



# Application Guide

## Volume 2



Medical



Industrial



Lighting



Transportation



Renewable Energy



IoT



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## Legend

| Term | Definition                          |
|------|-------------------------------------|
| OCP  | Over Current Protection             |
| SCP  | Short Circuit Protection            |
| CSP  | Continuous Short Circuit Protection |
| OVP  | Over Voltage Protection             |
| OLP  | Over Load Protection                |
| QB   | Quarter Brick                       |
| HB   | Half Brick                          |



## Transportation

### Railroad

LED displays  
Audio amplifiers  
Safety monitors  
Lighting  
Communication systems

### Automotive

Navigation systems  
Communication systems  
Entertainment systems

### Electric Car Chargers

Charging system  
Communication system  
Payment system

### Key Features

Nominal Input Voltage 110VDC  
Industrial temp: -40 to 85°C  
Encapsulated packages for  
withstanding shock and vibration  
High Isolation between circuits

### Key Features

Sensing  
Industrial temp. range: -55 to 125°C  
Remote On/Off  
Over temperature protection  
Encapsulated packages for  
withstanding shock and vibration  
High Isolation between circuits



AM20EW-NZ



AM50QB-NZ



AM150HB-NZ



## Railroad - DC/DC Converters

| Series              | Power (W) | Input (VDC) | Single Output (VDC) | Dual Output (VDC) | Operating Temperature (°C) | Isolation (VDC) | Case                       | Safety |
|---------------------|-----------|-------------|---------------------|-------------------|----------------------------|-----------------|----------------------------|--------|
| AM6CW-110xxSH22-NZ  | 6         | 40-160      | 5, 12, 15, 24       | -                 | -40 to +85                 | 2.25k           | 1 x 1", metal encapsulated | CE, UL |
| AM8TW-110xx-SH30Z   | 8         | 42-176      | 3.3, 5, 12, 15      | ±5, ±12, ±15      | -40 to +105                | 3k VDC          | DIP24, metal encapsulated  | CE     |
| AM10EW-110xxSH22-NZ | 10        | 40-160      | 5, 12, 15, 24       | -                 | -40 to +76                 | 2.25k           | 2 x 1", metal encapsulated | CE     |
| AM15EW-110xxSH22-NZ | 15        | 40-160      | 3.3, 5, 12, 15, 24  | -                 | -40 to +105                | 2.25k           | 2 x 1", metal encapsulated | CE     |
| AM20EW-110xxSH22-NZ | 20        | 40-160      | 5, 12, 15, 24       | -                 | -40 to +85                 | 2.25k           | 2 x 1", metal encapsulated | CE, UL |
| AM20CWR-ZK          | 20        | 13-176      | 3.3, 5, 12, 15      | -                 | -40 to +100                | 3k              | 1 x 1"                     | CE     |
| AM25EUW-ZK          | 25        | 16-160      | 5, 12, 15, 24       | -                 | -40 to +100                | 3k              | 2 x 1"                     | CE     |
| AM50QB-NZ           | 50        | 66-160      | 5, 12, 15, 24       | -                 | -40 to +85                 | 3k              | QB                         | CE     |
| AM75QB-NZ           | 75        | 66-160      | 5, 12, 15, 24       | -                 | -40 to +85                 | 3k              | QB                         | CE     |
| AM100QB-NZ          | 100       | 66-160      | 12, 15, 24          | -                 | -40 to +85                 | 3k              | QB                         | CE     |
| AM150QB-NZ          | 150       | 18-75       | 5, 12, 15, 24, 48   | -                 | -40 to +85                 | 2.25k           | QB                         | CE     |
| AM150HB-NZ          | 150       | 66-160      | 12, 15, 24          | -                 | -40 to +85                 | 3k              | HB                         | CE     |
| AM200QB-NZ          | 200       | 18-75       | 5, 12, 15, 24       | -                 | -40 to +85                 | 2.25k           | QB                         | CE     |



## Electric Car Chargers - AC/DC Converters

| Series     | Power (W) | Input (VAC) | Single Output (VDC)   | Operating Temperature (°C) | Isolation (VAC) | Dimensions     | Features | Safety |
|------------|-----------|-------------|-----------------------|----------------------------|-----------------|----------------|----------|--------|
| AME3-BJZ   | 3         | 90-528      | 3.3, 5, 9, 12, 15, 24 | -40 to +70                 | 3k              | 2 x 1"         | OCP, CSP | CE, UL |
| AMEOF3-BJZ | 3         | 90-528      | 3.3, 5, 9, 12, 15, 24 | -40 to +70                 | 3k              | Open Frame SIP | OCP, CSP | CE, UL |
| AMEOF5-BJZ | 5         | 90-528      | 3.3, 5, 9, 12, 15, 24 | -40 to +85                 | 4k              | Open Frame SIP | OCP, CSP | CE, UL |
| AME10-BJZ  | 10        | 90-528      | 3.3, 5, 9, 12, 15, 24 | -40 to +85                 | 4k              | 62.0 x 45.0"   | OCP, CSP | CE, UL |
| AME20-BJZ  | 20        | 90-528      | 3.3, 5, 9, 12, 15, 24 | -40 to +85                 | 4k              | 70.0 x 48.0"   | OCP, CSP | CE, UL |

