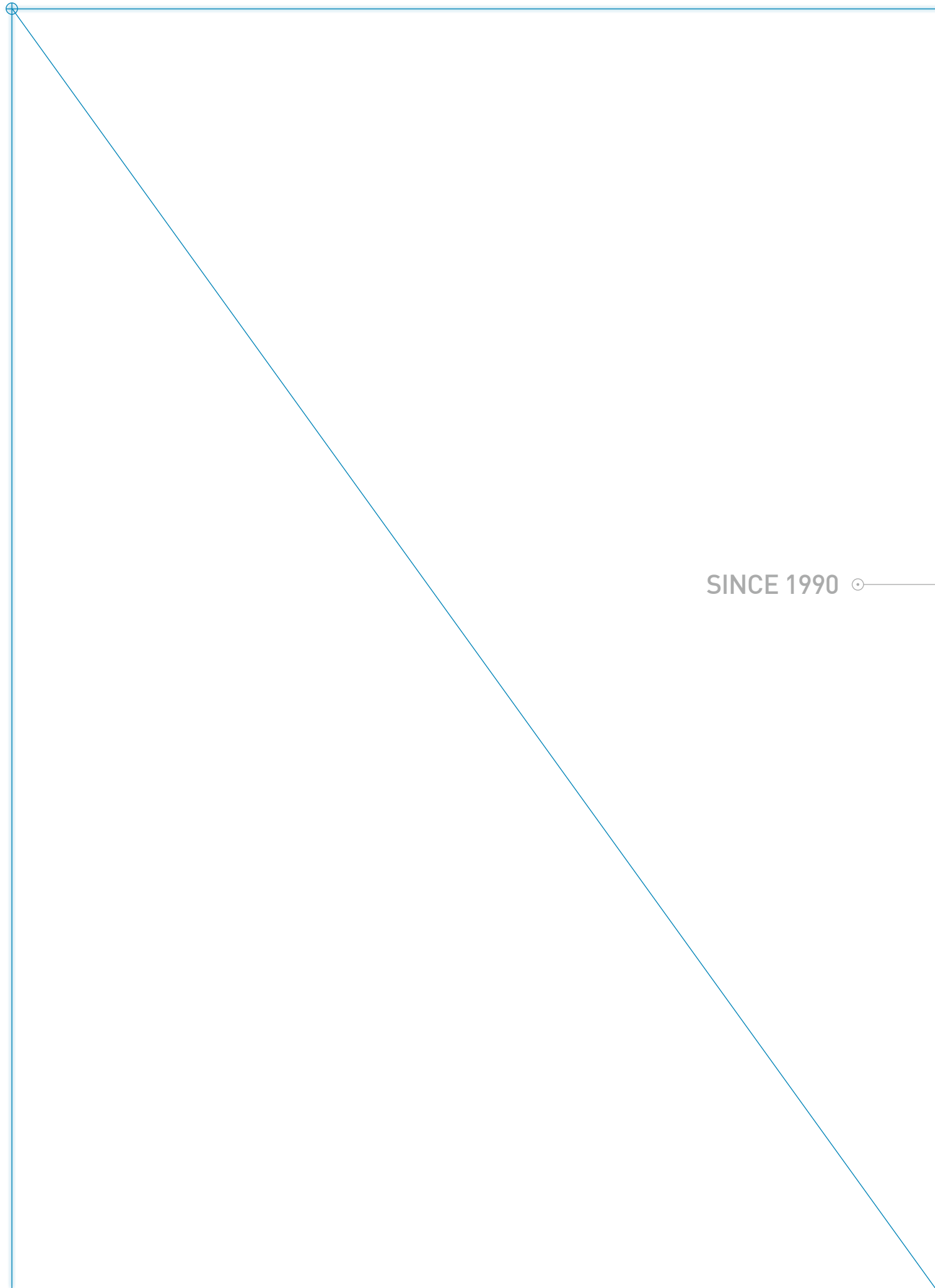


2024

PRODUCT CATALOGUE

POWER FOR
A BETTER FUTURE



SINCE 1990



SIP Package DC-DC Converters, 1-5W

| Series | Output Power | Input Voltage Range (VDC) | Output Voltage (VDC) | Output Regulation | Isolation (VDC) | Package | Safety | Page |
|---------|--------------|--|-------------------------------------|-------------------|-----------------|---------|--------|------|
| MBU100 | 1W | 2.97-3.63, 4.5-5.5, 10.8-13.2, 21.6-26.4 | 3.3, 5, 9, 12, 15 | - | 1000 | SIP-4 | - | 10 |
| MAU100 | 1W | 4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4 | 3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15 | - | 1000 | SIP-7 | • | 11 |
| MA01 | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 9, 12, 15, ±5, ±9, ±12, ±15 | - | 1000 | SIP-7 | • | 12 |
| MA01H | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 9, 12, 15 | - | 3000 | SIP-7 | • | 13 |
| MAU200 | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15 | - | 3000 | SIP-7 | • | 14 |
| MAPU01H | 1W | 2.97-3.63, 4.5-5.5, 10.8-13.2, 21.6-26.4 | 3.3, 5, 9, 12, 15, ±5, ±12, ±15 | - | 3000 | SIP-7 | • | 15 |
| MAW01 | 1W | 4.5-9, 9-18, 18-36, 36-75 | 5, 12, 15, 24, ±12, ±15 | • | 1500 | SIP-6 | • | 16 |
| MAU300 | 2W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 3.3, 5, 12, 15, ±5, ±12, ±15 | - | 1000 | SIP-7 | - | 17 |
| MAPU02H | 2W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 3.3, 5, 9, 12, 15, ±5, ±12, ±15 | - | 3000 | SIP-7 | - | 18 |
| MCW1000 | 2W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12 | • | 1000 | SIP-8 | • | 19 |
| MCWI02 | 2W | 4.5-18, 9-36, 18-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1500 | SIP-8 | • | 20 |
| MEW1000 | 2W | 9-36, 18-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1500 | SIP-9 | • | 21 |
| MBSU03 | 3W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15 | - | 1500 | SIP-4 | • | 22 |
| MA03 | 3W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 9, 12, 15 | - | 1000 | SIP-7 | • | 23 |
| MCW03 | 3W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1600 | SIP-8 | • | 24 |
| MCWI03 | 3W | 4.5-18, 9-36, 18-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1600 | SIP-8 | • | 25 |
| MCW04 | 4W | 9-18, 18-36, 36-75 | 5, 12, 15, 24, ±12, ±15 | • | 1600 | SIP-8 | • | 26 |
| MCWI04 | 4W | 9-36, 18-75 | 5, 12, 15, 24, ±12, ±15 | • | 1600 | SIP-8 | • | 27 |
| MCWI05 | 5W | 4.5-18, 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | SIP-8 | • | 28 |

SMD Package DC-DC Converters, 1-6W

| | | | | | | | | |
|----------|----|--|----------------------------------|---|------|-----|---|----|
| MSLU100 | 1W | 4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4 | 3.3, 5, 9, 12, 15, ±5, ±12, ±15 | - | 1500 | SMD | • | 29 |
| MSLU300 | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 3.3, 5, 12, 15, ±5, ±12, ±15 | - | 3000 | SMD | - | 30 |
| MSPU01H | 1W | 2.97-3.63, 4.5-5.5, 10.8-13.2 | 3.3, 5, 12, 15, ±5, ±12, ±15 | - | 3000 | SMD | • | 31 |
| MSCW01 | 1W | 4.5-9, 9-18, 18-36, 36-75 | 5, 12, 15, ±12, ±15 | • | 1500 | SMD | • | 32 |
| MSLU400 | 2W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 3.3, 5, 12, ±5, ±12, ±15 | - | 1500 | SMD | - | 33 |
| MSDW1000 | 2W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1500 | SMD | • | 34 |
| MSCWI02 | 2W | 4.5-12, 9-36, 18-75 | 5, 12, 15, 24, ±12, ±15 | • | 1500 | SMD | • | 35 |
| MSDWI03 | 3W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 | SMD | • | 36 |
| MSCWI03 | 3W | 4.5-12, 9-36, 18-75 | 5, 12, 15, 24, ±12, ±15 | • | 1500 | SMD | • | 37 |
| MSGWI06 | 6W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 | SMD | • | 38 |

