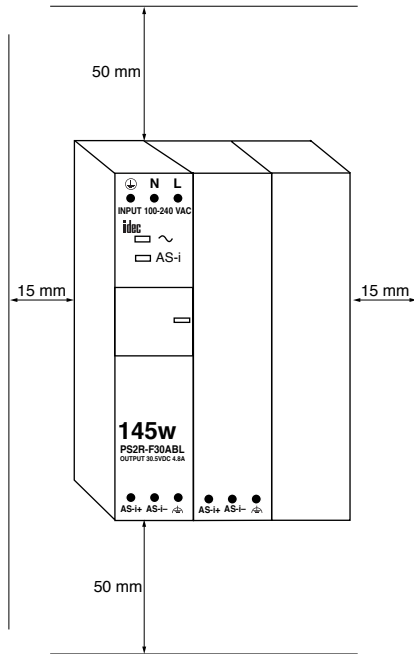


All dimensions in mm.

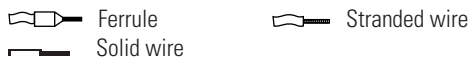
Precautions for Installation

1. Heat Dissipation by Convection

Keep minimum spacing of 50mm above and below, and 15mm on both sides to ensure proper ventilation.



2. Applicable Wires, Ferrules and Tightening Torque



| Ferrule/ Wire | | | | | |
|------------------|-------------|--------------|-------------|-----------|-------------|
| mm ² | 0.14 to 1.5 | 0.14 to 0.75 | 0.14 to 2.5 | 0.14 to 4 | 0.14 to 1.5 |
| AWG | 26 to 16 | 26 to 18 | 26 to 14 | 26 to 12 | 26 to 16 |

| | | | |
|--------|--|--|------------|
| | | | 0.6 N•m |
| ø3.5mm | | | 5.4 in•lbs |

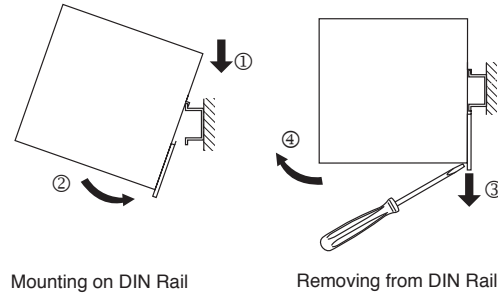
3. Mounting on 35mm-wide DIN Rails

Mounting

To mount the power supply on a DIN rail, place the input terminal side up and put the groove of the power supply on the DIN rail as shown. Press the power supply towards the DIN rail.

Removing

Insert a flat screwdriver into the slot in the clamp. While pulling out the clamp, turn the power supply bottom out.



Mounting Direction

The AS-Interface power supply can be mounted on a vertical plane only. Other mounting directions are not allowed because of heat dissipation.

Over Current Protection

When an overcurrent of 110% of the rated output current flows due to an overload, the output voltage drops automatically and intermittent operation starts.

When the load returns to normal conditions, the normal output voltage is automatically restored. Prevent overload or short-circuitry for a long period of time, otherwise the internal elements will be damaged.

Overvoltage Protection

When the output voltage exceeds 120% the rated output voltage, the output is turned off. When the output voltage is turned off due to an overvoltage, turn the input off, and after more than 10 seconds, turn the input on again.

Undervoltage Protection

When the output voltage drops below 95% the rated output voltage, the output is turned off. When the cause of the error is removed, normal output voltage is automatically restored.