

Altech Corp.®



Quality
Endorsed
Company



- ### Features
- Ultra Slim size
 - Conformal coated PCB
 - Parallel option available
 - Universal input
 - Three-year Warranty



Compact Power Supplies

PSC-75 Series



Input: 85-264VAC 47/63Hz
 Output Voltage: 12, 24 & 48 V DC
 Rated Power: 75W max.



FEATURES

- Universal AC input range(85~264Vac)
- Support 1+1 or N+1 redundant system (suggest to use redundancy modules.)
- Built-in active PFC,PF>0.95
- High efficiency up to 91%
- Built-in current sharing function
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-25°~70°)
- 150% peak load capacity
- Easy Fuse Tripping due to High Overload Current
- Excellent Partial Load Efficiency
- Built-in DC OK relay contact
- Can be installed on 35 mm DIN rail
- 100% full load burn-in test
- PCB with conformal coating
- Suitable for critical applications
- Ultra-slim,32mm width
- 3 years warranty

CATALOG NUMBER

PSC-7512

PSC-7524

PSC-7548

INPUT

| | | | |
|-------------------------------|-----------------------------|------------------|------------|
| Voltage Range | 85Vac~264Vac, 127Vdc-360Vdc | | |
| Frequency Range | 47Hz~63Hz | | |
| Power Factor (typical) | 0.99/100Vac | 0.95/230Vac | |
| AC Current (max.) | <0.95 A/100Vac | <0.45A/230Vac | |
| Inrush Current (Typical) | <30A/100Vac | <60A/230Vac | Cold start |
| Leakage Current | Input—output: ≤0.25mA | Input—PG: ≤3.5mA | |
| Efficiency (Typical) @230Vac | 88% | 91% | 91% |

OUTPUT

| | | | |
|-----------------------------|---------------------------------|--------|--------|
| DC Output | 12V | 24V | 48V |
| Rated Current | 6.3A | 3.2A | 1.6A |
| Current Range <i>Note 1</i> | 0~6.3A | 0~3.2A | 0~1.6A |
| Ripple and Noise | 0~70°C ≤100mV | ≤120mV | ≤120mV |
| | <i>Note 2</i> -25°C~0 ≤200mV | ≤240mV | ≤240mV |
| Voltage ADJ. Range | 12~14V | 24~28V | 48~56V |
| Voltage Accuracy | ±1.0% | | |
| Line Regulation | ±0.5% | | |
| Load Regulation | ±1.0% | | |
| Set-up Time | <250mS@230Vac ; <500mS@100Vac | | |
| Hold up Time | ≥20mS(230Vac input, Full load) | | |
| Temperature Coefficient | ±0.03%/°C | | |
| Overshoot | <5.0% | | |

ENVIRONMENTAL

| | |
|-----------------------------|-------------------------------------|
| Operating amb. Temp. & Hum. | -25°C~70°C; 20%~90%RH No condensing |
| Storage Temp. & Hum. | -40°C~85°C; 5%~95%RH No condensing |

PROTECTIONS

| | | | |
|------------------|--|--------|--------|
| Over voltage | 15~18V | 29~33V | 58~65V |
| Over Load | Protection type: Hiccup mode, Auto recovery 110%~150% of rated current, Constant power limiting for some time(150% of rated current, last 3S) then PS stop working for 7S,after 7S,if the load ≤rated current, PS will work normally, auto recovery | | |
| Over temperature | 100±5°C, detect on heat sink of power transistor; shut down O/P, auto recovery after temperature goes down. | | |
| Short Circuit | Long-term mode, auto recovery | | |

SAFETY & EMC

Note 3

| | |
|----------------------|---|
| Safety Standards | UL508, UL60950-1, EN62368-1 |
| Withstand Voltage | Primary-Secondary:3.0kVac/10mA .Primary-PG:2.5kVac/10mA. Secondary-PG:0.5kVac/20mA. |
| Isolation Resistance | 10M ohms |
| EMC Emission | Compliance to EN55032 Class B |
| Harmonic Current | Compliance to EN61000-3-2, Class A |
| EMC Immunity | Compliance to EN61000-4-2,3,4,5,6,11; |

OTHER

| | |
|----------------------|--|
| MTBF (MIL-HDBK-217F) | More than 300,000Hrs (25°C, Full load) |
| Dimension (L*W*H) | 124 x 119 x 32mm |
| Packing | 28pcs/CTN,17.6Kg, 0.04cbm |
| Cooling method | Cooling by free air convection |

NOTES

1. All parameters NOT specially mentioned are measured at rated input, rated load and 25°C of ambient temperature.
2. Measured at 20MHz of bandwidth by using a 12” twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.
3. The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies”

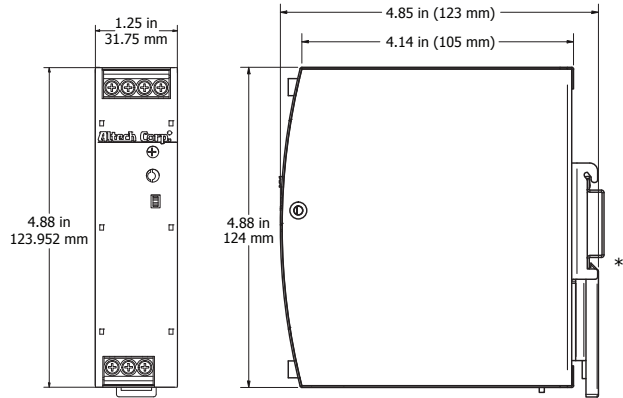
Mechanical Specification

1.AC terminal blocks installation information

| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|----------|-----------|--------------------|
| 1 | L | 20~10AWG | 1Nm |
| 2 | N | | |
| 3 | PG | | |

2.DC terminal blocks installation information

| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|---------------------|-----------|--------------------|
| 4 & 5 | DC OK Relay Contact | 20~10AWG | 1Nm |
| 6 | -V | | |
| 7 | +V | | |



* DIN Rail sold separately.

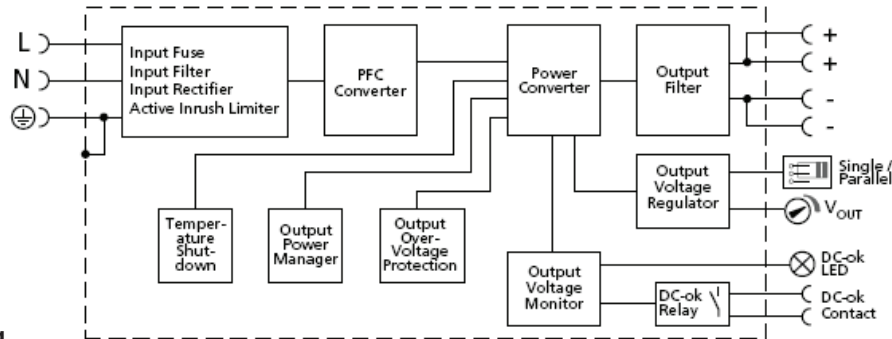
AC/DC Terminal

| Type | Screw terminal blocks |
|------------------------------|-------------------------------------|
| Solid Wire | 0.5-6mm ² |
| Strand Wire | 0.5-4mm ² |
| Wire Spec | AWG20-10 (PG wire >18AWG) |
| Max Wire Diameter | 2.8mm |
| Recommended stripping length | 7mm |
| Screwdriver | 3.5mm Straight or Cross Screwdriver |
| Recommended Torque | 1NM |

| | |
|----------------------------|---|
| Power boost | 150% of rated current |
| DC OK | V On: when output voltage is up to 90% of rated output voltage |
| | V Off: when output voltage is down to 80% of rated output voltage |
| DC OK relay contact rating | Max 30V/1A or 60V/0.3A or 30Vac/0.3A Resistive load |
| Parallel function | support |

Block Diagram

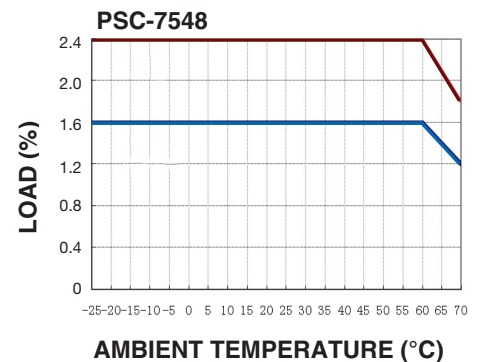
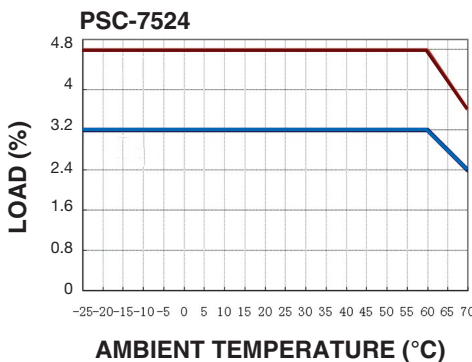
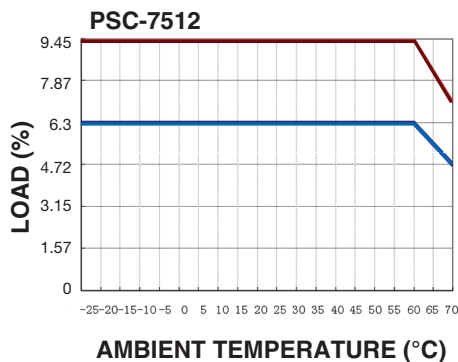
Functional Diagram



Peak Loading



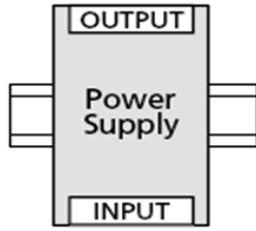
Derating Curve



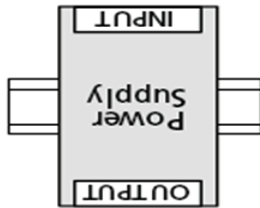
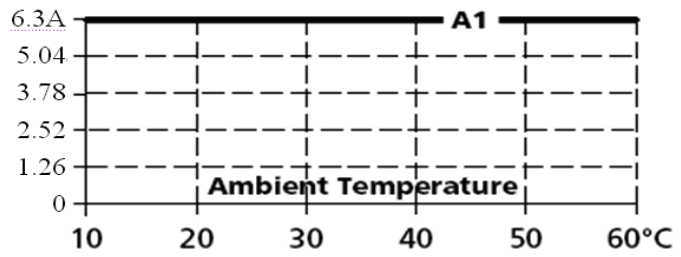
Mounting method instruction PSC-7512

A1 is recommended output current.

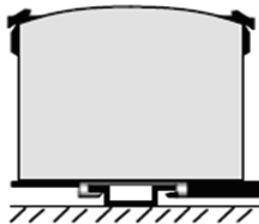
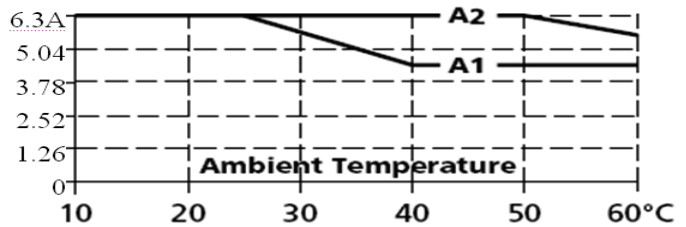
A2 is the allowed max output current (PSU lifetime is around half of A1).