DIP Package DC-DC Converters, 1-15W

| Series | Output Power | Input Voltage Range (VDC) | Output Voltage (VDC) | Output Regulation | Isolation (VDC) | Package | Safety | Page |
|-------------------|--------------|----------------------------------|-----------------------------------|-------------------|-----------------|---------|--------|------|
| MFSU01 | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15 | - | 1500 | DIP-8 | - | 39 |
| MFU100 | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 9, 12, 15 | - | 3000 | DIP-8 | • | 40 |
| MFPU01H | 1W | 2.97-3.63, 4.5-5.5, 10.8-13.2 | 3.3, 5, 12, 15, ±5, ±12, ±15 | - | 3000 | DIP-8 | • | 41 |
| MFW02 | 2W | 4.5-10, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1500 | DIP-8 | • | 42 |
| MDW1000 | 2W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1500 | DIP-16 | • | 43 |
| MFW03 | 3W | 4.5-10, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±5, ±12, ±15 | • | 1500 | DIP-8 | • | 44 |
| MDWI03 | 3W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 | DIP-16 | • | 45 |
| MIAR03 | 3W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15, ±12, ±15 | • | 1500 | DIP-24 | • | 46 |
| MIW1100 | 3W | 4.5-9, 9-18, 18-36, 36-75, 10-30 | 5, 12, 15, ±12, ±15 | • | 1500 | DIP-24 | - | 47 |
| MIW03 | 3W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 3000 | DIP-24 | • | 48 |
| MIWI03 | 3W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 3000 | DIP-24 | • | 49 |
| MIW06 | 6W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 3000 | DIP-24 | • | 50 |
| MIWI06 | 6W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 3000 | DIP-24 | • | 51 |
| MDWI06 | 6W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±5, ±12, ±15 | • | 1500 | DIP-16 | • | 52 |
| MDW08 | 8W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 53 |
| MDWI08 | 8W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 54 |
| MDW10 | 10W | 9-18, 18-36, 36-75 | 3.3, 5, 5.1, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 55 |
| MDWI10 | 10W | 9-36, 18-75 | 3.3, 5, 5.1, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 56 |
| MIW10 | 10W | 9-18, 18-36, 36-75 | 3.3, 5, 5.1, 12, 15, ±12, ±15 | • | 1500 | DIP-24 | • | 57 |
| MIWI10 | 10W | 9-36, 18-75 | 3.3, 5, 5.1, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-24 | • | 58 |
| MDW12 | 12W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 59 |
| MDWI12 | 12W | 9-36, 18-75 | 5, 5.1, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 60 |
| NEW MDW15 | 15W | 9-18, 18-36, 36-75 | 5.1, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 61 |
| NEW MDWI15 | 15W | 9-36, 18-75 | 5.1, 12, 15, 24, ±12, ±15 | • | 1500 | DIP-16 | • | 62 |

GENERAL INDUSTRIAL POWER SOLUTIONS

1" x1" Package DC-DC Converters, 10-30W

| Series | Output Power | Input Voltage Range (VDC) | Output Voltage (VDC) | Output Regulation | Isolation (VDC) | Package | Safety | Page |
|--------|--------------|---------------------------|---------------------------------------|-------------------|-----------------|---------|--------|------|
| MJW10 | 10W | 9-18, 18-36, 36-75 | 3.3, 5, 5.1, 12, 15, ±5, ±12, ±15 | • | 1500 | 1" x1" | • | 63 |
| MJWI10 | 10W | 9-36, 18-75 | 3.3, 5, 5.1, 12, 15, 24, ±5, ±12, ±15 | • | 1500 | 1" x1" | • | 64 |
| MJW15 | 15W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 1" x1" | • | 65 |
| MJWI15 | 15W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 1" x1" | • | 66 |
| MJWI20 | 20W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 1" x1" | • | 67 |
| MJW25 | 25W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±12, ±15 | • | 1500 | 1" x1" | • | 68 |
| MJWI25 | 25W | 9-36, 18-75 | 3.3, 5, 12, 15, ±12, ±15 | • | 1500 | 1" x1" | • | 69 |
| MJWI30 | 30W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 1" x1" | • | 70 |

2" x1" Package DC-DC Converters, 40-50W

| | | | | | | | | |
|--------|-----|--------------------|------------------------------|---|------|--------|---|----|
| MKW40 | 40W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 2" x1" | • | 71 |
| MKWI40 | 40W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 2" x1" | • | 72 |
| MKW50 | 50W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24 | • | 1500 | 2" x1" | • | 73 |
| MKWI50 | 50W | 9-36, 18-75 | 3.3, 5, 12, 15, 24 | • | 1500 | 2" x1" | • | 74 |

Chassis & Din-Rail Mounting Package DC-DC Converters, 6-60W

| | | | | | | | | |
|---------|-----|-------------|---------------------------------------|---|---------|------------------|---|----|
| MJWI06C | 6W | 9-36, 18-75 | 5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24 | • | 3000VDC | Chassis Din-Rail | • | 75 |
| MKW10C | 10W | 9-36, 18-75 | 5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24 | • | 3000VDC | Chassis Din-Rail | • | 76 |
| MOWI20C | 20W | 9-36, 18-75 | 5.1, 12, 24, 48 | • | 2500VDC | Chassis Din-Rail | • | 77 |
| MQWI40C | 40W | 9-36, 18-75 | 5.1, 12, 24, 48 | • | 2500VDC | Chassis Din-Rail | • | 78 |
| MRWI60C | 60W | 9-36, 18-75 | 5.1, 12, 24, 48 | • | 2500VDC | Chassis Din-Rail | • | 79 |

Switching Regulators, 0.5-1A

| | | | | | | | | |
|------------|------|--------------------------|---------------------------------------|---|---|-------|---|----|
| M78AR-0.5 | 0.5A | {4.75/6.5/8/11/15/18}-32 | 1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12, 15 | • | - | SIP-3 | • | 80 |
| M78SAR-0.5 | 0.5A | {4.75/6.5/8/11/15/18}-32 | 1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12, 15 | • | - | SMD | • | 81 |
| M78AR-1 | 1A | {6.5/15}-32 | 3.3, 5, 12, | • | - | SIP-3 | • | 82 |

GENERAL INDUSTRIAL POWER SOLUTIONS

AC-DC Power Supplies, 3-60W

| Series | Output Power | Input Voltage Range (VDC) | Output Voltage (VDC) | Output Regulation | Isolation (VAC) | Package | Safety | Page |
|------------|--------------|---------------------------|--|-------------------|---------------------|----------------------|--------|------|
| AAF-03 | 3W | 85 - 264VAC 120-370VDC | 3.3, 5, 9, 12, 15, 24 | • | 3000 VAC Reinforced | PCB | • | 83 |
| ABF-04 | 4W | 85 - 264VAC 120-370VDC | 3.3, 5, 9, 12, 15, 24, 5/3.3, 12/5, ±12, ±15 | • | 3000 VAC Reinforced | PCB | • | 84 |
| AAF-05 | 5W | 85 - 264VAC 120-370VDC | 3.3, 5, 9, 12, 15, 24, 48 | • | 3000 VAC Reinforced | PCB Chassis | • | 85 |
| NEW AMF-07 | 7W | 85 - 264VAC 90-370VDC | 5, 12, 15, 24, 48 | • | 3000 VAC Reinforced | PCB Chassis | • | 86 |
| ACF-10 | 10W | 85 - 264VAC 120-370VDC | 3.3, 5, 12, 15, 24, 48 | • | 4000 VAC Reinforced | PCB | • | 87 |
| NEW AMF-15 | 15W | 85 - 264VAC 90-370VDC | 5.1, 12, 15, 24, 48 | • | 3000 VAC Reinforced | PCB Chassis DIN-Rail | • | 88 |
| AGF-15 | 15W | 85 - 264VAC 120-370VDC | 3.3, 5, 9, 12, 15, 24, 48 | • | 3000 VAC Reinforced | PCB | • | 89 |
| NEW AMF-30 | 30W | 85 - 264VAC 90-370VDC | 5.1, 12, 15, 24, 48 | • | 3000 VAC Reinforced | PCB Chassis DIN-Rail | • | 90 |
| NEW AMF-60 | 60W | 85 - 264VAC 90-370VDC | 5.1, 12, 15, 24, 48 | • | 3000 VAC Reinforced | PCB Chassis DIN-Rail | • | 91 |