## Switching Regulators

| Series   | Input (VDC) | Single Output (VDC)               | Output Current (A) | Operating Temperature (°C) | Isolation (VDC) | Case | Safety |
|----------|-------------|-----------------------------------|--------------------|----------------------------|-----------------|------|--------|
| AMSR1-NZ | 6-36        | -15, -12, -5, 3.3, 5, 9, 12, 15   | 1                  | -40 to +85                 | -               | SIP3 | CE, UL |
| AMSR1-JZ | 4.75-36     | 1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12 | 1                  | -40 to +85                 | -               | SMD  | CE     |
| AMSR1-JZ | 6-36        | 3.3, 5, 9, 12, 15                 | 1                  | -40 to +85                 | -               | SIP3 | CE     |
| AMSR2-JZ | 6-36        | 3.3, 5, 9, 12, 15                 | 2                  | -40 to +85                 | -               | SIP3 | CE     |



## Renewable Energy

### Photovoltaic Systems

Power generators  
Charge controllers  
Inverters

### Wind Turbines

Turbine generators  
Charge controllers  
Inverters

### Fast Power Transfer

IGBT drivers  
SiC drivers

#### Key Features

Ultra wide input voltage range  
High Isolation between circuits  
Cold startup temperature: -40°C  
OLP, Continuous SCP

#### Key Features

Ultra wide input voltage range  
High Isolation between circuits  
Cold startup temperature: -40°C  
OLP, Continuous SCP

#### Key Features

Extremely low Isolation capacitance  
High Isolation between circuits

## Fast Power Transfer - DC/DC Converters

| Series   | Power (W) | Input (VDC)      | Output (VDC)                     | Operating Temperature (°C) | Isolation | Case  | Isolation Capacitance (pF) |
|----------|-----------|------------------|----------------------------------|----------------------------|-----------|-------|----------------------------|
| AM1DC-Z  | 1         | 5, 9, 12, 15, 24 | 15/-9                            | -40 to +85                 | 6k VDC    | SIP7  | 10                         |
| AM1DG-NZ | 1         | 12, 15, 24       | 15/-8.7, 9, 9/-9, 17/-8.7, 15/-8 | -40 to +105                | 3k VDC    | SIP7  | 6.6                        |
| AM2DG-NZ | 2         | 12, 24, 48       | 15/-8.7, 15/-3.5                 | -40 to +105                | 3.5k VAC  | SIP7  | 3.5-6                      |
| AM3DG-NZ | 3         | 15               | 20/-4                            | -40 to +105                | 3.5k VAC  | SIP7  | 3.5                        |
| AM5TG-NZ | 5         | 12, 24           | 15/-9                            | -40 to +85                 | 3k VDC    | DIP24 | 100                        |
| AM5NG-NZ | 5         | 15               | 15/-9                            | -40 to +85                 | 4k VAC    | DIP24 | 3                          |



## Photovoltaic Systems and Wind Turbines - DC/DC Converters

| Series    | Power (W) | Input (VDC)          | Output (VDC) | Operating Temperature (°C) | Isolation (VAC) | Dimensions (In)            | Features                                      |
|-----------|-----------|----------------------|--------------|----------------------------|-----------------|----------------------------|---|
| AM5W-NZ   | 5         | 100-1000             | 5            | -40 to +70                 | 4k              | 2.76 x 1.89                | CSP, OCP, OVP, Reversed connection protection |
| AM10W-NZ  | 10        | 100-1000<br>200-1500 | 5, 9, 24     | -40 to +70                 | 4k              | 2.76 x 1.89<br>4.92 x 2.95 | CSP, OCP, OVP, Reversed connection protection |
| AM10WM-NZ | 10        | 200-1500             | 5            | -25 to +70                 | 4k              | 4.92 x 2.95                | CSP, OCP, OVP, Reversed connection protection |
| AM15W-NZ  | 15        | 100-1000<br>200-1500 | 12,15, 24    | -40 to +70                 | 4k              | 2.76 x 1.89<br>4.92 x 2.95 | CSP, OCP, OVP, Reversed connection protection |
| AM15WM-NZ | 15        | 200-1500             | 12,15, 24    | -25 to +70                 | 4k              | 4.29 x 2.30                | CSP, OCP, OVP, Reversed connection protection |
| AM40W-NZ  | 40        | 200-1200<br>200-1500 | 12,15, 24    | -40 to +70                 | 4k VDC          | 3.5 x 2.5<br>4.92 x 2.95   | CSP, OCP, OVP, Reversed connection protection |
| AM45W-NST | 45        | 150-1500             | 15/15        | -40 to +85                 | 4k              | 5.69 x 4.13                | CSP, OCP, OVP, Reversed connection protection |