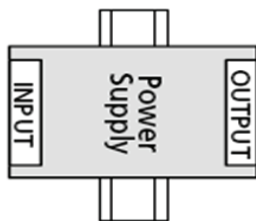
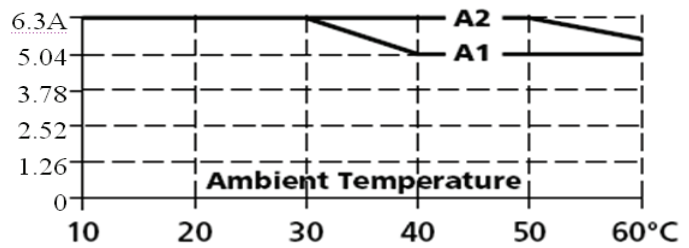
Output Current



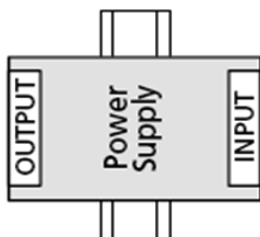
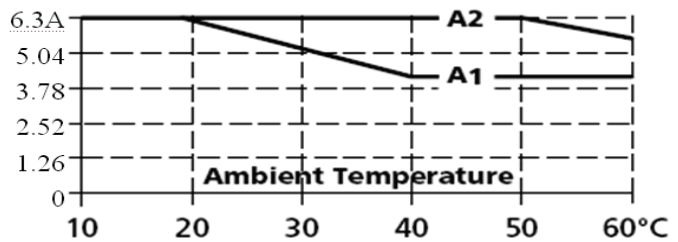
Output Current



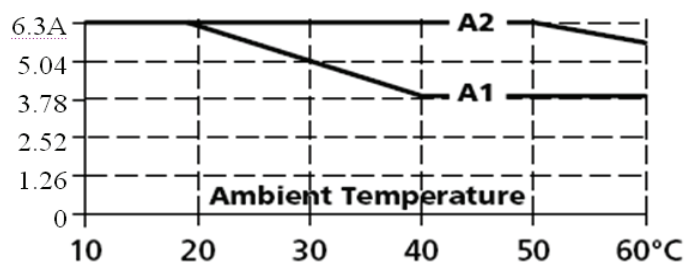
Output Current



Output Current



Output Current

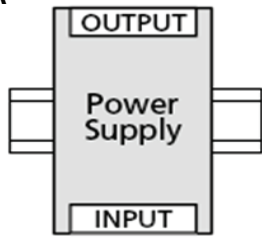


Mounting method instruction PSC-7524

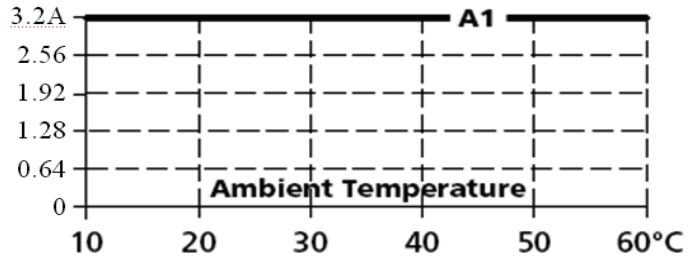
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

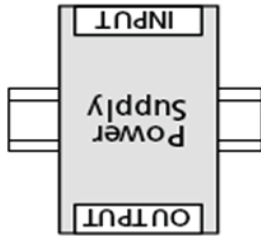
Mounting A



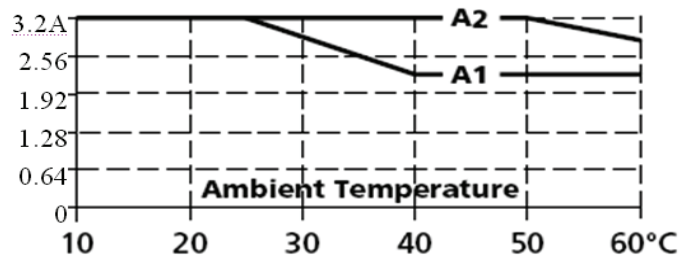
Output Current



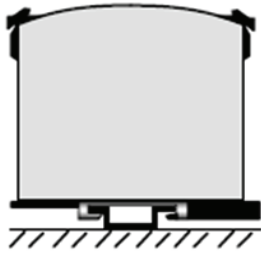
Mounting B



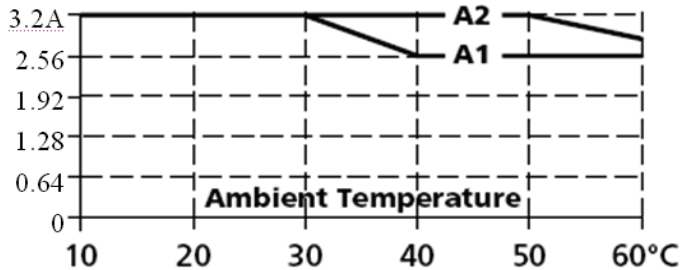
Output Current



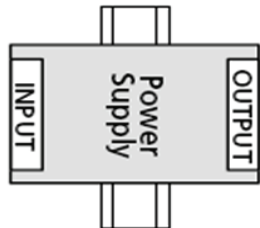
Mounting C



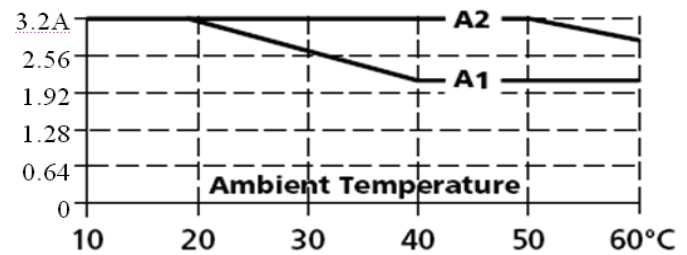
Output Current



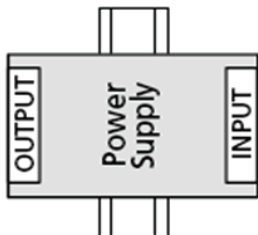
Mounting D



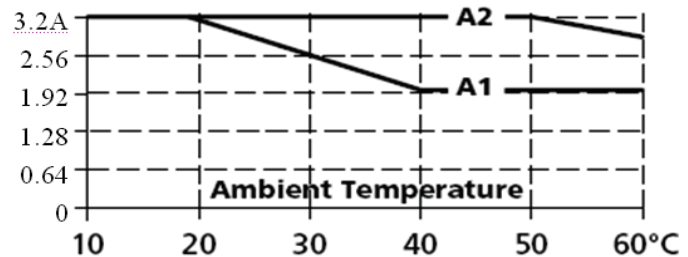
Output Current



Mounting E



Output Current

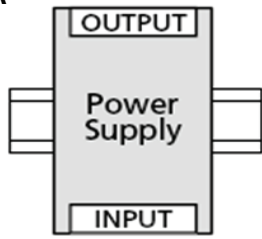


Mounting method instruction PSC-7548

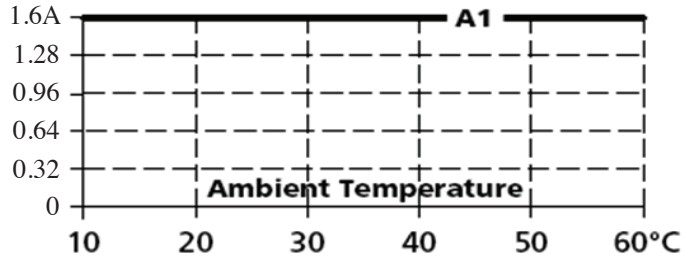
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

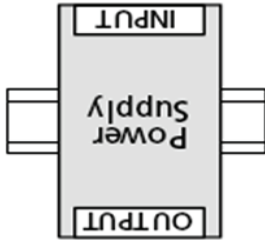
Mounting A



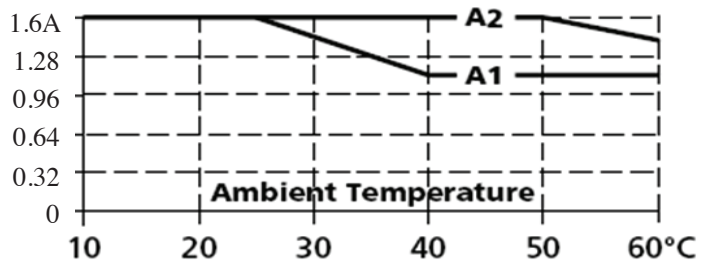
Output Current



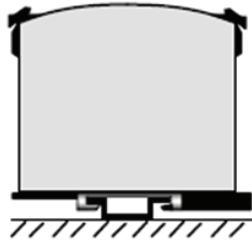
Mounting B



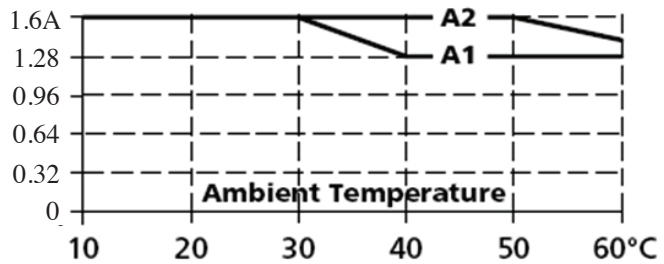
Output Current



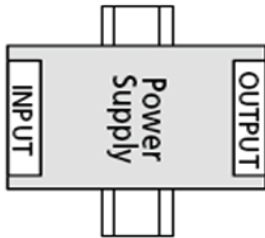
Mounting C



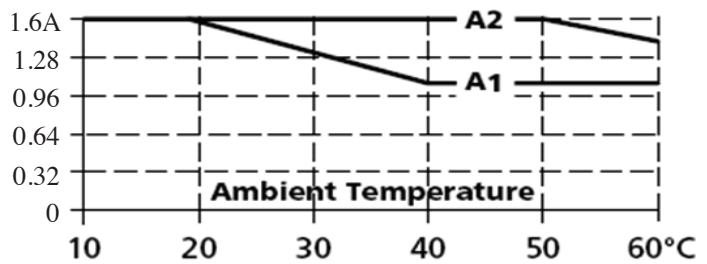
Output Current



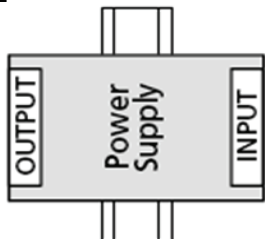
Mounting D



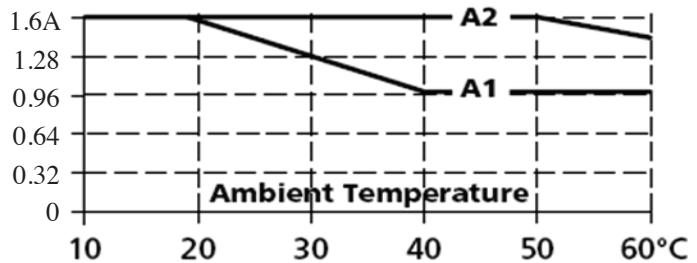
Output Current



Mounting E



Output Current



PSC-120 Series



Input: 85-264VAC 47/63Hz
 Output Voltage: 12, 24 & 48 V DC
 Rated Power: 120W max.



FEATURES

- Universal AC input range(85~264Vac)
- Support 1+1 or N+1 redundant system (suggest to use redundancy modules.)
- Built-in active PFC,PF>0.95
- High efficiency up to 92%
- Built-in current sharing function
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-25°C~70°C)
- 150%(180W) peak load capacity
- Easy Fuse Tripping due to High Overload Current
- Excellent Partial Load Efficiency
- Built-in DC OK relay contact
- Can be installed on 35 mm DIN rail
- 100% full load burn-in test
- PCB with conformal coating
- Suitable for critical applications
- Ultra-slim,32mm width
- 3 years warranty

CATALOG NUMBER

PSC-12012

PSC-12024

PSC-12048

INPUT

| | | | |
|-------------------------------|-----------------------------|------------------|------------|
| Voltage Range | 85Vac~264Vac, 127Vdc-360Vdc | | |
| Frequency Range | 47Hz~63Hz | | |
| Power Factor (typical) | 0.99/100Vac | 0.95/230Vac | |
| AC Current (max.) | <1.3 A/100Vac | <0.55A/230Vac | |
| Inrush Current (Typical) | <30A/100Vac | <60A/230Vac | Cold start |
| Leakage Current | Input—output: ≤0.25mA | Input—PG: ≤3.5mA | |
| Efficiency (Typical) @230Vac | 89.5% | 91% | 92% |

OUTPUT

| | | | |
|-----------------------------|---------------------------------|--------|--------|
| DC Output | 12V | 24V | 48V |
| Rated Current | 8.33A | 5A | 2.5A |
| Current Range <i>Note 1</i> | 0~8.33A | 0~5A | 0~2.5 |
| Ripple and Noise | 0~70°C ≤100mV | ≤120mV | ≤240mV |
| | <i>Note 2</i> -25°C~0 ≤200mV | ≤240mV | ≤240mV |
| Voltage ADJ. Range | 12~14V | 24~28V | 48~56V |
| Voltage Accuracy | ±1.0% | | |
| Line Regulation | ±0.5% | | |
| Load Regulation | ±1.0% | | |
| Set-up Time | <250mS@230Vac ; <500mS@100Vac | | |
| Hold up Time | ≥20mS(230Vac input, Full load) | | |
| Temperature Coefficient | ±0.03%/°C | | |
| Overshoot | <5.0% | | |

ENVIRONMENTAL

| | |
|-----------------------------|-------------------------------------|
| Operating amb. Temp. & Hum. | -25°C~70°C; 20%~90%RH No condensing |
| Storage Temp. & Hum. | -40°C~85°C; 5%~95%RH No condensing |

PROTECTIONS

| | | | |
|------------------|---|--------|--------|
| Over voltage | 15~18V | 29~33V | 58~65V |
| Over Load | Protection type: Hiccup mode, Auto recovery 110%~150% of rated current, Constant current limiting for some time(150% of rated current, last 3S) then PS stop working for 7S,after 7S,if the load ≤=rated current, PS will work normally, auto recovery | | |
| Over temperature | 100±5°C, detect on heat sink of power transistor; shut down O/P, auto recovery after temperature goes down. | | |
| Short Circuit | Long-term mode, auto recovery | | |

SAFETY & EMC

Note 3

| | |
|----------------------|---|
| Safety Standards | UL508, UL60950-1, EN62368-1 |
| Withstand Voltage | Primary-Secondary:3.0KVac/10mA .Primary-PG:2.5KVac/10mA. Secondary-PG:0.5KVac/20mA. |
| Isolation Resistance | 10M ohms |
| EMC Emission | Compliance to EN55032 Class B |
| Harmonic Current | Compliance to EN61000-3-2, Class A |
| EMC Immunity | Compliance to EN61000-4-2,3,4,5,6,11; |

OTHER

| | |
|----------------------|---------------------------------------|
| MTBF (MIL-HDBK-217F) | More than 300,000Hrs (25°, Full load) |
| Dimension (L*W*H) | 124 x 119 x 32mm |
| Packing | 28pcs/CTN,18.02Kgs, 0.04cbm |
| Cooling method | Cooling by free air convection |

NOTES

1. All parameters NOT specially mentioned are measured at rated input, rated load and 25° of ambient temperature.
2. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.
3. The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies".