Railway Certified DC-DC Converters, 3-150W

| Series | Output Power | Input Voltage Range (VDC) | Output Voltage (VDC) | Output Regulation | Isolation | Package | Safety | Page |
|------------|--------------|---------------------------|-----------------------------|-------------------|--------------------|---------------|--------|------|
| MIZI03 | 3W | 9-36, 18-75 40-160 | 5, 12, 15, ±12, ±15 | • | 3000VAC Reinforced | DIP | • | 94 |
| MKZI10 | 10W | 9-36, 18-75 40-160 | 5, 12, 15, 24, ±12, ±15 | • | 3000VAC Reinforced | 2" x1" | • | 95 |
| MKZI20 | 20W | 9-36, 18-75 40-160 | 5, 12, 15, 24, ±12, ±15 | • | 3000VAC Reinforced | 2" x1" | • | 96 |
| MKZI40 | 40W | 36-160 | 5, 12, 15, 24, 54, ±12, ±15 | • | 3000VAC Reinforced | 2" x1" | • | 97 |
| MTQZ50 | 50W | 43-101 66-160 | 5, 12, 15, 24 | • | 3000VAC Reinforced | Quarter Brick | • | 98 |
| NEW MRZI75 | 75W | 36-160 | 5, 12, 15, 24, 54 | • | 3000VAC Reinforced | Quarter Brick | • | 99 |
| MRZI100 | 100W | 36-160 | 5, 12, 15, 24, 54 | • | 2000VAC Reinforced | Quarter Brick | • | 100 |
| MRZI150 | 150W | 36-160 | 5, 12, 15, 24, 54 | • | 2000VAC Reinforced | Quarter Brick | • | 101 |



ULTRA-HIGH ISOLATION POWER SOLUTION

Ultra-high Isolation DC-DC Converters, 1-60W

| Series | Output Power | Input Voltage Range (VDC) | Output Voltage (VDC) | Output Regulation | Isolation | Package | Safety | Page |
|------------|--------------|--|---|-------------------|--------------------|------------------|--------|------|
| MA01-HI | 1W | 4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4 | 3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15, +15/-9 | - | 5200VDC | SIP | • | 104 |
| MAEU01-HI | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15 | - | 3000VAC Reinforced | SIP | • | 105 |
| MAEU02-HI | 2W | 4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4 | 3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15, +15/-9 | - | 5200VDC | SIP | • | 106 |
| MSCEU01-HI | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15, ±12, ±15 | - | 3000VAC Reinforced | SMD | • | 107 |
| MDEU02-HI | 2W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15, ±12, ±15 | - | 4000VAC Reinforced | DIP | • | 108 |
| MIR500 | 2W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15, ±5, ±12, ±15 | • | 6000VDC | DIP | • | 109 |
| MIE03-HI | 3.5W | 4.5-9, 9-18, 18-36, 36-75 | 5, 5.8, 12, 15, 24, ±12, ±15 | • | 5000VAC Reinforced | DIP | • | 110 |
| MIEI03-HI | 3W | 9-40, 18-80 | 5, 12, ±12, ±15 | • | 8000VDC Reinforced | DIP | • | 111 |
| MIE06-HI | 6W | 9-18, 18-36, 36-75 | 5, 12, 15, 24, ±12, ±15 | • | 5000VAC Reinforced | DIP | • | 112 |
| MIE10-HI | 10W | 9-18, 18-36, 36-75 | 3.3, 5, 5.1, 12, 15, 24, ±12, ±15 | • | 5000VAC Reinforced | DIP | • | 113 |
| MKE15-HI | 15W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, ±12, ±15 | • | 4200VAC Reinforced | 2" x1" | • | 114 |
| MKE20-HI | 20W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, ±12, ±15 | • | 4200VAC Reinforced | 2" x1" | • | 115 |
| MJA06C | 6W | 80-160 | 5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24 | • | 3000VAC Reinforced | Chassis Din-Rail | • | 116 |
| MKA10C | 10W | 80-160 | 5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24 | • | 3000VAC Reinforced | Chassis Din-Rail | • | 117 |
| MOA20C | 20W | 80-160 | 5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24 | • | 3000VAC Reinforced | Chassis Din-Rail | • | 118 |
| MQA40C | 40W | 80-160 | 5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24 | • | 3000VAC Reinforced | Chassis Din-Rail | • | 119 |
| MRA60C | 60W | 80-160 | 5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24 | • | 3000VAC Reinforced | Chassis Din-Rail | • | 120 |

MEDICAL SAFETY POWER SOLUTIONS

Medicial Safety DC-DC Converters, 1-20W

| Series | Output Power | Input Voltage Range (VDC) | Output Voltage (VDC) | Output Regulation | Isolation (VAC) | Package | Safety | Page |
|----------|--------------|-------------------------------|-----------------------------------|-------------------|--------------------|---------|--------|------|
| MAU400 | 1W | 4.5-5.5, 10.8-13.2 | 5, 12, 15, ±5, ±12, ±15 | - | 3000VAC Reinforced | SIP | • | 124 |
| MAU01M | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15 | - | 4000VAC Reinforced | SIP | • | 125 |
| MSCU01M | 1W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15, ±12, ±15 | - | 4000VAC Reinforced | SMD | • | 126 |
| MSHU100 | 2W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15, ±12, ±15 | - | 4000VAC Reinforced | SMD | • | 127 |
| MDHU100 | 2W | 4.5-5.5, 10.8-13.2, 21.6-26.4 | 5, 12, 15, ±12, ±15 | - | 4000VAC Reinforced | DIP | • | 128 |
| MIHW2000 | 3W | 9-40, 18-80, 36-160 | 5, 12, 15, ±12, ±15 | • | 4000VAC Reinforced | DIP | • | 129 |
| MIW03M | 3.5W | 4.5-9, 9-18, 18-36, 36-75 | 5, 5.8, 12, 15, ±12, ±15 | • | 5000VAC Reinforced | DIP | • | 130 |
| MIW06M | 6W | 9-18, 18-36, 36-75 | 5, 12, 15, ±12, ±15 | • | 5000VAC Reinforced | DIP | • | 131 |
| MIW10M | 10W | 9-18, 18-36, 36-75 | 3.3, 5, 5.1, 12, 15, 24, ±12, ±15 | • | 5000VAC Reinforced | DIP | • | 132 |
| MKW15M | 15W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, ±12, ±15 | • | 4200VAC Reinforced | 2" x1" | • | 133 |
| MKW20M | 20W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, ±12, ±15 | • | 4200VAC Reinforced | 2" x1" | • | 134 |

Medicial Safety AC-DC Power Supplies, 24-60W

| Series | Output Power | Input Voltage Range (VAC) | Output Voltage (VDC) | Output Regulation | Isolation (VAC) | Package | Safety | Page |
|--------|--------------|---------------------------|---------------------------|-------------------|--------------------|----------------------|--------|------|
| AJM-24 | 24W | 85-264 | 5, 9, 12, 15, 24, ±12 ±15 | • | 4000VAC Reinforced | PCB Chassis DIN-Rail | • | 135 |
| APM-40 | 40W | 85-264 | 5, 12, 15, 24, ±12 ±15 | • | 4000VAC Reinforced | PCB Chassis DIN-Rail | • | 136 |
| AYM-60 | 60W | 85-264 | 5.1, 12, 15, 24, 48 | • | 4000VAC Reinforced | PCB Chassis DIN-Rail | • | 137 |