AM45W-NST



AM40W-NZ



AM3A-Z



## Life Support Key Features

Ultra-small leakage current  
2 x MOPP



## Medical

## Non-Life Support Key Features

Small leakage current  
2 x MOOP/1 x MOPP

## Medical Converters

| Series     | Power (W) | Input (VAC)    | Single Output (VDC)   | Dual Output (VDC)  | Operating Temperature (°C) | Isolation (VAC) | Dimensions   | Features         | Means of Protection | Safety |
|------------|-----------|----------------|-----------------------|--|----------------------------|-----------------|--------------|------------------|---------------------|--------|
| AM1DM-NZ   | 1         | 3-26           | 3.3, 5, 12, 24        | ±5, ±9, ±12, ±15   | -40 to +85                 | 4.2k            | SIP7         | SCP              | 2 X MOOP            | CE, UL |
| AM2DM-NZ   | 2         | 5-26           | 5, 12, 24             | ±5, ±9, ±12, ±15   | -40 to +85                 | 4.2k            | SIP7         | SCP              | 2 X MOOP            | CE, UL |
| AM2L-NZ    | 2         | 5, 12, 24      | 5, 15                 | -  | -40 to + 85                | 6k VDC          | SMD          | SCP/CSP          | -                   | CE     |
| AMEL5-MJZ  | 5         | 85-264         | 5, 12, 15, 24         | -  | -25 to +70                 | 4k              | 2.12 x 1.13" | CSP              | 2 X MOPP            | CE, UL |
| AMEL5-MAZ  | 5         | 90-264         | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15   | -40 to +95                 | 4k              | 2.03 x 1.1"  | CSP              | 2 x MOOP            | CE, UL |
| AM10TWM-YZ | 10        | 9-36,<br>18-75 | 3.3, 5, 12, 15        | ±5, ±12, ±15   | -400 to +100               | 5k              | 0.79 x 1.24" | CSP              | -                   | -      |
| AMEL10-MJZ | 10        | 85-264         | 3.3, 5, 12, 15,<br>24 | -  | -25 to +70                 | 4k              | 2.11 x 1.13" | CSP              | 2 X MOPP            | CE, UL |
| AMEL10-MAZ | 10        | 90-264         | 3.3, 5, 12, 15,<br>24 | -5/5, ±3.3/5, ±3.3/12,<br>±3.3/15, 3.3/24,<br>±5/12, ±5/15, 5/24,<br>-12/12, ±12/15,<br>12/24, 15/24 | -40 to +70                 | 4k              | 2.22 x 1.21" | CSP              | 2 x MOOP            | CE, UL |
| AME15-MJZ  | 15        | 85-264         | 5, 12, 15, 18,<br>24  | -  | -40 to +70                 | 4k              | 2.44 x 1.77" | CSP              | 2 X MOPP            | CE, UL |
| AMEC15-MAZ | 15        | 90-264         | 3.3, 5, 12, 15,<br>24 | ±5, ±12, ±15   | -40 to +80                 | 4k              | 3.62 x 2.56" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |



## Medical Converters

| Series      | Power (W) | Input (VAC) | Single Output (VDC)   | Dual Output (VDC)   | Operating Temperature (°C) | Isolation (VAC) | Dimensions   | Features         | Means of Protection | Safety |
|-------------|-----------|-------------|-----------------------|---|----------------------------|-----------------|--------------|------------------|---------------------|--------|
| AME15-MAZ   | 15        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15  | -40 to +85                 | 4k              | 2.56 x 1.83" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |
| AMEL20-MAZ  | 20        | 90-264      | 3.3, 5, 12,<br>15, 24 | -5/5, ±3.3/5, ±3.3/12,<br>±3.3/15, 3.3/24, ±5/12,<br>±5/15, 5/24, -12/12,<br>±12/15, 12/24, 15/24 | -40 to +70                 | 4k              | 2.22 x 1.21" | CSP              | 2 x MOOP            | CE, UL |
| AME25-MJZ   | 25        | 85-264      | 5, 12, 15,<br>18, 24  | -   | -40 to +70                 | 4k              | 2.75 x 1.84" | OLP, OVP         | 2 X MOPP            | CE, UL |
| AME30-MAZ   | 30        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +85                 | 4k              | 3.56 x 2.48" | CSP, SCR         | 2 x MOOP            | CE, UL |
| AMEC30-MAZ  | 30        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +80                 | 4k              | 4.92 x 2.56" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |
| AMEOS30-MAZ | 30        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +85                 | 4k              | 4.92 x 2.32" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |
| AMEOC30-MAZ | 30        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +85                 | 4k              | 4.92 x 2.32" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |
| AME40-MAZ   | 40        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +85                 | 4k              | 3.56 x 2.48" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |
| AMEC40-MAZ  | 40        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +85                 | 4k              | 4.92 x 2.56" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |
| AMEOC40-MAZ | 40        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +85                 | 4k              | 4.92 x 2.32" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |
| AMEOS40-MAZ | 40        | 90-264      | 3.3, 5, 12,<br>15, 24 | ±5, ±12, ±15, ±24   | -40 to +85                 | 4k              | 4.92 x 2.32" | SCP, OLP,<br>OVP | 2 x MOOP            | CE, UL |



IoT

### Remote Control Systems

Automatic garage doors  
Interior lighting  
Alarms  
Fire detectors  
HVAC  
Energy meters  
Water meters  
Gas meters  
Building Controls  
Exterior Lighting