PSC-120 Series

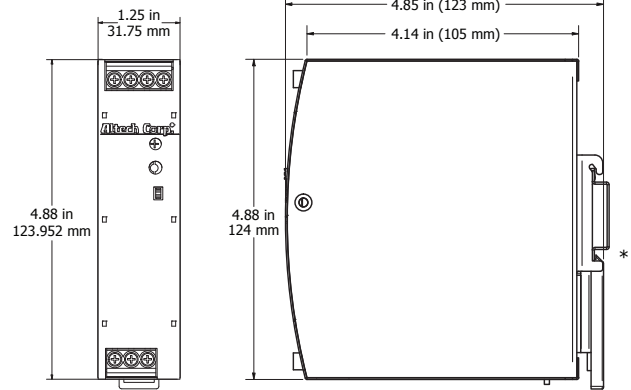
Mechanical Specification

1.AC terminal blocks installation information

| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|----------|-----------|--------------------|
| 1 | L | 20~10AWG | 1Nm |
| 2 | N | | |
| 3 | PG | | |

2.DC terminal blocks installation information

| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|---------------------|-----------|--------------------|
| 4 & 5 | DC OK Relay Contact | 20~10AWG | 1Nm |
| 6 | -V | | |
| 7 | +V | | |



* DIN Rail sold separately.

AC/DC Terminal

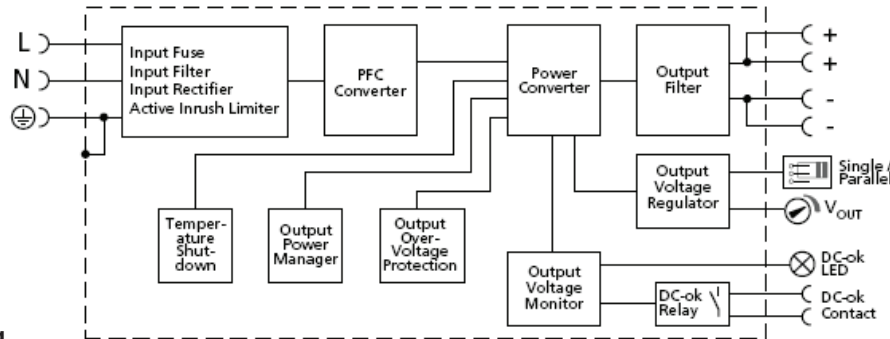
| Type | Screw terminal blocks |
|------------------------------|-------------------------------------|
| Solid Wire | 0.5-6mm ² |
| Strand Wire | 0.5-4mm ² |
| Wire Spec | AWG20-10 (PG wire >18AWG) |
| Max Wire Diameter | 2.8mm |
| Recommended stripping length | 7mm |
| Screwdriver | 3.5mm Straight or Cross Screwdriver |
| Recommended Torque | 1NM |

Additional Functions

| | |
|----------------------------|---|
| Power boost | 150% of rated current |
| DC OK | V On: when output voltage is up to 90% of rated output voltage |
| | V Off: when output voltage is down to 80% of rated output voltage |
| DC OK relay contact rating | Max 30V/1A or 60V/0.3A or 30Vac/0.3A Resistive load |
| Parallel function | support |

Block Diagram

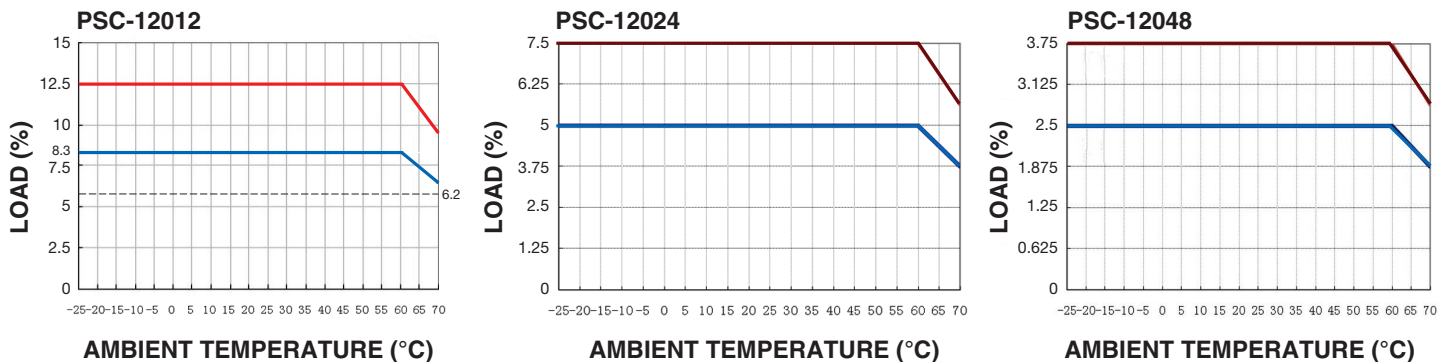
Functional Diagram



Peak Loading



Derating Curve

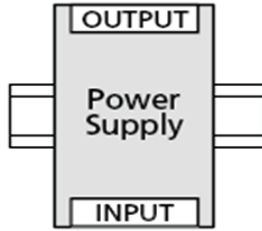


Mounting method instruction PSC-12012

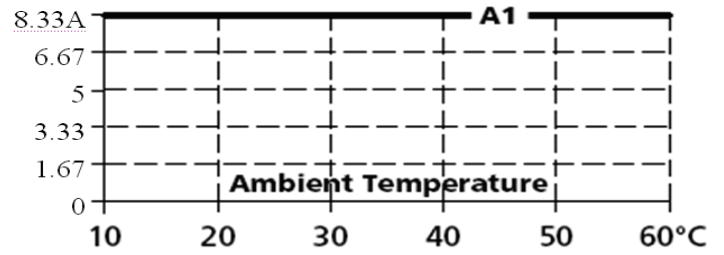
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

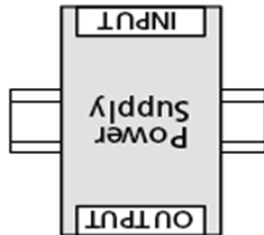
Mounting A



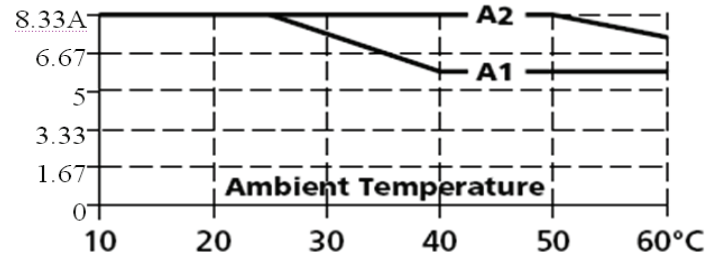
Output Current



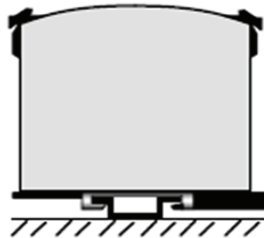
Mounting B



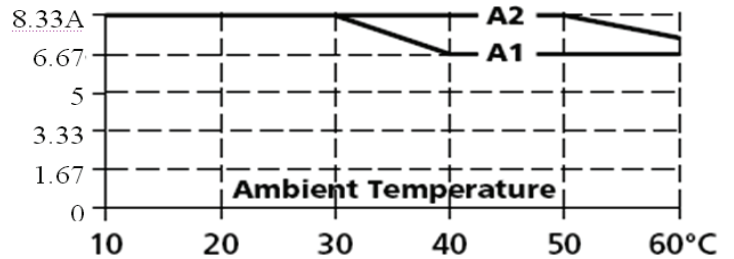
Output Current



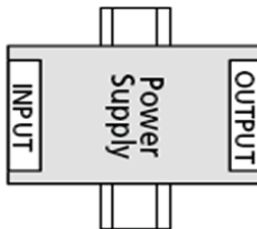
Mounting C



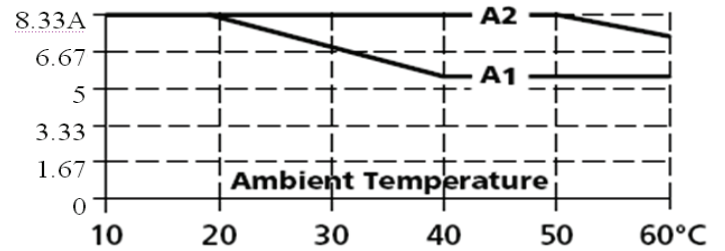
Output Current



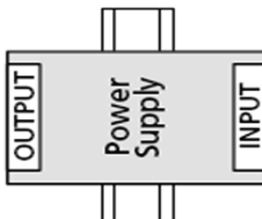
Mounting D



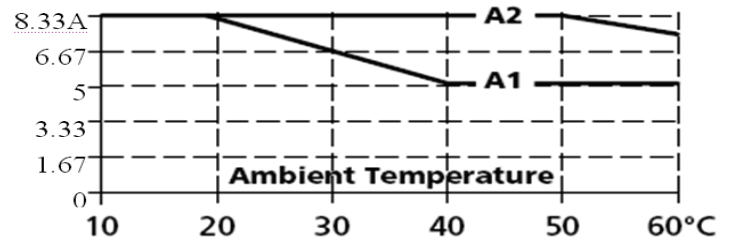
Output Current



Mounting E



Output Current

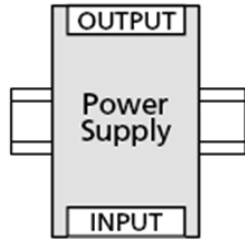


Mounting method instruction PSC-12024

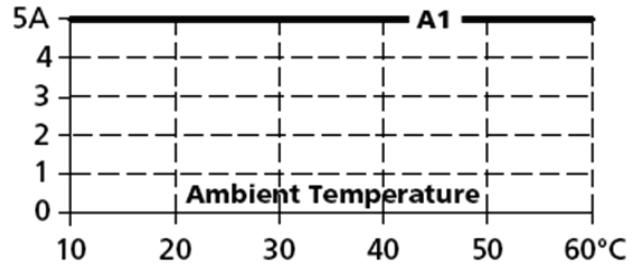
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