GENERAL INDUSTRIAL POWER SOLUTIONS

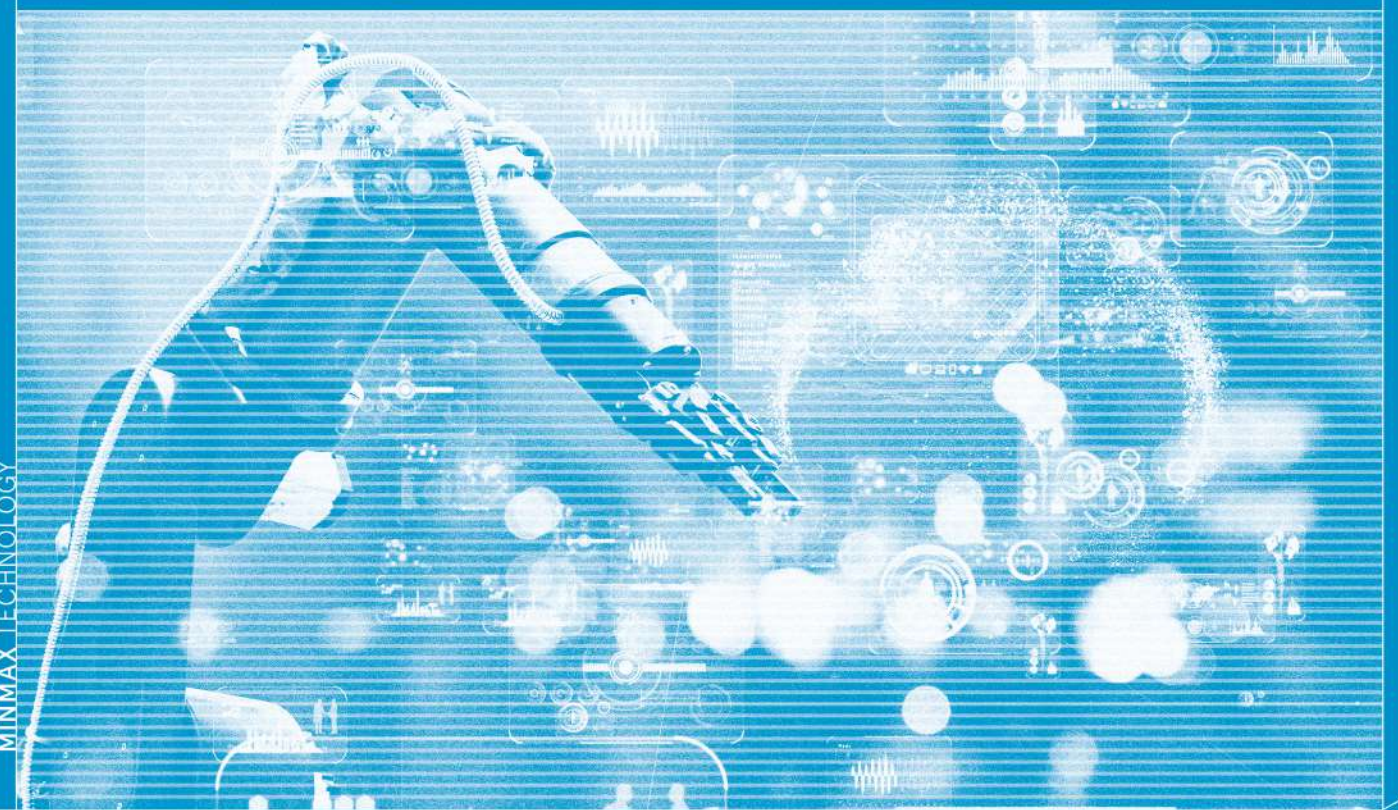
POWER FOR
A BETTER FUTURE

75%
Board Space

79%
Weight



MINMAX TECHNOLOGY



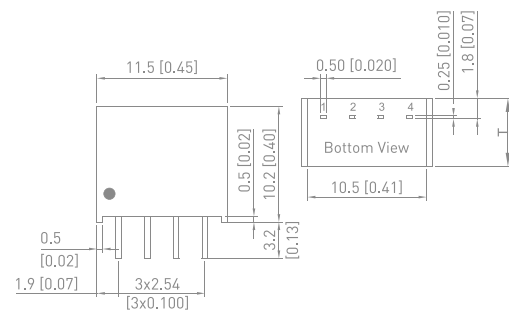
MBU100 Series | 1W



- Industrial Standard SIP-4 Package
- Unregulated Output Voltage
- I/O Isolation 1000 VDC
- Operating Ambient Temp. Range -40°C to +85°C

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MBU135 | 3.3 | 3.3 | 260 | 74% |
| MBU131 | 2.97 - 3.63 | 5 | 200 | 77% |
| MBU105 | 5 (4.5 - 5.5) | 3.3 | 260 | 72% |
| MBU101 | | 5 | 200 | 69% |
| MBU102 | | 9 | 110 | 76% |
| MBU103 | | 12 | 84 | 77% |
| MBU104 | | 15 | 67 | 78% |
| MBU111 | 12 (10.8 - 13.2) | 5 | 200 | 71% |
| MBU112 | | 9 | 110 | 77% |
| MBU113 | | 12 | 84 | 79% |
| MBU114 | | 15 | 67 | 80% |
| MBU121 | 24 (21.6 - 26.4) | 5 | 200 | 70% |
| MBU122 | | 9 | 110 | 76% |
| MBU123 | | 12 | 84 | 79% |
| MBU124 | | 15 | 67 | 79% |

Mechanical Dimensions

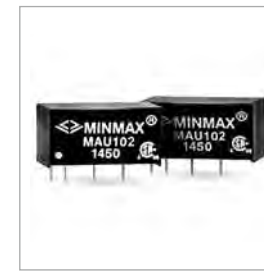


Pin Connections

| Pin | Function |
|-----|----------|
| 1 | -Vin |
| 2 | +Vin |
| 3 | -Vout |
| 4 | +Vout |

T: 6.1[0.24] for 3.3V & 5V & 12V Input Models
T: 7.1[0.28] for 24V Input Models

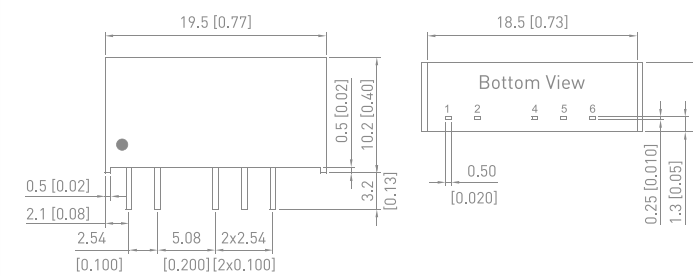
MAU100 Series | 1W



- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- I/O Isolation 1000 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- UL/cUL/IEC/EN 60950-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency | |
|--------------|---------------------|----------------------|---------------------|------------|-----|
| MAU101 | 5 (4.5 - 5.5) | 3.3 | 260 | 73% | |
| MAU102 | | 5 | 200 | 71% | |
| MAU103 | | 9 | 110 | 76% | |
| MAU104 | | 12 | 84 | 78% | |
| MAU105 | | 15 | 67 | 78% | |
| MAU106 | 12 (10.8 - 13.2) | ±5 | ±100 | 72% | |
| MAU107 | | ±9 | ±56 | 77% | |
| MAU108 | | ±12 | ±42 | 78% | |
| MAU109 | | ±15 | ±34 | 79% | |
| MAU111 | 15 (13.5 - 16.5) | 3.3 | 260 | 74% | |
| MAU112 | | 5 | 200 | 73% | |
| MAU113 | | 9 | 110 | 78% | |
| MAU114 | | 12 | 84 | 80% | |
| MAU115 | 24 (21.6 - 26.4) | 15 | 67 | 80% | |
| MAU116 | | ±5 | ±100 | 74% | |
| MAU117 | | ±9 | ±56 | 79% | |
| MAU118 | | ±12 | ±42 | 81% | |
| MAU119 | ±15 | ±34 | 81% | | |
| MAU151 | 3.3 | 5 | 200 | 72% | |
| MAU152 | | 12 | 84 | 79% | |
| MAU153 | | 15 | 67 | 79% | |
| MAU154 | | ±5 | ±100 | 72% | |
| MAU155 | 5 | ±12 | ±42 | 80% | |
| MAU156 | | ±15 | ±34 | 80% | |
| MAU121 | | 3.3 | 3.3 | 260 | 73% |
| MAU122 | | | 5 | 200 | 71% |
| MAU123 | 9 | | 110 | 76% | |
| MAU124 | 12 | | 84 | 78% | |
| MAU125 | 15 | 15 | 67 | 79% | |
| MAU126 | | ±5 | ±100 | 72% | |
| MAU127 | | ±9 | ±56 | 76% | |
| MAU128 | | ±12 | ±42 | 79% | |
| MAU129 | ±15 | ±34 | 80% | | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | -Vout | -Vout |
| 5 | No Pin | Common |
| 6 | +Vout | +Vout |