### Elevators

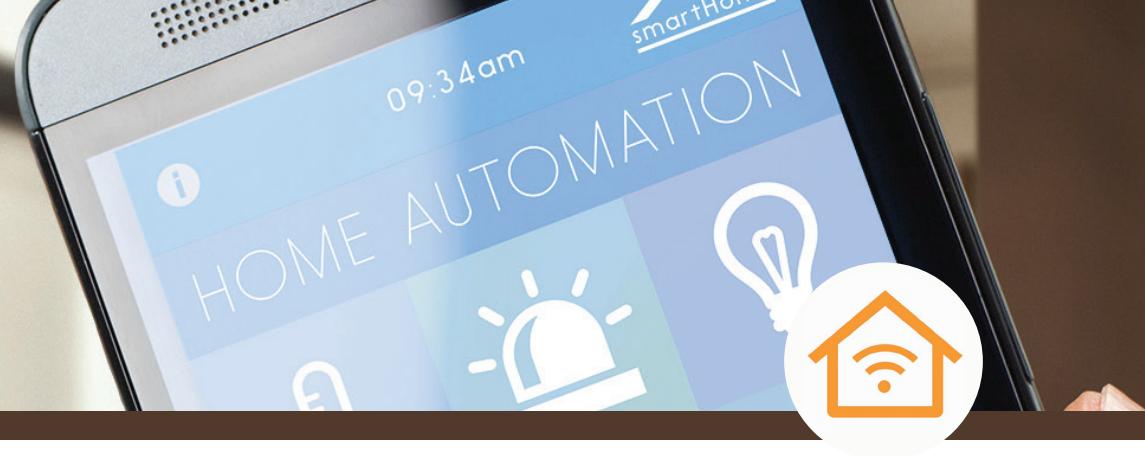
Displays  
Communication systems  
Safety Monitor

### Key Features

High Isolation between circuits  
Small Packages  
Up to 528VAC Input Voltage  
Low no load consumption  
EN55022 Class B EMI emissions  
Remote On/Off control

## IoT - Converters

| Series    | Input (VAC) | Single /Dual Output ( VDC) | No Load (W) | Isolation (VAC) | Dimensions     | Features | Safety |
|-----------|-------------|----------------------------|-------------|-----------------|----------------|----------|--------|
| AM1LO     | 3, 5VDC     | 3.3, 5 / ±3.3, ±5          | -           | 4.2k VDC        | 0.50 x 0.44"   | SCP      | CE, UL |
| AME1-AZ   | 90-305      | 3.3, 5, 12, 15, 24         | <0.3        | 3k              | 1.40 x 0.92"   | OLP, CSP | CE, UL |
| AMEOF1-JZ | 85-305      | 5, 12, 15, 24              | <0.5        | 3k              | Open Frame SIP | OCP, CSP | CE     |
| AME1-JZ   | 85-305      | 3.3, 5, 12, 15, 24         | -           | 3k              | 1.33 x 0.87"   | OCP, SCP | CE, UL |



## IoT - Converters

| Series     | Input (VAC)    | Single Output (VDC)   | No Load (W) | Isolation (VAC) | Dimensions     | Features      | Safety |
|------------|----------------|-----------------------|-------------|-----------------|----------------|---------------|--------|
| AME2-AZ    | 90-305         | 3.3, 5, 12, 15, 24    | <0.3        | 3k              | 1.40 x 0.92"   | OLP, CSP      | CE, UL |
| AME2-JZ    | 85-305         | 3.3, 5, 12, 15, 24    | -           | 3k              | 1.33 x 0.87"   | OCP, SCP      | CE, UL |
| AM3A-Z     | 12, 24, 48 VDC | 3.3, 5, 12, 15        | -           | 1.6k VDC        | SIP6           | CSP           | CE     |
| AME3-AZ    | 90-305         | 3.3, 5, 12, 15, 24    | <0.3        | 3k              | 1.40 x 0.92"   | OLP, CSP      | CE, UL |
| AMEOF3-BJZ | 90-528         | 3.3, 5, 9, 12, 15, 24 | <0.5        | 4k              | Open Frame SIP | OCP, CSP      | CE     |
| AMEL3-VZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4               | 1.46 x 0.96"   | OCP, OVP, CSP | CE     |
| AMEOF5-BJZ | 90-528         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | Open Frame SIP | OCP, CSP      | CE     |
| AMEL5-VZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 1.46 x 0.96"   | OCP, OVP, CSP | CE     |
| AME5-VZ    | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 1.91 x 1.42"   | OCP, OVP, CSP | CE     |
| AMEL6-VZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2 x 1"         | OCP, OVP, CSP | CE     |
| AME10-JZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2.11 x 1.13"   | OCP, OVP, CSP | CE     |
| AME10-VZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2.17 x 1.77"   | OCP, OVP, CSP | CE     |
| AME15-VZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2.44 x 1.77"   | OCP, OVP, CSP | CE     |
| AMEL15-JZ  | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2.11 x 1.13"   | OCP, OVP, CSP | CE     |
| AMEL20-JZ  | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2.11 x 1.13"   | OCP, OVP, CSP | CE     |
| AME20-VZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2.44 x 1.77"   | OCP, OVP, CSP | CE     |
| AME25-VZ   | 85-264         | 3.3, 5, 9, 12, 15, 24 | -           | 4k              | 2.76 x 1.89"   | OCP, OVP, CSP | CE     |



## Industrial

### Industrial Automation

Industrial lifts  
Industrial robots  
Automated visual inspection

### Industrial Control

Sensing Systems  
Temperature control  
Protection systems  
Alarms

### Industrial Motor Drives

IGBT drivers  
SiC drivers

### Key Features

Industrial temperature range: -40 to 85°C  
Encapsulated packages  
Isolation  
OLP, OVP, SCP, OTP