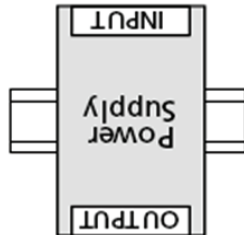
Mounting A



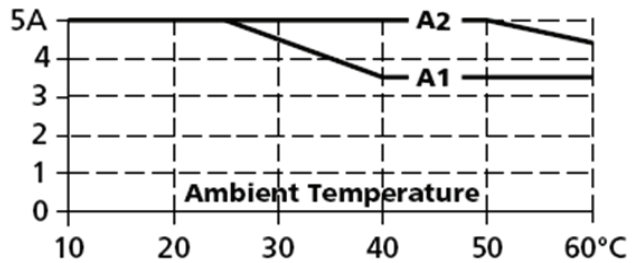
Output Current



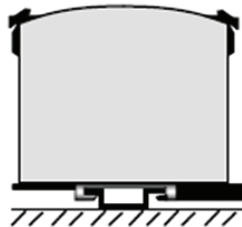
Mounting B



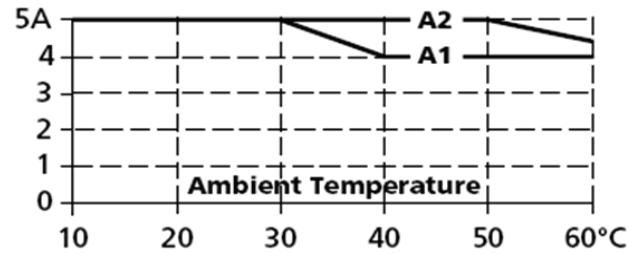
Output Current



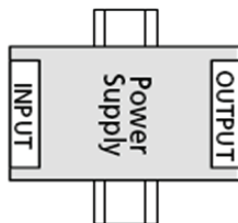
Mounting C



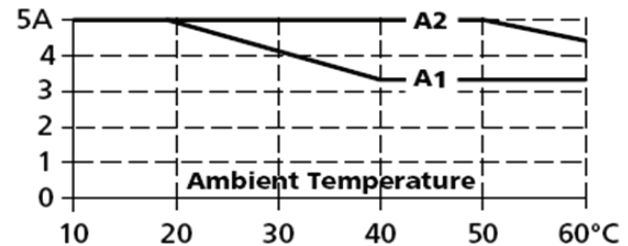
Output Current



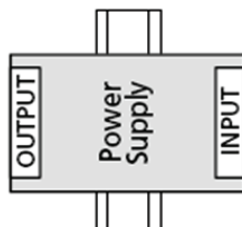
Mounting D



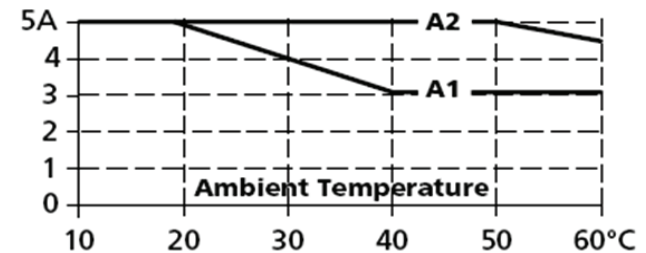
Output Current



Mounting E



Output Current

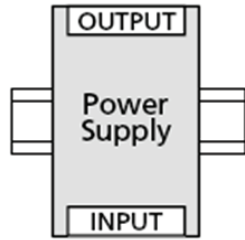


Mounting method instruction PSC-12048

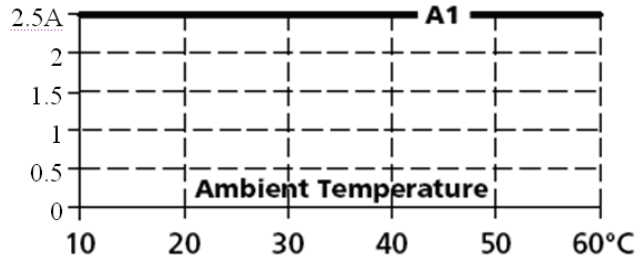
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

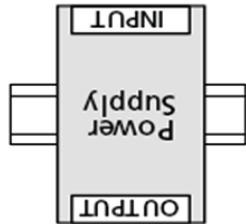
Mounting A



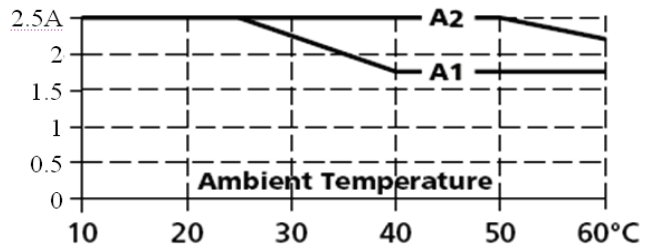
Output Current



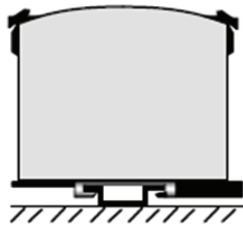
Mounting B



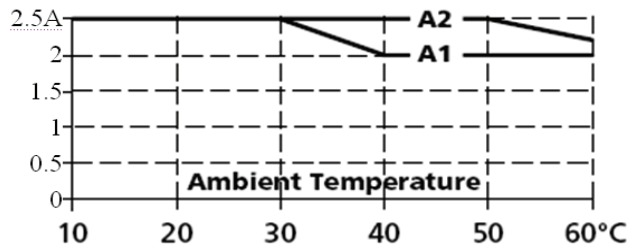
Output Current



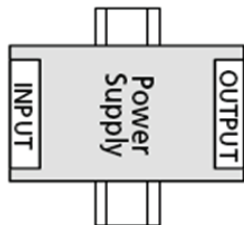
Mounting C



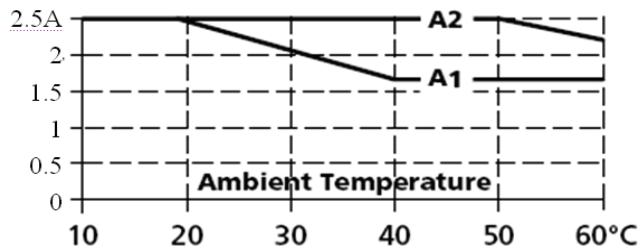
Output Current



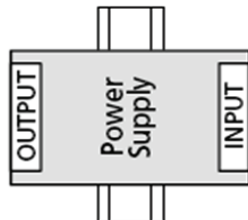
Mounting D



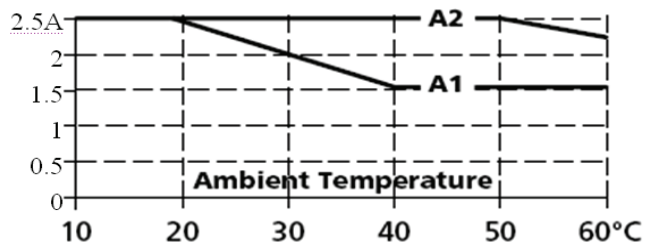
Output Current



Mounting E



Output Current



PSC-U120 Series



Input: 85-264VAC 47/63Hz
 Output Voltage: 12, 24 & 48 V DC
 Rated Power: 120W max.



FEATURES

- Universal AC input range (90~264Vac)
- High efficiency up to 89%
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-20°C~70°C)
- Built-in DC OK function (indication only)
- Can be installed on TS-35/7.5 or TS-35/15
- 100% full load burn-in test
- Suitable for critical applications
- Operating altitude up to 6000m
- PCB with conformal coating
- Ultra-slim, 45mm width
- 3 years warranty

CATALOG NUMBER

PSC-U12012

PSC-U12024

PSC-U12048

INPUT

| | | | |
|--------------------------|---|-----|-----|
| Voltage Range | 90Vac~264Vac, 127Vdc-370Vdc | | |
| Frequency Range | 47Hz~63Hz | | |
| AC Current (max.) | <2.7 A/115VAC ; <1.35A/230VAC | | |
| Inrush Current (Typical) | 20A/115Vac ; 35A/230Vac Cold start | | |
| Leakage Current | Input—output: ≤0.25mA Input—PG: ≤3.5mA (264Vac input, 63Hz) | | |
| Efficiency (Typical) | 85% | 88% | 89% |

OUTPUT

| | | | |
|--------------------------------|--------------------------------------|------------------|------------------|
| DC Output | 12V | 24V | 48V |
| Rated Current | 10A | 5A | 2.5A |
| Current Range <i>Note 1</i> | 0~10A | 0~5A | 0~2.5A |
| Ripple and Noise <i>Note 2</i> | 0~70°C -20°C~0 | ≤120mV ≤240mV | ≤120mV ≤240mV |
| Voltage ADJ. Range | 12~14V | 24~28V | 48~56V |
| Voltage Accuracy | ±1.0% | | |
| Line Regulation | ±0.5% | | |
| Load Regulation | ±1.0% | | |
| Set-up Time | <1.2S@230Vac ; <3.0mS@115Vac | | |
| Hold up Time | ≥10mS@115Vac; ≥20mS@230Vac Full load | | |
| Temperature Coefficient | ±0.03%/°C | | |
| Overshoot | <5.0% | | |

ENVIRONMENTAL

| | |
|-----------------------------|---|
| Operating amb. Temp. & Hum. | -20°C~70°C; 20%~90%RH No condensing (pls refer to derating curve) |
| Storage Temp. & Hum. | -40°C~85°C; 5%~95%RH No condensing |

PROTECTIONS

| | | | |
|------------------|---|-----------|------------|
| Over Load | 10.5~13A Protection type: Constant current | 5.25~6.5A | 2.75~3.25A |
| Over voltage | 15~18V Protection type: Shut down, re-power on. | 29~33V | 58~63V |
| Over temperature | 100±5°C, detect on heat sink of power transistor; shut down O/P, re-power on. | | |
| Short Circuit | Long-term mode, auto recovery | | |

SAFETY & EMC

Note 3

| | |
|----------------------|--|
| Safety Standards | UL508, UL60950-1, EN62368-1 |
| Withstand Voltage | Primary-Secondary: 3.0KVac/10mA .Primary-PG: 2KVac/10mA. Secondary-PG: 0.5KVac/10mA. |
| Isolation Resistance | 10M ohms |
| EMC Emission | Compliance to EN55032 Class B |
| Harmonic Current | Compliance to EN61000-3-2, Class A |
| EMC Immunity | Compliance to EN61000-4-2,3,4,5,6,11; |

OTHER

| | |
|----------------------|---------------------------------------|
| MTBF (MIL-HDBK-217F) | More than 500,000Hrs (25°C Full load) |
| Dimension (L*W*H) | 124*119*45mm |
| Packing | 24pcs/CTN, 15.0Kg, 0.04cbm |
| Cooling method | Cooling by free air convection |

NOTES

1. All parameters NOT specially mentioned are measured at rated input, rated load and 25°C of ambient temperature.
2. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.
3. The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies".

Mechanical Specification

1.AC Screw terminal information

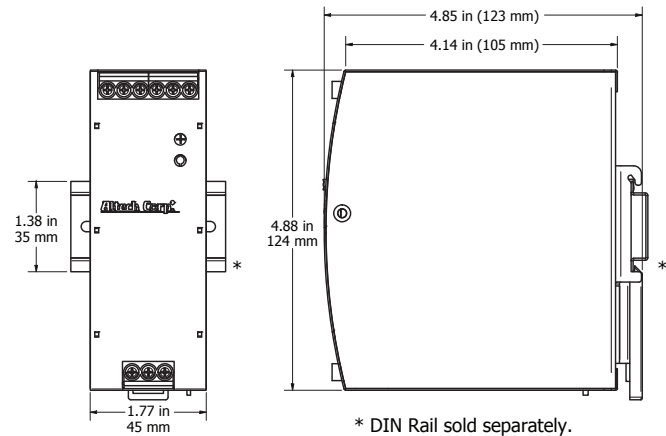
| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|----------|-----------|--------------------|
| 1 | PE | 20~10AWG | 5Nm |
| 2 | N | | |
| 3 | L | | |

2.DC Screw terminal information

| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|----------|-----------|--------------------|
| 4-6 | V+ | 20~10AWG | 5Nm |
| 7-9 | V- | | |

AC/DC Terminal

| Type | Screw terminal blocks |
|------------------------------|-------------------------------------|
| Solid Wire | 0.5-6mm ² |
| Strand Wire | 0.5-4mm ² |
| Wire Spec | AWG20-10 |
| Max Wire Diameter | 2.8mm |
| Recommended stripping length | 7mm |
| Screwdriver | 3.5mm Straight or Cross Screwdriver |
| Recommended Torque | 0.5NM |

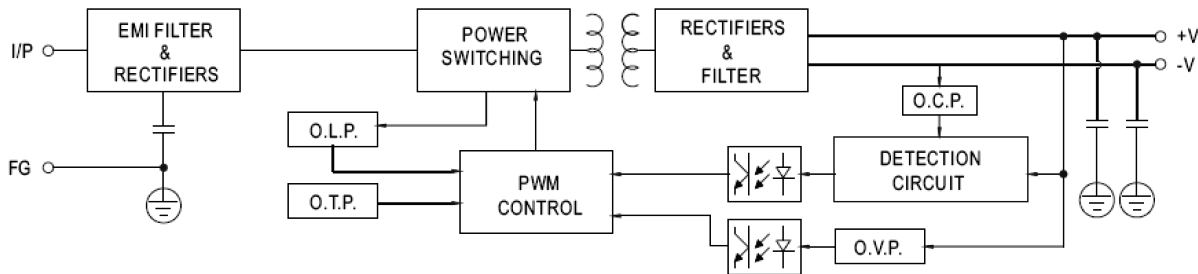


* DIN Rail sold separately.