T: 6.1[0.24] for 5V & 12V Input Models
T: 7.1[0.28] for 24V Input Models

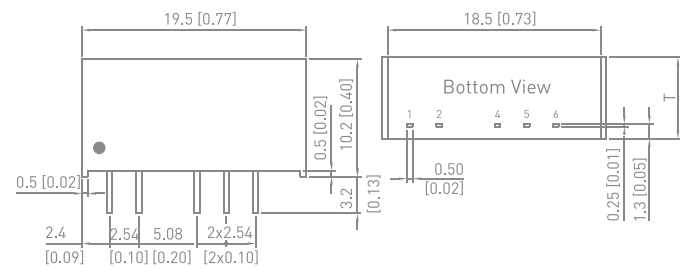
MA01 Series | 1W



- Industrial Standard SIP-7 Package
- Semi-regulated Output Voltage
- Very High Efficiency up to 88.5%
- I/O Isolation 1000 VDC
- Operating Ambient Temp. Range -40°C to +95°C
- UL/cUL/IEC/EN 60950-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MA01-05S05 | 5 (4.5 ~ 5.5) | 5 | 200 | 84% |
| MA01-05S09 | | 9 | 110 | 87% |
| MA01-05S12 | | 12 | 84 | 87% |
| MA01-05S15 | | 15 | 67 | 87.5% |
| MA01-05D05 | | ±5 | ±100 | 84.5% |
| MA01-05D09 | | ±9 | ±56 | 86% |
| MA01-05D12 | | ±12 | ±42 | 86.5% |
| MA01-05D15 | | ±15 | ±34 | 86.5% |
| MA01-12S05 | | 12 (10.8 ~ 13.2) | 5 | 200 |
| MA01-12S09 | 9 | | 110 | 86.5% |
| MA01-12S12 | 12 | | 84 | 86.5% |
| MA01-12S15 | 15 | | 67 | 88% |
| MA01-12D05 | ±5 | | ±100 | 84.5% |
| MA01-12D09 | ±9 | | ±56 | 86% |
| MA01-12D12 | ±12 | | ±42 | 88.6% |
| MA01-12D15 | ±15 | | ±34 | 87.5% |
| MA01-24S05 | 24 (21.6 ~ 26.4) | | 5 | 200 |
| MA01-24S09 | | 9 | 110 | 86.5% |
| MA01-24S12 | | 12 | 84 | 87.5% |
| MA01-24S15 | | 15 | 67 | 87.5% |
| MA01-24D05 | | ±5 | ±100 | 83.5% |
| MA01-24D09 | | ±9 | ±56 | 86% |
| MA01-24D12 | | ±12 | ±42 | 87% |
| MA01-24D15 | | ±15 | ±34 | 87% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | -Vout | -Vout |
| 5 | No Pin | Common |
| 6 | +Vout | +Vout |

T: 6.1[0.24] for 5V & 12V Input Models
T: 7.1[0.28] for 24V Input Models

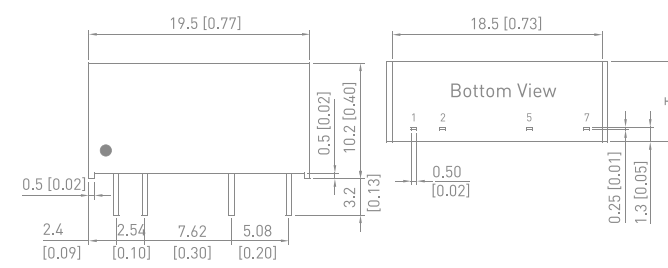
MA01H Series | 1W



- Industrial Standard SIP-7 Package
- Semi-regulated Output Voltage
- Very High Efficiency up to 88%
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +95°C
- UL/cUL/IEC/EN 60950-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MA01-05S05H | 5 (4.5 ~ 5.5) | 5 | 200 | 84% |
| MA01-05S09H | | 9 | 110 | 86.5% |
| MA01-05S12H | | 12 | 84 | 87% |
| MA01-05S15H | | 15 | 67 | 87.5% |
| MA01-12S05H | | 12 (10.8 ~ 13.2) | 5 | 200 |
| MA01-12S09H | 9 | | 110 | 86% |
| MA01-12S12H | 12 | | 84 | 88% |
| MA01-12S15H | 15 | | 67 | 88% |
| MA01-24S05H | 24 (21.6 ~ 26.4) | | 5 | 200 |
| MA01-24S09H | | 9 | 110 | 86.5% |
| MA01-24S12H | | 12 | 84 | 87.5% |
| MA01-24S15H | | 15 | 67 | 87.5% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | +Vin |
| 2 | -Vin |
| 5 | -Vout |
| 7 | +Vout |

T: 6.1[0.24] for 5V & 12V Input Models
T: 7.1[0.28] for 24V Input Models

MAU200 Series | 1W

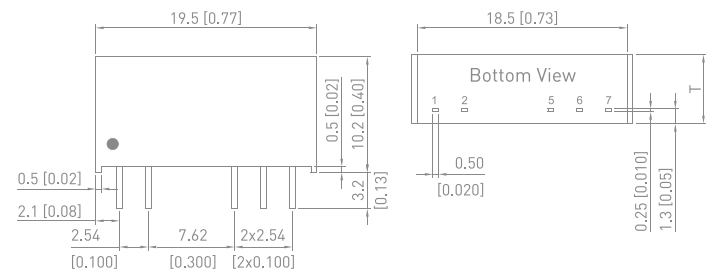


- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- I/O Isolation 3000 VDC
- Operating Ambient Temp. Range -40°C to +90°C
- UL/cUL/IEC/EN 60950-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MAU201 | 5 (4.5 - 5.5) | 3.3 | 260 | 73% |
| MAU202 | | 5 | 200 | 71% |
| MAU203 | | 9 | 110 | 76% |
| MAU204 | | 12 | 84 | 78% |
| MAU205 | | 15 | 67 | 78% |
| MAU206 | | ±5 | ±100 | 72% |
| MAU207 | | ±9 | ±56 | 77% |
| MAU208 | | ±12 | ±42 | 78% |
| MAU209 | | ±15 | ±34 | 79% |
| MAU211 | 12 (10.8 - 13.2) | 3.3 | 260 | 74% |
| MAU212 | | 5 | 200 | 73% |
| MAU213 | | 9 | 110 | 78% |
| MAU214 | | 12 | 84 | 80% |
| MAU215 | | 15 | 67 | 80% |
| MAU216 | | ±5 | ±100 | 74% |
| MAU217 | | ±9 | ±56 | 79% |
| MAU218 | | ±12 | ±42 | 81% |
| MAU219 | | ±15 | ±34 | 81% |
| MAU221 | 15 (13.5 - 16.5) | 3.3 | 260 | 73% |
| MAU222 | | 5 | 200 | 71% |
| MAU223 | | 9 | 110 | 76% |
| MAU224 | | 12 | 84 | 78% |
| MAU225 | | 15 | 67 | 79% |
| MAU226 | | ±5 | ±100 | 72% |
| MAU227 | | ±9 | ±56 | 76% |
| MAU228 | | ±12 | ±42 | 79% |
| MAU229 | | ±15 | ±34 | 80% |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