## DC/DC Converters

| Package | Power Range (W) | Input Voltage Range (VDC)                                  | Single Output (VDC)            | Dual Output (VDC)  | Isolation (VDC)        | Efficiency Range (%) |
|---------|-----------------|--|--------------------------------|--|------------------------|----------------------|
| SMD     | 0.25 ~ 3        | 3.3, 5, 12, 15, 24, 9-18, 9-36, 18-36, 18-72, 18-75, 36-75 | 3.3, 5, 9, 12, 15, 24          | ±5, ±9, ±12, ±15   | 1K, 1.5K, 3K, 3.5K, 6K | 64 ~ 86              |
| SIP4    | 0.25 ~ 2        | 3.3, 5, 12, 15, 24, 48                                     | 3.3, 5, 7.2, 9, 12, 15, 18, 24 | ±3.3, ±5, ±7.2, ±9, ±12, ±15, ±18, ±24   | 1K, 1.5K, 3K           | 66 ~ 84              |
| DIP8    | 1               | 3.3, 5, 12, 24, 48   | 3.3, 5, 7.2, 9, 12, 15, 18, 24 | ±12, ±15   | 1K, 1.5K, 3K           | 67 ~ 85              |
| SIP6    | 1 ~ 3           | 4.5-9, 9-18, 18-36, 36-75                                  | 5, 12, 15, 24                  | ±3.3, ±5, ±7.2, ±9, ±12, ±15, ±18, ±24, 15/-9, 15/-8.7, 9, 9/-9, 17/-8.7, 15/-8, 20/-4 | 1.5k                   | 76 ~ 81              |



## DC/DC Converters

| Package      | Power Range (W) | Input Voltage Range (VDC)                         | Single Output (VDC)            | Dual Output (VDC)  | Isolation (VDC)                            | Efficiency Range (%) |
|--------------|-----------------|---|--------------------------------|--|--|----------------------|
| SIP7         | 1 ~ 3           | 3.3, 5, 12, 15, 24, 48                            | 3.3, 5, 7.2, 9, 12, 15, 18, 24 | ±3.3, ±5, ±7.2, ±9, ±12, ±15, ±18, ±24, 15/-9, 15/-8.7, 9, 9/-9, 17/-8.7, 15/-8, 20/-4 | 1K, 1.5K, 3K, 3.5K, 4K, 5.2K, 6K           | 65 ~ 90              |
| DIP14        | 1 ~ 2           | 3.3, 5, 9, 12, 15, 24                             | 3.3, 5, 7.2, 9, 12, 15, 24     | 3.3/3.3, 5/5, 7.2/7.2, 9/9, 12/12, 15/15, 18/18, 24/24                                 | 1K, 1.5K, 3K                               | 55 ~ 85              |
| SIP8         | 1 ~ 9           | 4.5-9, 9-18, 18-36, 36-75, 9-36, 18-75            | 3.3, 5, 7.2, 9, 12, 15, 18, 24 | -  | 1K, 1.5K, 3K                               | 64 ~ 87              |
| DIP16        | 2               | 5, 12, 24   | 5, 12, 15                      | -  | 6k   | 77 ~ 81              |
| SIP9         | 2 ~ 3           | 9-36, 18-72, 18-75                                | 3.3, 5, 12, 15                 | -  | 1.5k                                       | 75 ~ 85              |
| SIP12        | 2 ~ 3           | 5, 12, 24   | 3.3, 5, 7.2, 9, 12, 15, 18, 24 | -  | 1K, 3K, 5.2K                               | 54 ~ 72              |
| DIP24        | 1 ~ 15          | 5, 12, 24, 4.5-9, 9-18, 18-36, 36-75, 9-36, 18-75 | 3.3, 5, 7.2, 9, 12, 15, 18, 24 | 3.3/3.3, 5/5, 7.2/7.2, 9/9, 12/12, 15/15, 18/18, 24/24                                 | 1K, 1.5K, 3K, 3.5K, 5.2K, 6K, 4KVAC, 5KVAC | 52 ~ 91              |
| 1 x 1"       | 6 ~ 30          | 9-18, 18-36, 36-75, 9-36, 18-75, 40-160           | 3.3, 5, 9, 12, 15, 24          | -  | 1.5K, 1.6k                                 | 76 ~ 92              |
| 1.08 x 0.70" | 2               | 4.5-9, 9-18, 18-36, 36-75                         | 5, 12, 15                      | -  | 500VAC                                     | 73 ~ 83              |
| 1.37 x 0.90" | 3               | 4.5-9, 9-18, 18-36, 36-75                         | 5, 12, 15                      | -  | 500VAC                                     | 67 ~ 85              |
| 1.75 x 1.10" | 6               | 4.5-9, 9-18, 18-36, 36-75                         | 3.3, 5, 12, 15                 | -  | 500VAC                                     | 73 ~ 88              |