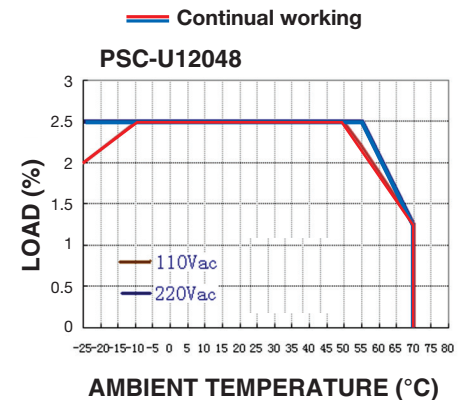
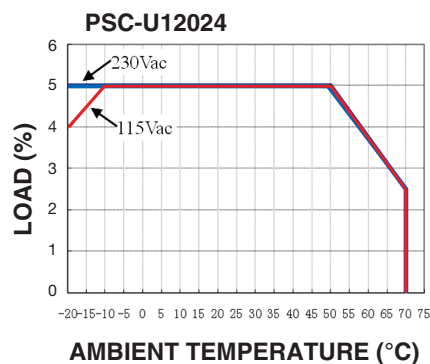
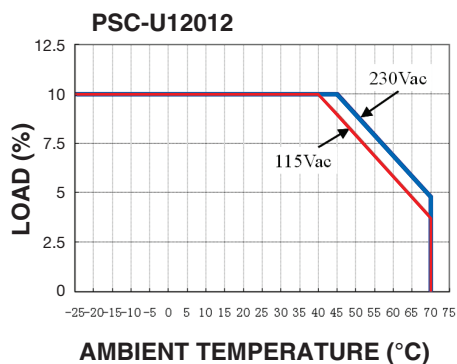
Additional Functions

| | |
|-------|---|
| DC OK | LED V On: when output voltage is up to 90% of rated output voltage |
| | LED V Off: when output voltage is down to 80% of rated output voltage |

Block Diagram



Derating Curve

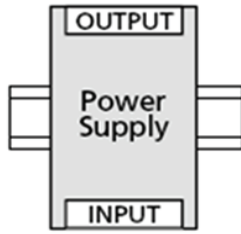


Mounting method instruction PSC-U12012

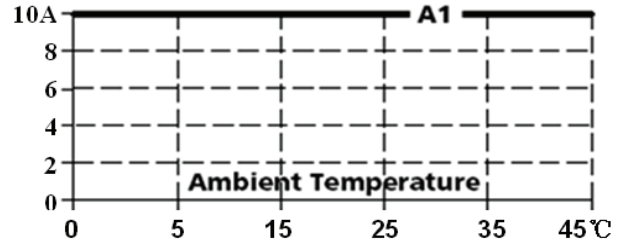
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

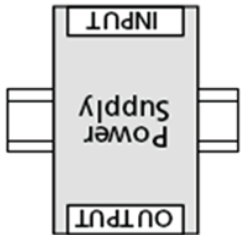
Mounting A



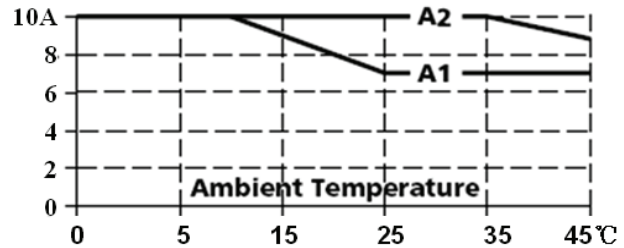
Output Current



Mounting B



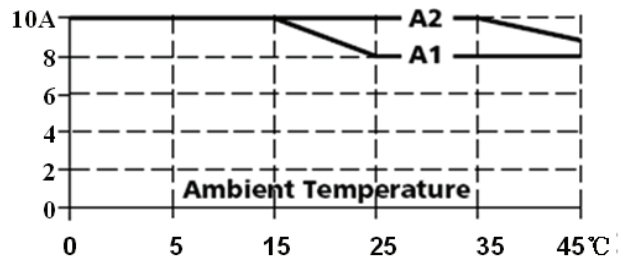
Output Current



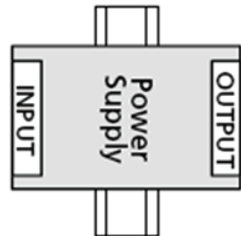
Mounting C



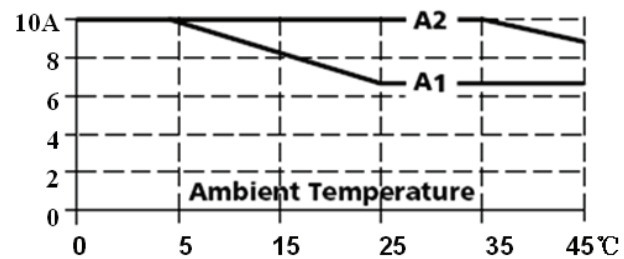
Output Current



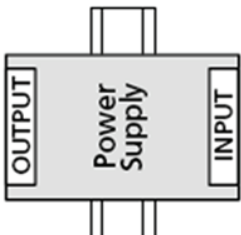
Mounting D



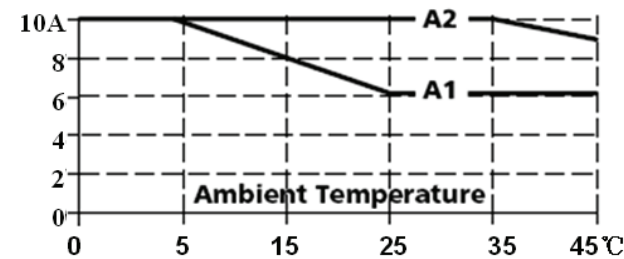
Output Current



Mounting E



Output Current

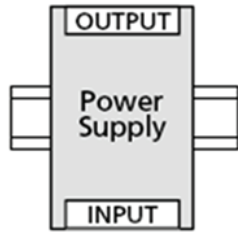


Mounting method instruction PSC-U12024

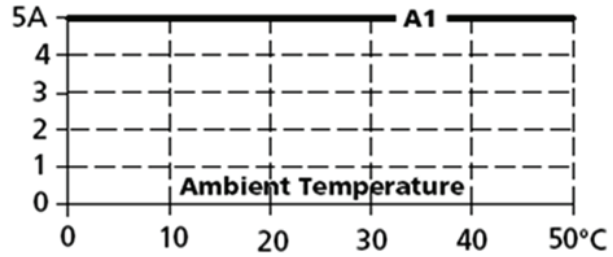
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

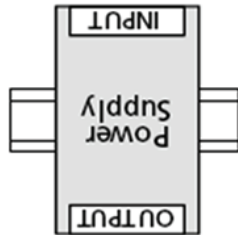
Mounting A



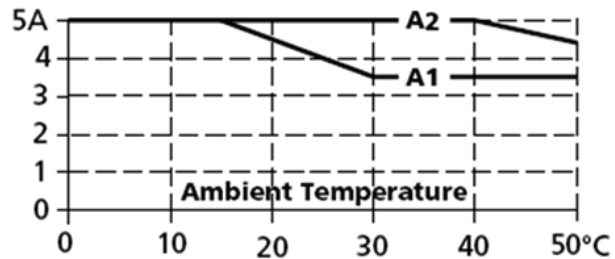
Output Current



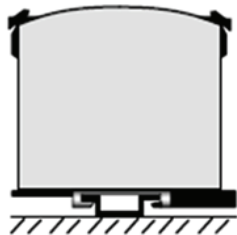
Mounting B



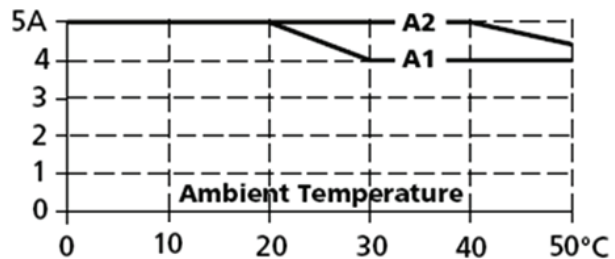
Output Current



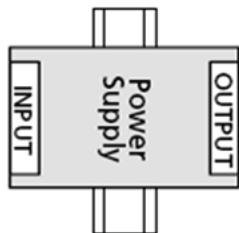
Mounting C



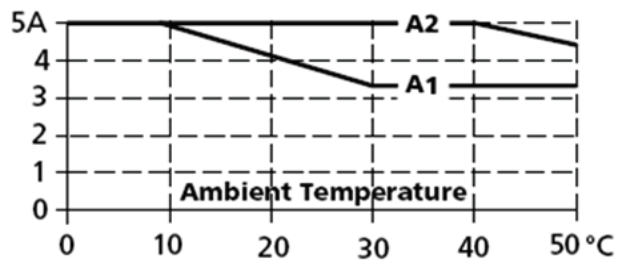
Output Current



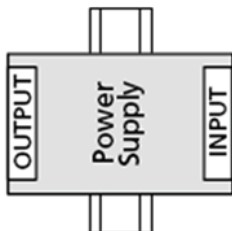
Mounting D



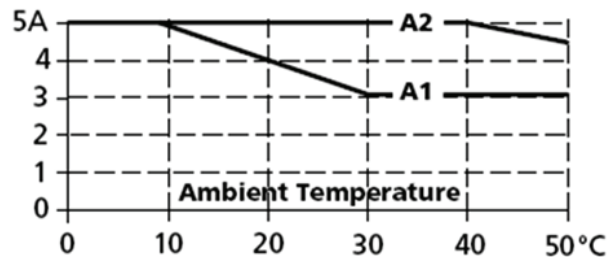
Output Current



Mounting E



Output Current

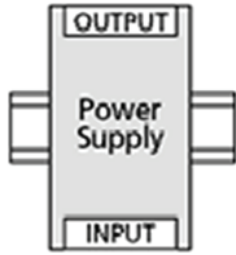


Mounting method instruction PSC-U12048

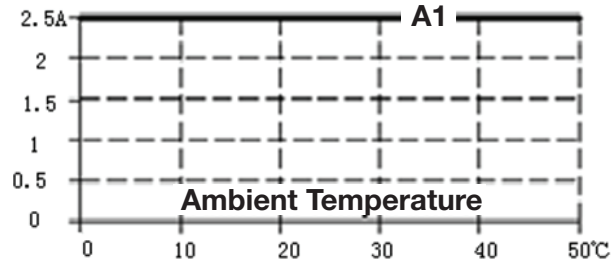
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

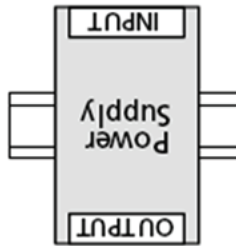
Mounting A



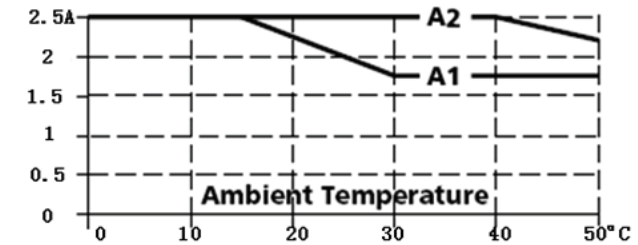
Output Current



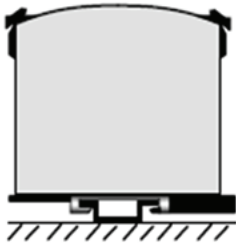
Mounting B



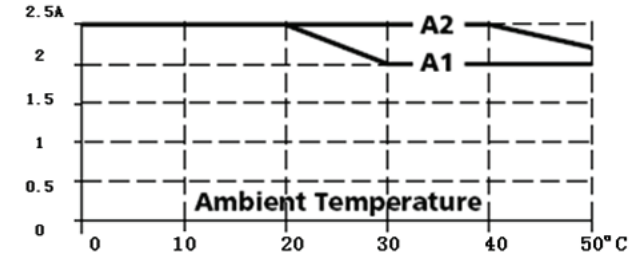
Output Current



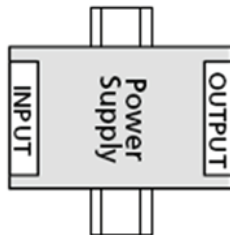
Mounting C



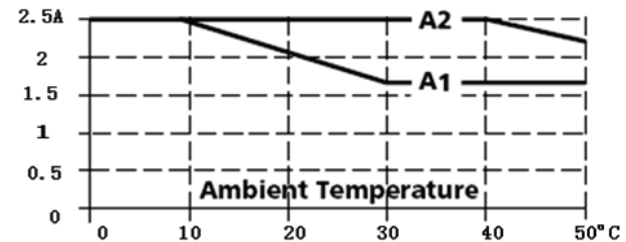
Output Current



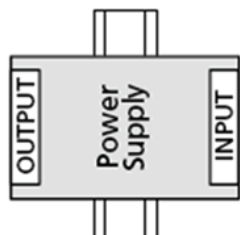
Mounting D



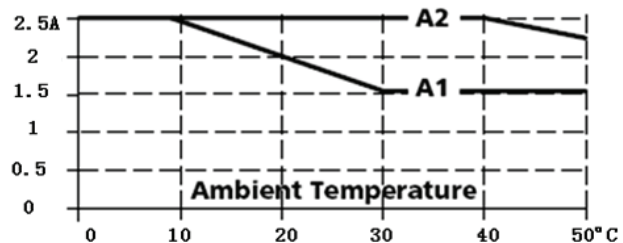
Output Current



Mounting E



Output Current



PSC-240 Series



Input: 85-264VAC 47/63Hz
Output Voltage: 24 & 48 V DC
Rated Power: 240W max.