T: 6.1[0.24] for 5V & 12V Input Models
T: 7.1[0.28] for 24V Input Models

MAPU01H Series | 1W

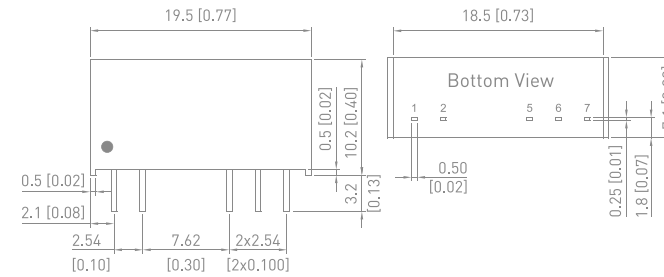


- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|-----------------|----------------------|----------------------|---------------------|------------|
| MAPU01-033S033H | 3.3 (2.97 - 3.63) | 3.3 | 300 | 77% |
| MAPU01-033S05H | | 5 | 200 | 77% |
| MAPU01-033S09H | | 9 | 110 | 78% |
| MAPU01-033S12H | | 12 | 84 | 80% |
| MAPU01-033S15H | | 15 | 68 | 79% |
| MAPU01-033D05H | | ±5 | ±100 | 77% |
| MAPU01-033D12H | | ±12 | ±42 | 79% |
| MAPU01-033D15H | | ±15 | ±34 | 79% |
| MAPU01-05S033H | | 5 (4.5 - 5.5) | 3.3 | 300 |
| MAPU01-05S05H | 5 | | 200 | 78% |
| MAPU01-05S09H | 9 | | 110 | 81% |
| MAPU01-05S12H | 12 | | 84 | 82% |
| MAPU01-05S15H | 15 | | 68 | 83% |
| MAPU01-05D05H | ±5 | | ±100 | 81% |
| MAPU01-05D12H | ±12 | | ±42 | 81% |
| MAPU01-05D15H | ±15 | | ±34 | 81% |
| MAPU01-12S033H | 12 (10.8 - 13.2) | | 3.3 | 300 |
| MAPU01-12S05H | | 5 | 200 | 80% |
| MAPU01-12S09H | | 9 | 110 | 82% |
| MAPU01-12S12H | | 12 | 84 | 84% |
| MAPU01-12S15H | | 15 | 68 | 83% |
| MAPU01-12D05H | | ±5 | ±100 | 81% |
| MAPU01-12D12H | | ±12 | ±42 | 82% |
| MAPU01-12D15H | | ±15 | ±34 | 82% |
| MAPU01-24S033H | | 24 (21.6 - 26.4) | 3.3 | 300 |
| MAPU01-24S05H | 5 | | 200 | 81% |
| MAPU01-24S09H | 9 | | 110 | 79% |
| MAPU01-24S12H | 12 | | 84 | 82% |
| MAPU01-24S15H | 15 | | 68 | 82% |
| MAPU01-24D05H | ±5 | | ±100 | 80% |
| MAPU01-24D12H | ±12 | | ±42 | 81% |
| MAPU01-24D15H | ±15 | | ±34 | 80% |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

To order the converter for another type pin, please refer to the datasheet.

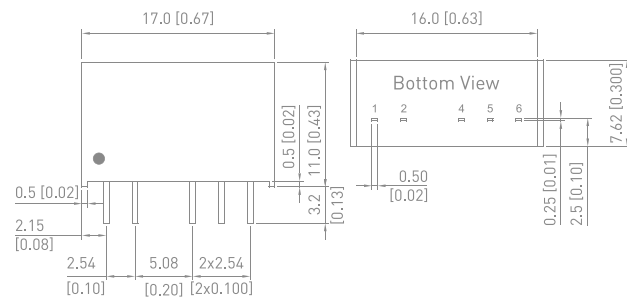
MAW01 Series | 1W



- Industrial Standard SIP-6 Package
- Wide 2 : 1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +95°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MAW01-05S05 | 5 (4.5 ~ 9) | 5 | 200 | 76% |
| MAW01-05S12 | | 12 | 83 | 77% |
| MAW01-05S15 | | 15 | 67 | 79% |
| MAW01-05S24 | | 24 | 42 | 76% |
| MAW01-05D12 | | ±12 | ±42 | 77% |
| MAW01-05D15 | | ±15 | ±33 | 78% |
| MAW01-12S05 | 12 (9 ~ 18) | 5 | 200 | 77% |
| MAW01-12S12 | | 12 | 83 | 77% |
| MAW01-12S15 | | 15 | 67 | 80% |
| MAW01-12S24 | | 24 | 42 | 77% |
| MAW01-12D12 | | ±12 | ±42 | 79% |
| MAW01-12D15 | | ±15 | ±33 | 78% |
| MAW01-24S05 | 24 (18 ~ 36) | 5 | 200 | 77% |
| MAW01-24S12 | | 12 | 83 | 80% |
| MAW01-24S15 | | 15 | 67 | 80% |
| MAW01-24S24 | | 24 | 42 | 77% |
| MAW01-24D12 | | ±12 | ±42 | 80% |
| MAW01-24D15 | | ±15 | ±33 | 80% |
| MAW01-48S05 | 48 (36 ~ 75) | 5 | 200 | 77% |
| MAW01-48S12 | | 12 | 83 | 78% |
| MAW01-48S15 | | 15 | 67 | 78% |
| MAW01-48S24 | | 24 | 42 | 76% |
| MAW01-48D12 | | ±12 | ±42 | 79% |
| MAW01-48D15 | | ±15 | ±33 | 79% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 4 | +Vout | +Vout |
| 5 | No Pin | Common |
| 6 | -Vout | -Vout |

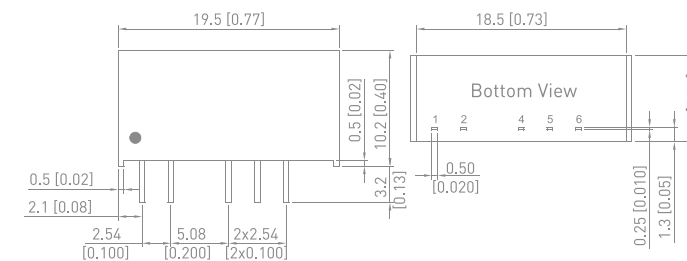
MAU300 Series 2W



- Industrial Standard SIP-7 Package
- I/O Isolation 1000 VDC
- Operating Ambient Temp. Range -40°C to +85°C

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MAU301 | 5 (4.5 ~ 5.5) | 3.3 | 500 | 73% |
| MAU303 | | 5 | 400 | 76% |
| MAU303 | | 12 | 165 | 80% |
| MAU304 | | 15 | 133 | 80% |
| MAU305 | | ±5 | ±200 | 77% |
| MAU306 | | ±12 | ±83 | 79% |
| MAU307 | | ±15 | ±66 | 79% |
| MAU311 | 12 (10.8 ~ 13.2) | 3.3 | 500 | 74% |
| MAU312 | | 5 | 400 | 78% |
| MAU313 | | 12 | 165 | 82% |
| MAU314 | | 15 | 133 | 83% |
| MAU315 | | ±5 | ±200 | 79% |
| MAU316 | | ±12 | ±83 | 82% |
| MAU317 | | ±15 | ±66 | 82% |
| MAU321 | 24 (21.6 ~ 26.4) | 3.3 | 500 | 74% |
| MAU322 | | 5 | 400 | 77% |
| MAU323 | | 12 | 165 | 81% |
| MAU324 | | 15 | 133 | 82% |
| MAU325 | | ±5 | ±200 | 79% |
| MAU326 | | ±12 | ±83 | 81% |
| MAU327 | | ±15 | ±66 | 82% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | -Vout | -Vout |
| 5 | No Pain | Common |
| 6 | +Vout | +Vout |

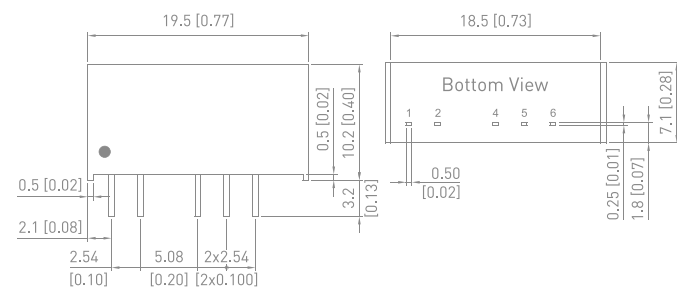
MAPU02H Series | 2W



- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Short Circuit Protection

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency | |
|----------------|---------------------|----------------------|---------------------|------------|-----|
| MAPU02-05S033H | 5 (4.5 - 5.5) | 3.3 | 500 | 74% | |
| MAPU02-05S05H | | 5 | 400 | 78% | |
| MAPU02-05S09H | | 9 | 222 | 79% | |
| MAPU02-05S12H | | 12 | 168 | 81% | |
| MAPU02-05S15H | | 15 | 132 | 80% | |
| MAPU02-05D05H | | ±5 | ±200 | 77% | |
| MAPU02-05D12H | | ±12 | ±84 | 79% | |
| MAPU02-05D15H | | ±15 | ±66 | 78% | |
| MAPU02-12S033H | | 12 (10.8 - 13.2) | 3.3 | 500 | 76% |
| MAPU02-12S05H | | | 5 | 400 | 78% |
| MAPU02-12S09H | 9 | | 222 | 80% | |
| MAPU02-12S12H | 12 | | 168 | 82% | |
| MAPU02-12S15H | 15 | | 132 | 81% | |
| MAPU02-12D05H | ±5 | | ±200 | 78% | |
| MAPU02-12D12H | ±12 | | ±84 | 81% | |
| MAPU02-12D15H | ±15 | | ±66 | 81% | |
| MAPU02-24S033H | 24 (21.6 - 26.4) | | 3.3 | 500 | 76% |
| MAPU02-24S05H | | | 5 | 400 | 78% |
| MAPU02-24S09H | | 9 | 222 | 79% | |
| MAPU02-24S12H | | 12 | 168 | 81% | |
| MAPU02-24S15H | | 15 | 132 | 79% | |
| MAPU02-24D05H | | ±5 | ±200 | 76% | |
| MAPU02-24D12H | | ±12 | ±84 | 80% | |
| MAPU02-24D15H | | ±15 | ±66 | 79% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | -Vout | -Vout |
| 5 | No Pin | Common |
| 6 | +Vout | +Vout |