## DC/DC Converters

| Package      | Power Range (W) | Input Voltage Range (VDC)                     | Single Output (VDC)            | Dual Output (VDC) | Triple Output (VDC)            | Isolation (VDC) | Efficiency Range (%) |
|--------------|-----------------|---|--------------------------------|-------------------|--------------------------------|-----------------|----------------------|
| 2 x 1"       | 10 ~ 60         | 9-18, 18-36, 36-72, 36-75, 9-36, 18-72, 18-75 | 3.3, 5, 7.2, 9, 12, 15, 18, 24 | -                 | 3.3/±12, 3.3/±15, 5/±12, 5/±15 | 1.5K, 1.6K, 3K  | 78 ~ 93              |
| 2 x 1.6"     | 30              | 9-18, 18-36, 36-75, 9-36, 18-75               | 3.3, 5, 12, 15, 24             | ±5, ±12, ±15      | -                              | 1.5K, 3K        | 78 ~ 91              |
| 2 x 2"       | 40 ~ 60         | 9-18, 18-36, 36-75, 9-36, 18-75               | 3.3, 5, 12, 15, 24             | ±5, ±12, ±15      | -                              | 1.5K, 1.6K, 3K  | 80 ~ 92              |
| 2.76 x 1.89" | 5 ~ 15          | 100-1000                                      | 5, 12, 15, 24                  | -                 | -                              | 4KVAC           | 72 ~ 80              |
| 3.50 x 2.50" | 40              | 200-1200                                      | 12, 15, 24                     | -                 | -                              | 4k              | 83 ~ 84              |
| 4.92 x 2.95" | 10 ~ 40         | 200-1500                                      | 5, 12, 15, 24                  | -                 | -                              | 4KVAC           | 64 ~ 80              |
| 5.69 x 4.13" | 45              | 150-1500                                      | -                              | 15/15             | -                              | 1.5k            | 76 ~ 78              |

## Switching Regulators

| Package | Output Current (A) | Input Voltage Range (VDC) | Output (VDC)                                   | Efficiency Range (%) |
|---------|--------------------|---------------------------|--|----------------------|
| SIP3    | 0.5 ~ 2            | 4.5 ~ 72                  | 1.5, 1.8, 2.5, 3.3, 5, 6.5, 7.2, 9, 12, 15, 24 | 65 ~ 97              |
| SMD     | 0.5 ~ 1            | 4.75 ~ 36                 | 1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12              | 75 ~ 96              |



## AC/DC Converters

| Input Voltage (VAC) | Power Range (W) | Package  | Single Output (VDC)       | Dual Output (VDC)     | Triple Output (VDC)       | Isolation (VAC) | Efficiency Range (%) |
|---------------------|-----------------|--|---------------------------|-----------------------|---------------------------|-----------------|----------------------|
| 65-460              | 10              | 3.94 x 1.97"   | -                         | 5.1/12                | -                         | 4k              | 78                   |
| 85-264              | 1 ~ 40          | SIP12, SIP14, 1.46 x 0.96", 2 x 1", 1.91 x 1.42", 2.17 x 1.77", 2.12 x 1.13", 2.44 x 1.77", 2.76 x 1.89", 3.5 x 2.5" | 3.3, 5, 9, 12, 15, 24, 48 | 5/5, 5/12, 5/15, 5/24 | 5/±5, 5/±12, 5/±15, 5/±24 | 3K, 4K          | 63 ~ 87              |
| 85-305              | 1 ~ 25          | 1.33 x 0.87", 2 x 1", 2.17 x 1.77", 2.44 x 1.77", 2.76 x 1.89"   | 3.3, 5, 9, 12, 15, 24, 48 | 5/5, 5/12, 5/15, 5/24 | 5/±5, 5/±12, 5/±15, 5/±24 | 3k              | 63 ~ 87              |
| 90-264              | 5 ~ 40          | 2.03 x 1.10", 2.22 x 1.21", 2.56 x 1.83", 3.56 x 2.48", 3.62 x 2.56", 4.29 x 2.3", 4.92 x 2.32", 4.92 x 2.56"        | 3.3, 5, 9, 12, 15, 24, 48 | -                     | -                         | 4K              | 68 ~ 86              |
| 90-305              | 1 ~ 20          | 1.4 x 0.92", 2.03 x 1.10", 2.22 x 1.21"  | 3.3, 5, 12, 15, 24        | -                     | -                         | 3K, 4K          | 44 ~ 81              |
| 90-528              | 1 ~ 20          | 1.4 x 0.92", 2.44 x 1.77", 1.75 x 0.94"  | 3.3, 5, 9, 12, 15, 24     | -                     | -                         | 3K, 4K          | 44 ~ 83              |
| 165-264             | 1 ~ 3           | 1.46 x 0.96"   | 3.3, 5, 9, 12, 15, 24     | -                     | -                         | 3K              | 66 ~ 78              |



## Lighting

### Outdoor

High bay lights  
Street lights  
Area Lights

### Key Features

Cold startup temperature: -40°C or -55°C  
60W and up  
Input Voltage up to 305VAC  
IP67 or IP68  
Dimming