FEATURES

- Universal AC input range (85~264Vac)
- Support 1+1 or N+1 redundant system (suggest to use redundancy modules.)
- Built-in active PFC, PF>0.95
- High efficiency up to 94%
- Built-in current sharing function
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-25°C~70°C)
- 150% (360W) peak load capacity
- Easy Fuse Tripping due to High Overload Current
- Excellent Partial Load Efficiency
- Built-in DC OK relay contact
- Can be installed on 35 mm DIN rail
- 100% full load burn-in test
- PCB with conformal coating
- Suitable for critical applications
- Ultra-slim, 45mm width
- Three-year Warranty

CATALOG NUMBER

PSC-24024

PSC-24048

INPUT

| | | |
|------------------------------|-----------------------------|------------------------|
| Voltage Range | 85Vac~264Vac, 120Vdc-375Vdc | |
| Frequency Range | 47Hz~63Hz | |
| Power Factor (typical) | 0.99/110Vac | 0.95/230Vac |
| AC Current (max.) | <3.0 A/100Vac | <1.5A/230Vac |
| Inrush Current (Typical) | <20A/110Vac | <40A/230Vac Cold start |
| Leakage Current | Input—output: ≤0.25mA | Input—PG: ≤3.5mA |
| Efficiency (Typical) @230Vac | 94% | 93.8% |

OUTPUT

| | | |
|-----------------------------|--------------------------------|--------|
| DC Output | 24V | 48V |
| Rated Current | 10A | 5A |
| Current Range <i>Note 1</i> | 0~10A | 0~5A |
| Ripple and Noise (0~70°C) | ≤240mV | ≤480mV |
| (-25°C) <i>Note 2</i> | ≤480mV | ≤480mV |
| Voltage ADJ. Range | 24~28V | 48~56V |
| Voltage Accuracy | ±3.0% | |
| Line Regulation | ±0.5% | |
| Load Regulation | ±1.0% | |
| Set-up Time | <3S@230Vac | |
| Hold up Time | ≥20mS(230Vac input, Full load) | |
| Temperature Coefficient | ±0.03%/°C | |
| Overshoot | <5.0% | |
| Power boost | 150% of rated current | |
| Parallel function | supported | |

ENVIRONMENTAL

| | |
|-----------------------------|-------------------------------------|
| Operating amb. Temp. & Hum. | -25°C~70°C; 20%~90%RH No condensing |
| Storage Temp. & Hum. | -40°C~85°C; 5%~95%RH No condensing |

PROTECTIONS

| | |
|--------------------------|--|
| Overload Protection | >130%-200% Rated Output Power Protection type: Hiccup Mode- recovers automatically after fault condition is removed |
| Over Voltage Protection | 110~145% Protection Type: Clamp by Zener diode |
| Short Circuit Protection | Protection to Zero Voltage |
| Over Current Protection | 110%~180% |

SAFETY & EMC

Note 3

| | |
|----------------------|---|
| Safety Standards | UL508; UL62368-1; UL60950-1; IEC62368-1, EN62368-1 |
| Withstand Voltage | Primary-Secondary:3.0kVac/10mA .Primary-PG:2.5kVac/10mA. Secondary-PG:0.5kVac/20mA. |
| Isolation Resistance | 10M ohms |
| EMC Emission | Compliance to EN55032 Class B |
| Harmonic Current | Compliance to EN61000-3-2, Class A |
| EMC Immunity | Compliance to EN61000-4-2,3,4,5,6,11; |

OTHER

| | |
|----------------------|---------------------------------------|
| MTBF (MIL-HDBK-217F) | More than 300,000Hrs (25°, Full load) |
| Dimension (L*W*H) | 45*124*119mm |
| Packing | 24pcs/CTN, 21Kgs/CTN, 0.045cbm |
| Cooling method | Cooling by free air convection |

NOTES

1. All parameters NOT specially mentioned are measured at rated input, rated load and 25° of ambient temperature.
2. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.
3. The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies".

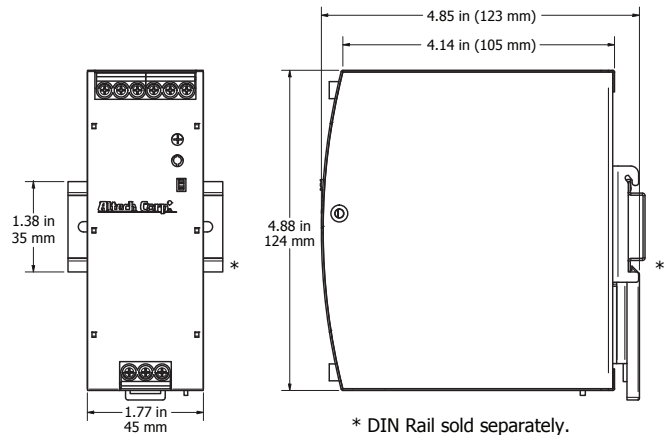
Mechanical Specification

1.AC terminal blocks installation information

| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|----------|-----------|--------------------|
| 1 | PG | 20~10AWG | 5Nm |
| 2 | N | | |
| 3 | L | | |

2.DC terminal blocks installation information

| Terminal No. | Function | Wire Spec | Recommended Torque |
|--------------|---------------------|-----------|--------------------|
| 4 & 5 | DC OK Relay Contact | 20~10AWG | 5Nm |
| 6 & 7 | +V | | |
| 8 & 9 | -V | | |



AC/DC Terminal

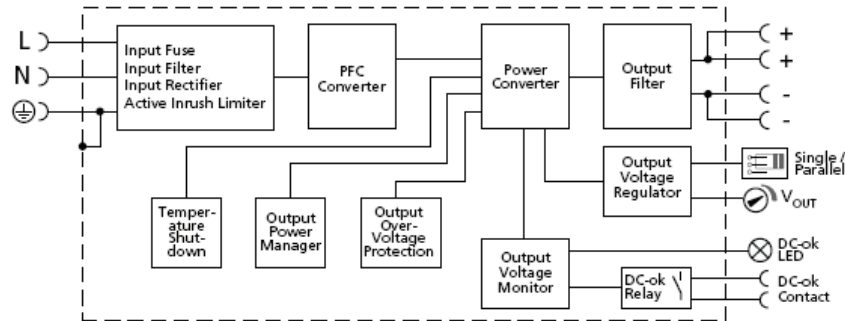
| Type | Screw terminal blocks |
|------------------------------|-------------------------------------|
| Solid Wire | 0.5-6mm ² |
| Strand Wire | 0.5-4mm ² |
| Wire Spec | AWG20-10 (PG Wire>18AWG) |
| Max Wire Diameter | 2.8mm |
| Recommended stripping length | 7mm |
| Screwdriver | 3.5mm Straight or Cross Screwdriver |
| Recommended Torque | 5NM |

Additional Functions

| | |
|----------------------------|---|
| DC-OK | V On: when output voltage is up to 90% of rated output voltage V Off: when output voltage is down to 80% of rated output voltage |
| DC-OK relay contact rating | Max 30V/1A or 60V/0.3A or 30Vac/0.3A Resistive load |

Block Diagram

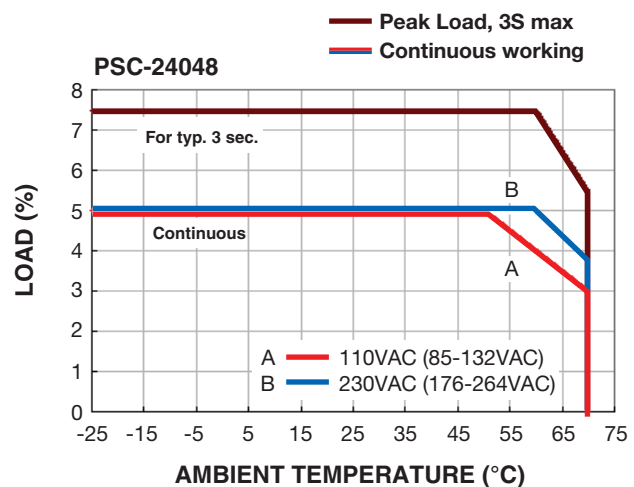
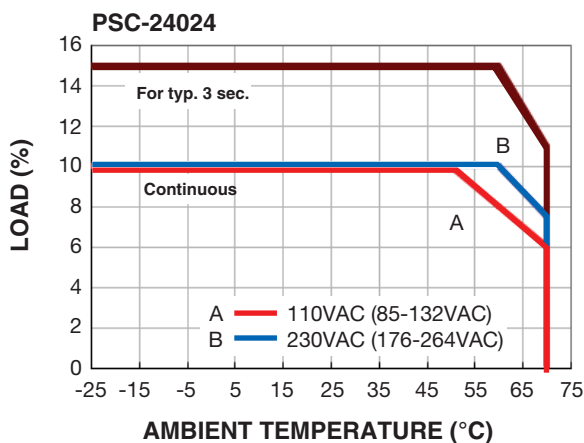
Functional Diagram



Peak Loading



Derating Curve



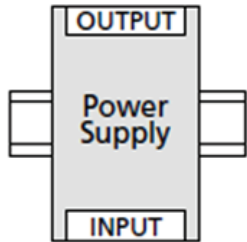
Mounting method instruction PSC-24024

A1 is recommended output current.

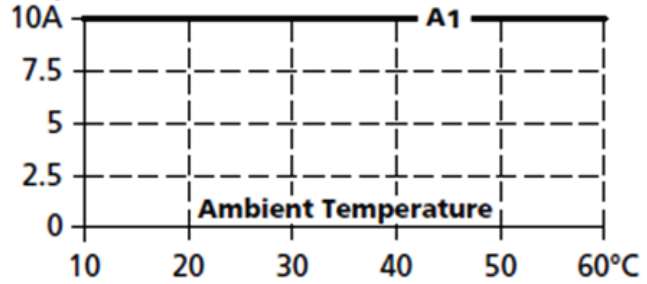
A2 is the allowed max output current (PSU lifetime is around half of A1).

Below curves are tested under 230Vac(179~264Vac), when 110Vac input(85~175Vac), all derating points drops 10°C.

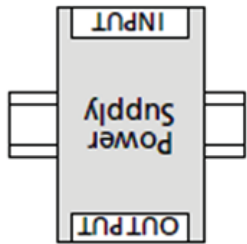
Mounting A



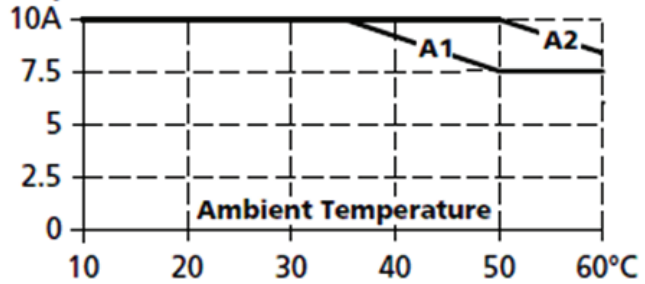
Output Current



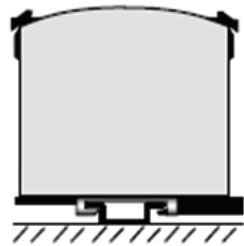
Mounting F



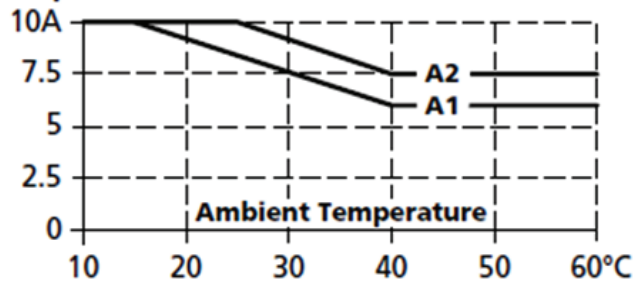
Output Current



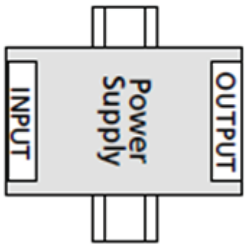
Mounting C



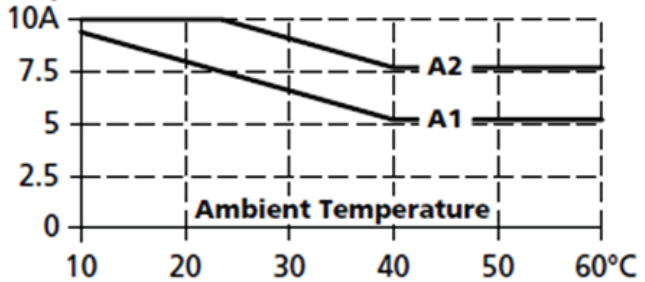
Output Current



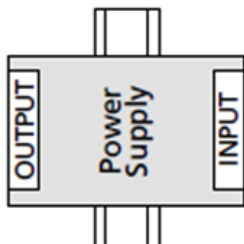
Mounting I



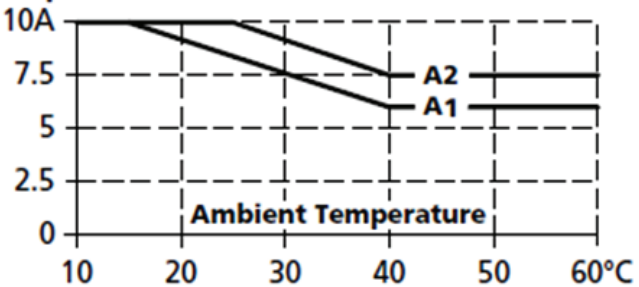
Output Current



Mounting E



Output Current



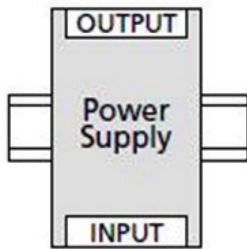
Mounting method instruction PSC-24048

A1 is recommended output current.