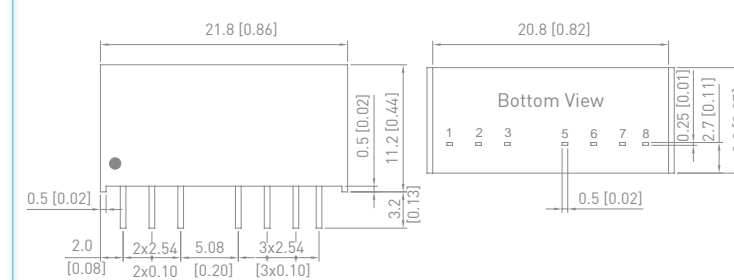
MCW1000 Series | 2W



- Industry Standard SIP-8 Package
- Wide 2 : 1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1000 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Under-Voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MCW1011 | 5 (4.5 - 9) | 3.3 | 500 | 70% |
| MCW1012 | | 5 | 400 | 73% |
| MCW1013 | | 12 | 167 | 75% |
| MCW1021 | 12 (9 - 18) | 3.3 | 500 | 73% |
| MCW1022 | | 5 | 400 | 77% |
| MCW1023 | | 12 | 167 | 80% |
| MCW1031 | 24 (18 - 36) | 3.3 | 500 | 72% |
| MCW1032 | | 5 | 400 | 77% |
| MCW1033 | | 12 | 167 | 81% |
| MCW1041 | 48 (36 - 75) | 3.3 | 500 | 71% |
| MCW1042 | | 5 | 400 | 73% |
| MCW1043 | | 12 | 167 | 79% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | -Vin |
| 2 | +Vin |
| 3 | Remote On/Off |
| 5 | NC |
| 6 | +Vout |
| 7 | -Vout |
| 8 | NC |

NC= No Connection

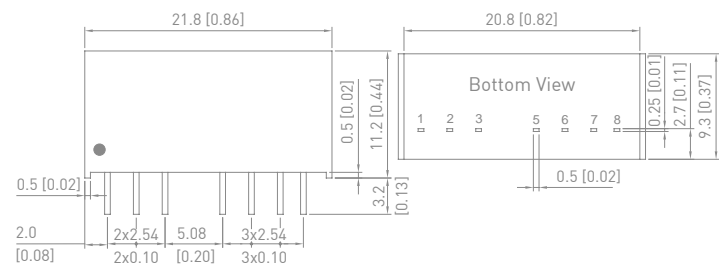
MCWI02 Series | 2W



- Industrial Standard SIP-8 Package
- Ultra-wide 4 : 1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MCWI02-12S033 | 12 (4.5 - 18) | 3.3 | 500 | 75% |
| MCWI02-12S05 | | 5 | 400 | 80% |
| MCWI02-12S12 | | 12 | 167 | 82% |
| MCWI02-12S15 | | 15 | 134 | 82% |
| MCWI02-12D05 | | ±5 | ±200 | 80% |
| MCWI02-12D12 | | ±12 | ±83 | 82% |
| MCWI02-12D15 | ±15 | ±67 | 82% | |
| MCWI02-24S033 | 24 (9 - 36) | 3.3 | 500 | 75% |
| MCWI02-24S05 | | 5 | 400 | 80% |
| MCWI02-24S12 | | 12 | 167 | 82% |
| MCWI02-24S15 | | 15 | 134 | 82% |
| MCWI02-24D05 | | ±5 | ±200 | 80% |
| MCWI02-24D12 | | ±12 | ±83 | 82% |
| MCWI02-24D15 | ±15 | ±67 | 82% | |
| MCWI02-48S033 | 48 (18 - 75) | 3.3 | 500 | 74% |
| MCWI02-48S05 | | 5 | 400 | 80% |
| MCWI02-48S12 | | 12 | 167 | 82% |
| MCWI02-48S15 | | 15 | 134 | 82% |
| MCWI02-48D05 | | ±5 | ±200 | 80% |
| MCWI02-48D12 | | ±12 | ±83 | 82% |
| MCWI02-48D15 | ±15 | ±67 | 82% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | Remote On/Off |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC= No Connection

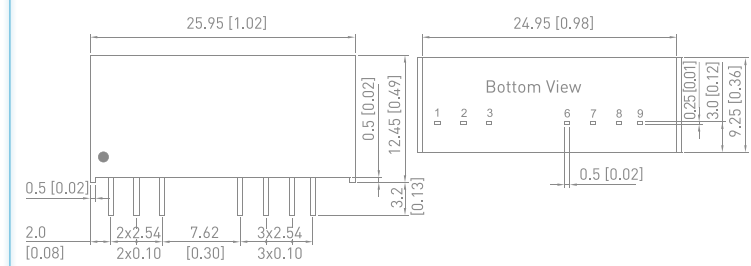
MEW1000 Series 2W



- High Power Density in SIP-9 Package
- Small Footprint: 26 x 9.2 mm (1.02" x 0.36")
- Ultra-wide 4:1 Input Range
- Fully Regulated Output
- Operating Temp. Range -40°C to +85°C
- Under-Voltage, Overload and Short Circuit Protection
- I/O-Isolation Voltage 1500 VDC
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MEW1021 | 24 (9 ~ 36) | 3.3 | 500 | 71% |
| MEW1022 | | 5 | 400 | 76% |
| MEW1023 | | 12 | 165 | 79% |
| MEW1024 | | 15 | 133 | 80% |
| MEW1025 | | ±5 | ±200 | 73% |
| MEW1026 | | ±12 | ±83 | 77% |
| MEW1027 | ±15 | ±67 | 79% | |
| MEW1031 | 48 (18 ~ 75) | 3.3 | 500 | 70% |
| MEW1032 | | 5 | 400 | 72% |
| MEW1033 | | 12 | 165 | 78% |
| MEW1034 | | 15 | 133 | 78% |
| MEW1035 | | ±5 | ±200 | 70% |
| MEW1036 | | ±12 | ±83 | 76% |
| MEW1037 | ±15 | ±67 | 76% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | +Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | Remote On/Off |
| 6 | +Vout | +Vout |
| 7 | NC | Common |
| 8 | NC | NC |
| 9 | -Vout | -Vout |

NC= No Connection

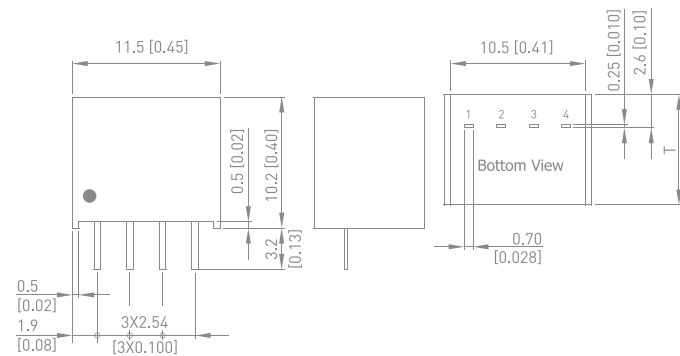
MBSU03 Series | 3W



- Industrial Standard SIP-4 Package
- Unregulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Short Circuit Protection

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MBSU03-05S05 | 5 (4.5 - 5.5) | 5 | 600 | 79% |
| MBSU03-05S12 | | 12 | 250 | 83% |
| MBSU03-05S15 | | 15 | 200 | 84% |
| MBSU03-12S05 | 12 (10.8 - 13.2) | 5 | 600 | 81% |
| MBSU03-12S12 | | 12 | 250 | 85% |
| MBSU03-12S15 | | 15 | 200 | 85% |
| MBSU03-24S05 | 24 (21.6 - 26.4) | 5 | 600 | 82% |
| MBSU03-24S12 | | 12 | 250 | 86% |
| MBSU03-24S15 | | 15 | 200 | 86% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | -Vin |
| 2 | +Vin |
| 3 | -Vout |
| 4 | +Vout |