### Indoor

Interior  
Entertainment Lights

### Key Features

60W and lower  
Dimming

## Indoor - AC/DC LED Drivers

| Series      | Input (VAC) | Single Output (VDC)                    | Output Current (A)              | Isolation (VAC) | Dimming | Operating Temperature (°C) | IP Rating  | Safety |
|-------------|-------------|--|---------------------------------|-----------------|---------|----------------------------|------------|--------|
| AMEPR5-AZ   | 90-264      | 3-5, 2-6, 5-12, 6-14, 8-16             | 1, 0.7, 0.36, 0.35, 0.3         | 3k              | -       | 0 to +80                   | IP67       | CE, UL |
| AMEPR8D-AZ  | 90-264      | 6-12, 9-18, 12-24                      | 0.7, 0.4, 0.35                  | 3k              | TRIAC   | -20 to +85                 | IP67       | UL     |
| AMEPR10-Z   | 90-264      | 8-26, 23-33, 30-42                     | 0.24, 0.29                      | 3.75k           | -       | -20 to +50                 | IP20       | CE     |
| AMEPR10D-AZ | 90-264      | 5-12, 8-15, 15-30, 24-36, 30-40, 36-50 | 0.7, 0.64, 0.35, 0.3, 0.25, 0.2 | 3k              | TRIAC   | -20 to +80                 | IP20, IP67 | CE, UL |
| AMEPR15D-AZ | 90-264      | 8-15, 12-24, 24-36, 30-48, 36-50       | 1, 0.7, 0.5, 0.35, 0.3          | 3k              | TRIAC   | -20 to +80                 | IP20, IP67 | CE, UL |
| AMEPR16-Z   | 90-264      | 4-42, 40-58, 30-42                     | 0.29, 0.36                      | 3.75k           | -       | -20 to +50                 | IP20       | CE     |
| AMEPR25D-AZ | 180-264     | 12-24                                  | 1                               | 3k              | TRIAC   | -20 to +80                 | IP20, IP67 | CE, UL |



## Indoor - AC/DC LED Drivers

| Series      | Input (VAC) | Single Output (VDC)                 | Output Current (A)        | Isolation (VAC) | Dimming                      | Operating Temperature (°C) | IP Rating | Safety |
|-------------|-------------|-------------------------------------|---------------------------|-----------------|------------------------------|----------------------------|-----------|--------|
| AMEPR30-Z   | 90-264      | 24-42                               | 0.5, 0.6, 0.7             | 3.75k           | -                            | -30 to +50                 | IP20      | CE     |
| AMEPR30N-Z  | 90-305      | 24-42                               | 0.5, 0.6, 0.7             | 3.75k           | -                            | -30 to +50                 | IP62      | CE     |
| AMEPR30NC-Z | 90-305      | 24-42                               | 0.5, 0.6, 0.7             | 3.75k           | Resistive,<br>Analog,<br>PWM | -30 to +50                 | IP62      | CE     |
| AMEPR30D-AZ | 90-264      | 8-15, 12-24, 24-36,<br>32-42, 36-50 | 2, 1.4, 1.25,<br>1, 0.7   | 3k              | TRIAC                        | -20 to +80                 | IP67      | CE, UL |
| AMEPR30-AZ  | 90-305      | 5-12, 12-24, 24-36,<br>36-48, 36-50 | 2.5, 1.4, 1,<br>0.64, 0.7 | 3.75k           | Resistive                    | -40 to +85                 | IP68      | CE, UL |
| AMEPR30C-AZ | 90-305      | 5-12, 12-24, 24-36,<br>36-48, 36-50 | 2.5, 1.4, 1,<br>0.64, 0.7 | 3.75k           | Resistive,<br>Analog,<br>PWM | -40 to +85                 | IP68      | CE, UL |
| AMEPR40-Z   | 90-264      | 80-100, 30-42                       | 1, 0.4                    | 3.75k           | -                            | -20 to +50                 | IP20      | CE     |
| AMEPR40N-Z  | 90-305      | 80-100, 30-42                       | 1, 0.4                    | 3.75k           | -                            | -20 to +50                 | IP62      | CE     |
| AMEPR50N-Z  | 90-264      | 30-42                               | 1.15, 1.05, 1             | 3.75k           | -                            | -40 to +50                 | -         | CE     |
| AMEPR60N-Z  | 90-264      | 24-42                               | 1.4                       | 3.75k           | -                            | -40 to +50                 | -         | CE     |
| AMEPR60-AZ  | 90-305      | 5-12, 12-24, 24-36,<br>36-50        | 5, 2.5, 1.7, 1.2          | 3.75k           | Resistive,<br>Analog,<br>PWM | -40 to +85                 | IP68      | CE, UL |
| AMEPR60C-AZ | 90-305      | 5-12, 12-24, 24-36,<br>36-50        | 5, 2.5, 1.7, 1.2          | 3.75k           | Resistive,<br>Analog,<br>PWM | -40 to +85                 | IP68      | CE, UL |