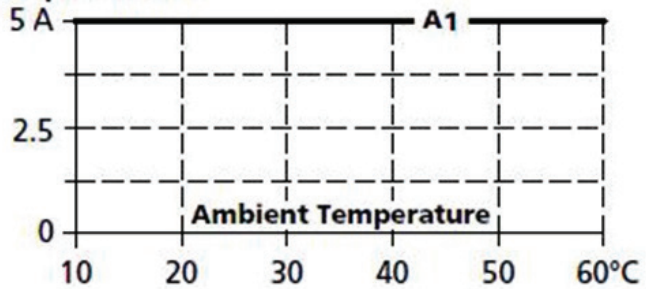
A2 is the allowed max output current (PSU lifetime is around half of A1).

Below curves are tested under 230Vac(179~264Vac), when 110Vac input(85~175Vac), all derating points drops 10°C.

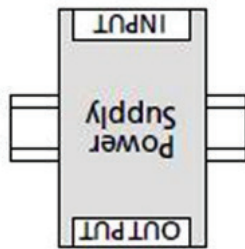
Mounting A



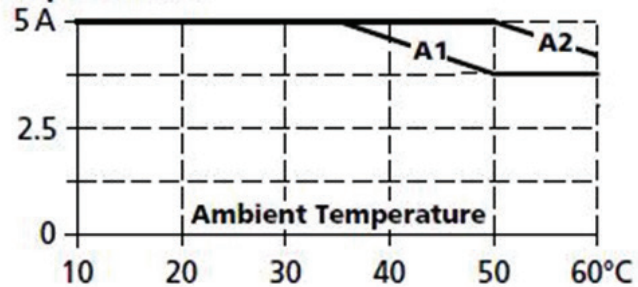
Output Current



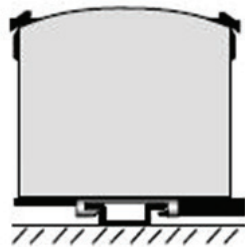
Mounting B



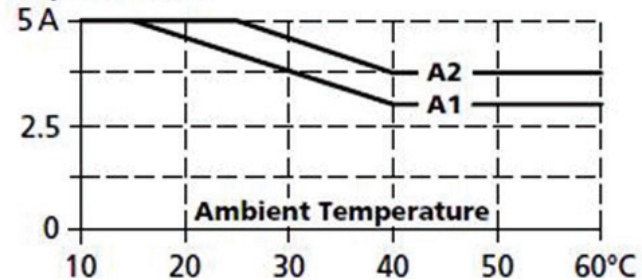
Output Current



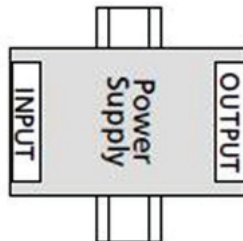
Mounting C



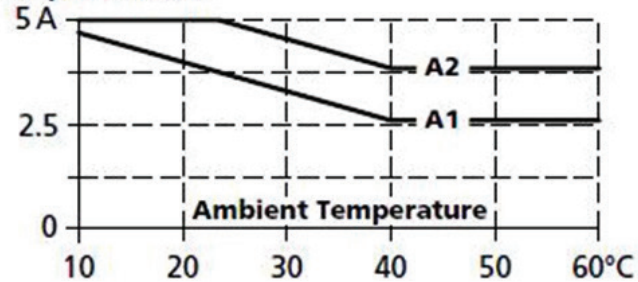
Output Current



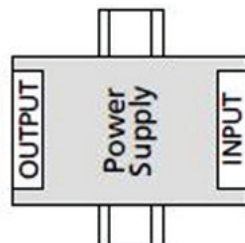
Mounting D



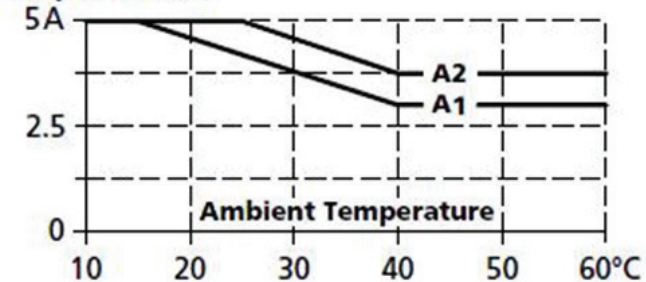
Output Current



Mounting E



Output Current



PSC-480 Series



Input: 85-264VAC 47/63Hz
Output Voltage: 24 & 48 V DC
Rated Power: 480W max.



FEATURES

- Universal AC input range (85~264Vac)
- Support 1+1 or N+1 redundant system suggest to use redundancy modules.
- Built-in active PFC, PF>0.95
- High efficiency up to 94%
- Built-in current sharing function
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-25°C~70°C)
- 150% (720W) peak load capacity
- Easy Fuse Tripping due to High Overload Current
- Built-in DC OK relay contact
- Can be installed on 35 mm DIN rail
- 100% full load burn-in test
- PCB with conformal coating
- Suitable for critical applications
- Ultra-slim, 70mm width
- Free air convection
- 3 years warranty

CATALOG NUMBER

PSC-48024

PSC-48048

INPUT

| | | |
|--------------------------|-----------------------------|------------------------|
| Voltage Range | 85Vac~264Vac, 120Vdc-375Vdc | |
| Frequency Range | 47Hz~63Hz | |
| Power Factor (typical) | 0.99/110Vac | 0.95/230Vac |
| AC Current (max.) | <7.0 A/100Vac | <3.5A/230Vac |
| Inrush Current (Typical) | <20A/110Vac | <40A/230Vac Cold start |
| Leakage Current | Input—output: ≤0.25mA | Input—PG: ≤3.5mA |
| Efficiency (Typical) | 93.8% | 93.5% |

OUTPUT

| | | |
|-----------------------------|--------------------------------|--------|
| DC Output | 24V | 8V |
| Rated Current | 20A | 10A |
| Current Range <i>Note 1</i> | 0~20A | 0~10A |
| Ripple and Noise | 0~70°C ≤240mV | ≤480mV |
| | -25°C~0 ≤480mV | ≤480mV |
| Voltage ADJ. Range | 24~28V | 48~56V |
| Voltage Accuracy | ±3.0% | |
| Line Regulation | ±0.5% | |
| Load Regulation | ±1.0% | |
| Set-up Time | <3S@230Vac | |
| Hold up Time | ≥20mS(230Vac input, Full load) | |
| Temperature Coefficient | ±0.03%/°C | |
| Overshoot | <5.0% | |

ENVIRONMENTAL

| | |
|-----------------------------|-------------------------------------|
| Operating amb. Temp. & Hum. | -25°C~70°C; 20%~90%RH No condensing |
| Storage Temp. & Hum. | -40°C~85°C; 5%~95%RH No condensing |

PROTECTIONS

| | | |
|------------------|--|---|
| Over voltage | 28.8~33V, constant voltage, Auto recovery | 58~63V, constant voltage, Auto recovery |
| Over Load | 110%~150% of rated current, Constant current limiting for some time(150% of rated current, last 3S) then PS stop working for 7S, after 7S, if the load <=rated current, PS will work normally, auto recovery | |
| Over temperature | 115±5°C, detect on temperature controller; shut down O/P, auto recovery after temperature goes down. | |
| Short Circuit | Long-term mode, auto recovery | |

SAFETY & EMC

Note 3

| | |
|----------------------|--|
| Safety Standards | UL508, UL60950-1, EN62368-1 |
| Withstand Voltage | Primary-Secondary: 3.0KVac/10mA. Primary-PG: 2.5KVac/10mA. Secondary-PG: 0.5KVac/20mA. |
| Isolation Resistance | 10M ohms |
| EMC Emission | Compliance to EN55032 Class B |
| Harmonic Current | Compliance to EN61000-3-2, CLASS A |
| EMC Immunity | Compliance to EN61000-4-2,3,4,5,6,11; |

OTHER

| | |
|----------------------|--|
| MTBF (MIL-HDBK-217F) | More than 300,000Hrs (25°C, Full load) |
| Dimension (L*W*H) | 70 x 124 x 127mm |
| Packing | 10pcs/CTN, 13Kgs/CTN, 0.04cbm |
| Cooling method | Cooling by free air convection |

NOTES

1. All parameters NOT specially mentioned are measured at rated input, rated load and 25°C of ambient temperature.
2. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.
3. The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies".

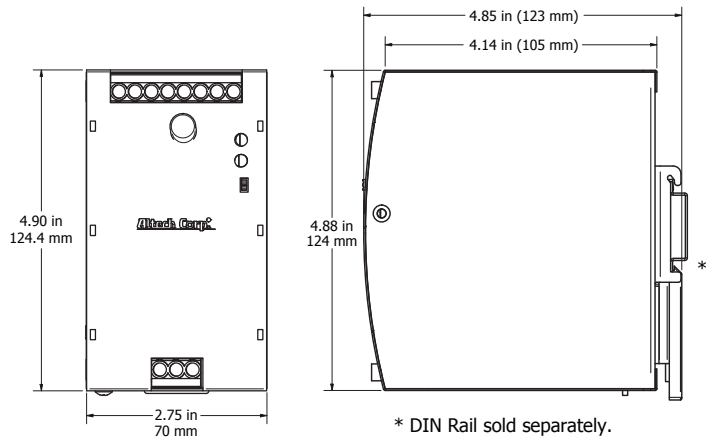
Mechanical Specification

1.AC terminal blocks installation information

| Terminal No. | Function | Specifications |
|--------------|----------|------------------------------------|
| 1 | PG | 6.35mm, 3pin screw terminal blocks |
| 2 | N | |
| 3 | L | |

2.DC terminal blocks installation information

| Terminal No. | Function | Specifications |
|--------------|----------|------------------------------------|
| 1 | DC | 6.35mm, 3pin screw terminal blocks |
| 2 | OK | |
| 3-5 | +V | |
| 6-8 | -V | |



AC/DC Terminal

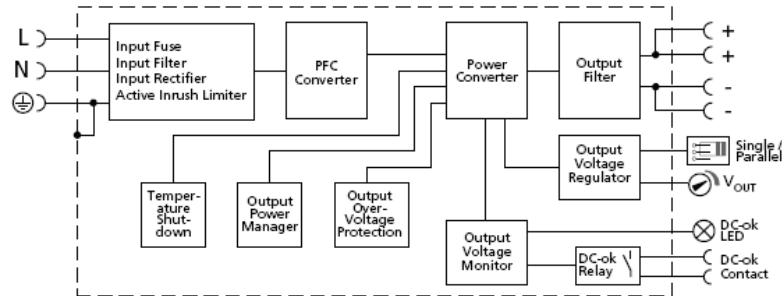
| Type | Screw terminal blocks |
|------------------------------|-------------------------------------|
| Solid Wire | 0.5-6 mm ² |
| Strand Wire | 0.5-4 mm ² |
| Wire Spec | AWG20-10 (PG wire >18AWG) |
| Max Wire Diameter | 2.8mm |
| Recommended stripping length | 7mm |
| Screwdriver | 3.5mm Straight or Cross Screwdriver |
| Recommended Torque | 1NM |

Additional Functions

| | |
|----------------------------|---|
| Power boost | 150% of rated current |
| Parallel function | support |
| DC-OK | V On: when output voltage is up to 90% of rated output voltage |
| | V Off: when output voltage is down to 80% of rated output voltage |
| DC-OK relay contact rating | Max 30V/1A or 60V/0.3A or 30Vac/0.3A Resistive load |

Block Diagram

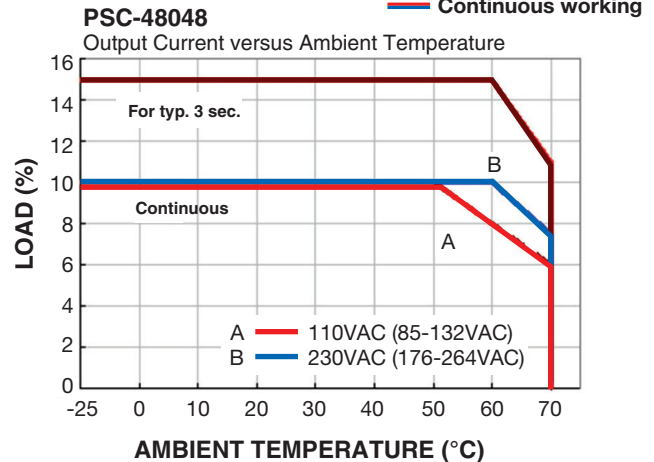
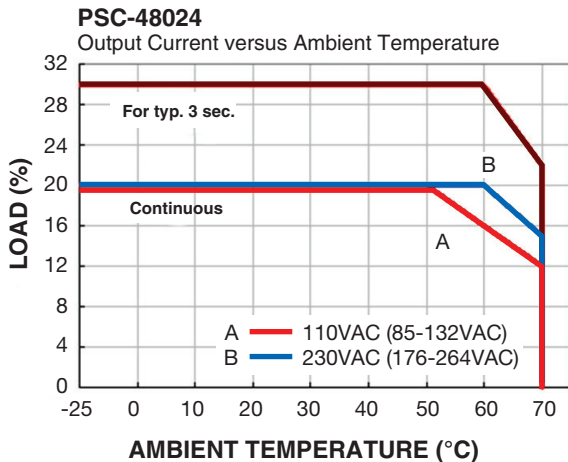
Functional Diagram



Peak Loading



Derating Curve



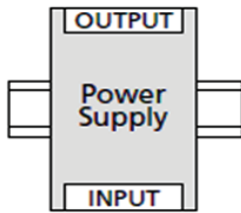
Mounting method instruction PSC-48024

A1 is recommended output current.