## Indoor - DC/DC LED Drivers

| Series               | Input (VDC) | Single Output (VDC) | Output Current (mA)   | Type      | Dimming     | Operating Temperature (°C) | Package        | Safety |
|----------------------|-------------|---------------------|---|-----------|-------------|----------------------------|----------------|--------|
| AMLB-Z/AMLBW-Z       | 9-36        | 14-48               | 150, 250, 300, 350, 500, 600, 700, 900  | Boost     | Analog, PWM | -40 to +85                 | 2 x 1"/wire    | CE     |
| AMLD-IZ              | 5-36        | 2-32                | 300, 350, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1800, 2000 | Step-down | Analog, PWM | -40 to +85                 | 2 x 1" & DIP24 | CE     |
| AMLDV-NZ             | 5.5-48      | 3.3-36              | 300, 350, 500, 600, 700   | Step-down | Analog, PWM | -40 to +85                 | SMD            | CE     |
| AMLD-Z               | 7-60        | 2-57                | 150, 250, 300, 350, 500, 600, 700, 1000   | Step-down | Analog, PWM | -40 to +85                 | DIP24          | CE     |
| AMLD-RZ/AMLDW-RZ     | 9-60        | 2-56                | 300, 350, 500, 600, 700, 1000   | Step-down | Analog, PWM | -40 to +85                 | DIP24/wire     | CE     |
| AMLDP-Z              | 7-16        | 2-14                | 300, 350, 500, 600, 700, 1000   | Step-down | Analog, PWM | -40 to +85                 | DIP8           | CE     |
| AMLDL-RZ             | 7-30        | 2-28                | 500, 600, 700   | Step-down | Analog, PWM | -40 to +71                 | DIP14          | CE     |
| AMLDL-Z/<br>AMLDLW-Z | 7-30        | 2-28                | 300, 350, 500, 600, 700, 1000   | Step-down | Analog, PWM | -40 to +85                 | DIP14 & DIP16  | CE     |



## Outdoor - AC/DC LED Drivers

| Series      | Input (VAC) | Single Output (VDC)       | Output Current (A) | Isolation (VAC) | Dimming                | Operating Temperature (°C) | IP Rating | Safety |
|-------------|-------------|---------------------------|--------------------|-----------------|------------------------|----------------------------|-----------|--------|
| AMER40(N)-Z | 90-305      | 30-42                     | 0.75               | 3750            | -                      | -40 to +60                 | IP67      | CE     |
| AMER50(N)-Z | 90-305      | 30-42                     | 0.9                | 3750            | -                      | -40 to +60                 | IP67      | CE     |
| AMEQR50N-Z  | 90-305      | 36-50                     | 1                  | 3750            | -                      | -40 to +60                 | IP67      | CE     |
| AMEPR60-AZ  | 90-305      | 5-12, 12-24, 24-36, 36-50 | 5, 2.5, 1.7, 1.2   | 3750            | Resistive              | -40 to +85                 | IP68      | CE, UL |
| AMEPR60C-AZ | 90-305      | 5-12, 12-24, 24-36, 36-50 | 5, 2.5, 1.7, 1.2   | 3750            | Resistive, Analog, PWM | -40 to +85                 | IP68      | CE, UL |
| AMER60(N)-Z | 90-305      | 24-42                     | 1.6, 1.5, 1.4, 1.3 | 3750            | -                      | -40 to +60                 | IP67      | CE     |
| AMEQR70-Z   | 90-305      | 36-50                     | 1.4                | 3750            | -                      | -40 to +60                 | IP67      | CE     |
| AMER90-AZ   | 90-305      | 12-24, 24-36, 36-50       | 3.75, 2.5, 1.8     | 3750            | Resistive              | -40 to +85                 | IP68      | CE, UL |
| AMER90-CAZ  | 90-305      | 12-24, 24-36, 36-50       | 3.75, 2.5, 1.8     | 3750            | Resistive              | -55 to +85                 | IP68      | CE, UL |
| AMER90C-Z   | 90-305      | 35-70                     | 1.2                | 3750            | Resistive, Analog, PWM | -40 to +70                 | IP67      | CE     |
| AMER120-AZ  | 90-305      | 12-24, 24-36, 36-50       | 5, 3.4, 2.5        | 3750            | Resistive              | -40 to +85                 | IP68      | CE, UL |
| AMER120-CAZ | 90-305      | 12-24, 24-36, 36-50       | 5, 3.4, 2.5        | 3750            | Resistive              | -55 to +85                 | IP68      | CE, UL |
| AMER120C-Z  | 90-305      | 35-70, 42-60              | 2, 1.7             | 3750            | Resistive, Analog, PWM | -40 to +70                 | IP67      | CE     |
| AMER130-Z   | 90-305      | 35-55                     | 2.4                | 3750            | -                      | -40 to +70                 | IP67      | CE     |
| AMER150-AZ  | 90-305      | 12-24, 24-36, 36-50       | 6.3, 4.16, 3       | 3750            | Resistive              | -40 to +85                 | IP68      | CE, UL |
| AMER150-CAZ | 90-305      | 12-24, 24-36, 36-50       | 6.3, 4.16, 3       | 3750            | Resistive              | -55 to +85                 | IP68      | CE, UL |
| AMER160-Z   | 90-305      | 15-48, 30-55              | 3.4, 3.2, 2.9,     | 3750            | -                      | -40 to +70                 | IP67      | CE     |
| AMER175-Z   | 90-305      | 15-48                     | 3.6                | 3750            | -                      | -40 to +70                 | IP67      | CE     |
| AMER250C-Z  | 90-305      | 12-24, 21-42              | 5/10, 3/6          | 3750            | Resistive, Analog, PWM | -40 to +70                 | IP67      | CE     |



205 rue Joseph Carrier  
Vaudreuil-Dorion, Quebec, J7V 5V5 Canada  
Tel: +1-514-620-2722  
Fax: +1-450-510-2498  
Toll Free: 1-888-9-Aimtec (924-6832) North America Only  
[info@aimtec.com](mailto:info@aimtec.com)

[www.aimtec.com](http://www.aimtec.com)