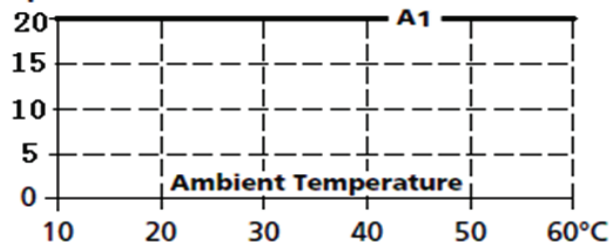
A2 is the allowed max output current (PSU lifetime is around half of A1).

Below curves are tested under 230Vac(179~264Vac), when 110Vac input(85~175Vac), all derating points drops 10°C.

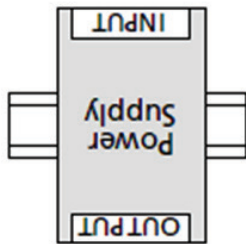
Mounting A



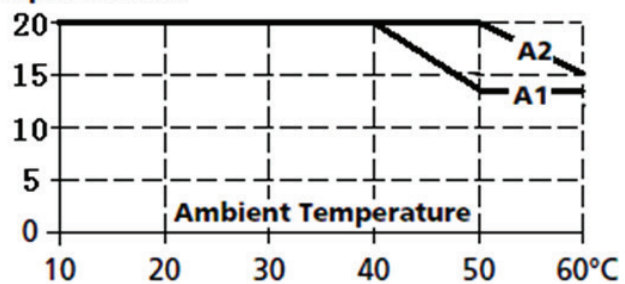
Output Current



Mounting B



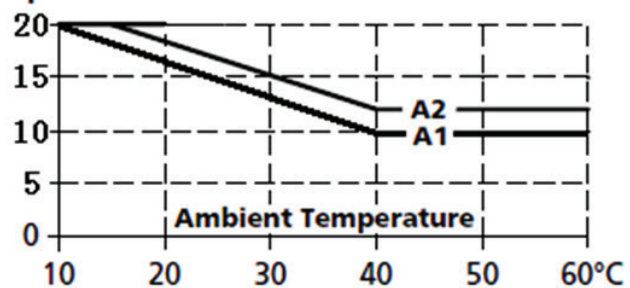
Output Current



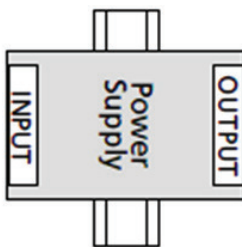
Mounting C



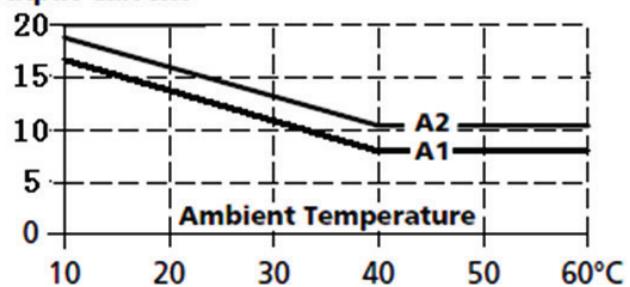
Output Current



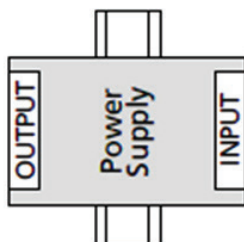
Mounting D



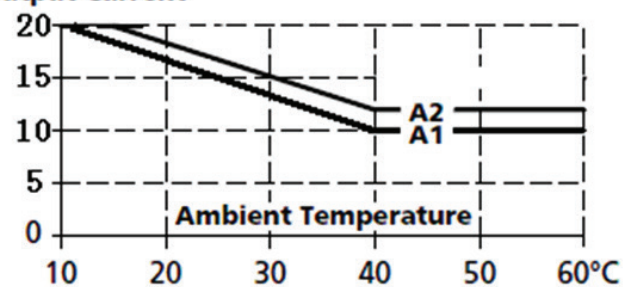
Output Current



Mounting E



Output Current



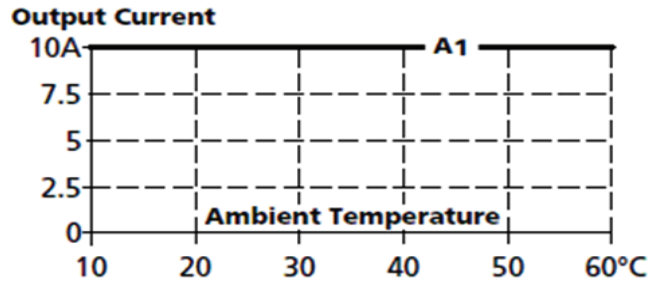
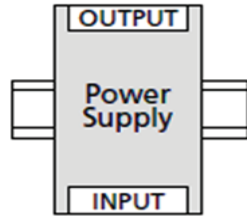
Mounting method instruction PSC-48048

A1 is recommended output current.

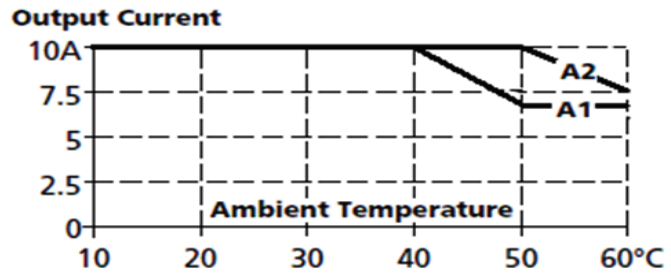
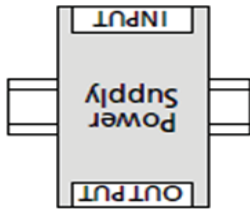
A2 is the allowed max output current (PSU lifetime is around half of A1).

Below curves are tested under 230Vac(179~264Vac), when 110Vac input(85~175Vac), all derating points drops 10°C.

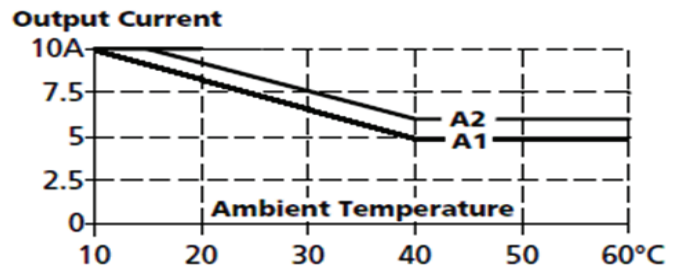
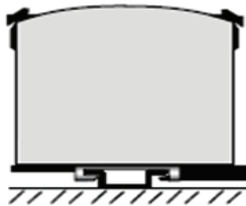
Mounting A



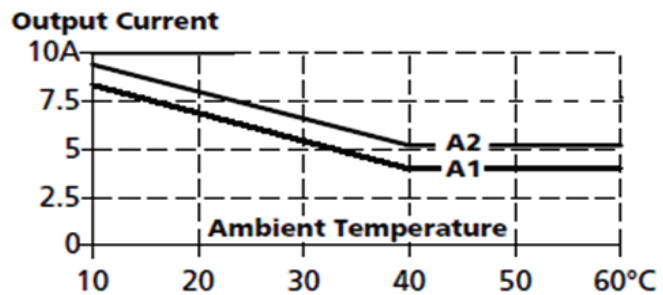
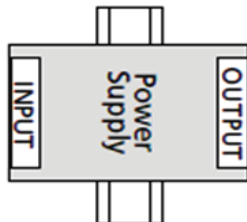
Mounting B



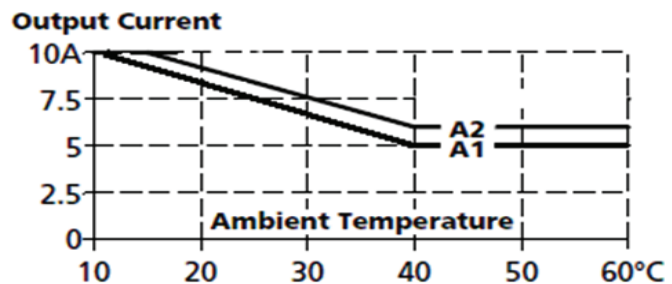
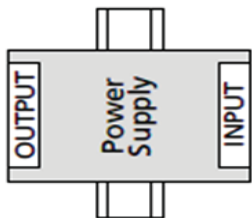
Mounting C



Mounting D



Mounting E





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CIRCUIT PROTECTION

| | | | | | | | | | |
|---|----------------------------|---|-----------------------------|---|--|---|---------------------------|---|--------------------------|
|  | Circuit Protection Devices |  | Busbar & Power Distribution |  | Contactors, Overload Relays, Manual Motor Starters |  | Motor Disconnect Switches |  | European Fuses & Holders |
|---|----------------------------|---|-----------------------------|---|--|---|---------------------------|---|--------------------------|

CONNECTORS

| | | | |
|---|----------------------|---|-------------|
|  | Pin & Sleeve Devices |  | Receptacles |
|---|----------------------|---|-------------|

ENCLOSURES

| | | | | | |
|---|------------------------------|---|----------------|---|---|
|  | Industrial & ATEX Enclosures |  | DIN Enclosures |  | Control Enclosures and Suspension Systems |
|---|------------------------------|---|----------------|---|---|

FOOT SWITCHES

| | | | |
|---|------------|---|---------|
|  | Industrial |  | Medical |
|---|------------|---|---------|

MODULES & RELAYS

| | | | | | |
|---|-------------------|---|---------------|---|------------------------------|
|  | Interface Modules |  | Safety Relays |  | Industrial & Slimline Relays |
|---|-------------------|---|---------------|---|------------------------------|

PANEL ACCESSORIES

| | | | |
|---|--------------|---|--------------------------------|
|  | Panel Lights |  | Heaters, Filters & Thermostats |
|---|--------------|---|--------------------------------|



SPARE PARTS

| | |
|---|----------------------|
|  | European Spare Parts |
|---|----------------------|

PILOT DEVICES

| | | | |
|---|--------------------------------------|---|------------------------|
|  | 22 & 30 mm Push Buttons & Enclosures |  | Pilot Lights & E-Stops |
|---|--------------------------------------|---|------------------------|

POWER DEVICES

| | | | |
|---|----------------|---|---------------------------|
|  | Power Supplies |  | DC-UPS & Battery Chargers |
|---|----------------|---|---------------------------|



POWER MANAGEMENT

| | | | | | |
|---|---------------------|---|----------------------|---|----------------|
|  | Altech Smart Relays |  | Digital Panel Meters |  | Digital Timers |
|---|---------------------|---|----------------------|---|----------------|



SAFETY SWITCHES

| | | | | | | | | | |
|---|-----------------------|---|---------------------------------|---|------------------------|---|-----------------------------|---|---------------------------|
|  | Keyed Safety Switches |  | Keyed Solenoid Locking Switches |  | Hinged Safety Switches |  | Non-Contact Safety Switches |  | Safety Rope Pull Switches |
|---|-----------------------|---|---------------------------------|---|------------------------|---|-----------------------------|---|---------------------------|

STANDARD SWITCHES

| | | | |
|---|----------------|---|---------------|
|  | Limit Switches |  | Foot Switches |
|---|----------------|---|---------------|

SENSORS

| | | | | | |
|---|--------------------------|---|------------------|---|-----------------|
|  | Cylindrical & Capacitive |  | Flat Pack & Ring |  | Metal Detection |
|---|--------------------------|---|------------------|---|-----------------|

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