T: 8.6 [0.34] for 5V & 12V Input Models
T: 9.6[0.38] for 24V Input Models

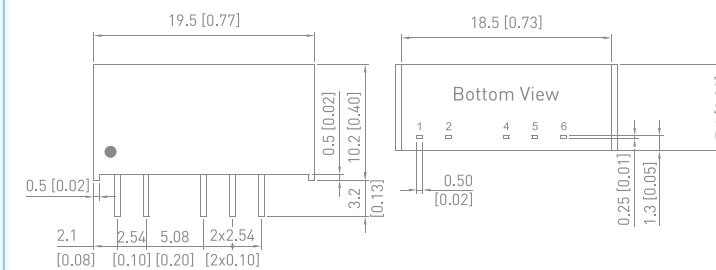
MA03 Series 3W



- Industrial Standard SIP-7 Package
- Semi-regulated Output Voltage
- Very High Efficiency up to 89%
- High I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +95°C
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MA03-05S05 | 5 (4.5 ~ 5.5) | 5 | 600 | 83% |
| MA03-05S09 | | 9 | 333 | 87% |
| MA03-05S12 | | 12 | 250 | 85.5% |
| MA03-05S15 | 12 (10.8 ~ 13.2) | 15 | 200 | 87.5% |
| MA03-12S05 | | 5 | 600 | 84% |
| MA03-12S09 | | 9 | 333 | 87.5% |
| MA03-12S12 | 12 (10.8 ~ 13.2) | 12 | 250 | 88% |
| MA03-12S15 | | 15 | 200 | 89% |
| MA03-24S05 | | 24 (21.6 ~ 26.4) | 5 | 600 |
| MA03-24S09 | 9 | | 333 | 85% |
| MA03-24S12 | 12 | | 250 | 85.5% |
| MA03-24S15 | 15 | | 200 | 85% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | +Vin |
| 2 | -Vin |
| 4 | -Vout |
| 5 | No Pin |
| 6 | +Vout |

NC= No Connection

MCW03 Series | 3W

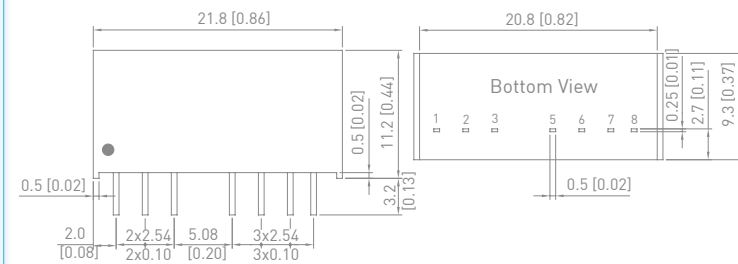


- Compact SIP-8 Package
- Wide 2 : 1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1600 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MCW03-05S033 | 5 (4.5 - 9) | 3.3 | 700 | 71% |
| MCW03-05S05 | | 5 | 600 | 73% |
| MCW03-05S12 | | 12 | 250 | 79% |
| MCW03-05S15 | | 15 | 200 | 79% |
| MCW03-05D05 | | ±5 | ±300 | 74% |
| MCW03-05D12 | | ±12 | ±125 | 79% |
| MCW03-05D15 | ±15 | ±100 | 79% | |
| MCW03-12S033 | 12 (9 - 18) | 3.3 | 700 | 75% |
| MCW03-12S05 | | 5 | 600 | 78% |
| MCW03-12S12 | | 12 | 250 | 83% |
| MCW03-12S15 | | 15 | 200 | 83% |
| MCW03-12D05 | | ±5 | ±300 | 79% |
| MCW03-12D12 | | ±12 | ±125 | 83% |
| MCW03-12D15 | ±15 | ±100 | 83% | |
| MCW03-24S033 | 24 (18 - 36) | 3.3 | 700 | 75% |
| MCW03-24S05 | | 5 | 600 | 78% |
| MCW03-24S12 | | 12 | 250 | 83% |
| MCW03-24S15 | | 15 | 200 | 83% |
| MCW03-24D05 | | ±5 | ±300 | 80% |
| MCW03-24D12 | | ±12 | ±125 | 83% |
| MCW03-24D15 | ±15 | ±100 | 83% | |
| MCW03-48S033 | 48 (36 - 75) | 3.3 | 700 | 75% |
| MCW03-48S05 | | 5 | 600 | 78% |
| MCW03-48S12 | | 12 | 250 | 83% |
| MCW03-48S15 | | 15 | 200 | 83% |
| MCW03-48D05 | | ±5 | ±300 | 80% |
| MCW03-48D12 | | ±12 | ±125 | 83% |
| MCW03-48D15 | ±15 | ±100 | 83% | |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | Remote On/Off |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC= No Connection

MCWI03 Series | 3W

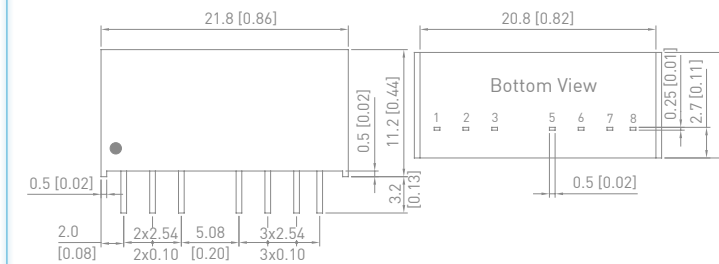


- Compact SIP-8 Package
- Ultra-wide 4 : 1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1600 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Remote On/Off Control

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MCWI03-12S033 | 12 (4.5 - 18) | 3.3 | 700 | 74% |
| MCWI03-12S05 | | 5 | 600 | 78% |
| MCWI03-12S12 | | 12 | 250 | 80% |
| MCWI03-12S15 | | 15 | 200 | 80% |
| MCWI03-12D05 | | ±5 | ±300 | 80% |
| MCWI03-12D12 | | ±12 | ±125 | 80% |
| MCWI03-12D15 | ±15 | ±100 | 80% | |
| MCWI03-24S033 | 24 (9 - 36) | 3.3 | 700 | 75% |
| MCWI03-24S05 | | 5 | 600 | 80% |
| MCWI03-24S12 | | 12 | 250 | 81% |
| MCWI03-24S15 | | 15 | 200 | 81% |
| MCWI03-24D05 | | ±5 | ±300 | 79% |
| MCWI03-24D12 | | ±12 | ±125 | 80% |
| MCWI03-24D15 | ±15 | ±100 | 81% | |
| MCWI03-48S033 | 48 (18 - 75) | 3.3 | 700 | 74% |
| MCWI03-48S05 | | 5 | 600 | 79% |
| MCWI03-48S12 | | 12 | 250 | 79% |
| MCWI03-48S15 | | 15 | 200 | 79% |
| MCWI03-48D05 | | ±5 | ±300 | 79% |
| MCWI03-48D12 | | ±12 | ±125 | 79% |
| MCWI03-48D15 | ±15 | ±100 | 80% | |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | Remote On/Off |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC= No Connection

MCW04 Series | 4W

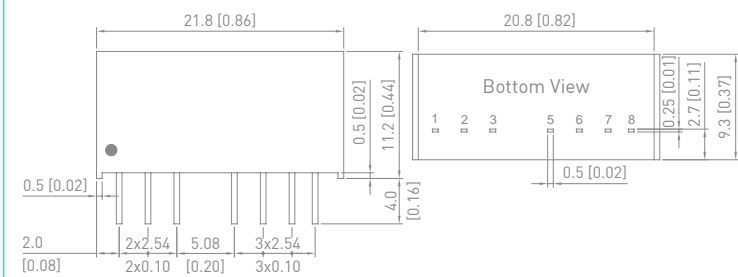


- Compact SIP-8 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1600 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1 Safety Approval, CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MCW04-12S05 | 12 (9 - 18) | 5 | 800 | 82% |
| MCW04-12S12 | | 12 | 333 | 87% |
| MCW04-12S15 | | 15 | 266 | 86% |
| MCW04-12S24 | | 24 | 166 | 86% |
| MCW04-12D12 | | ±12 | ±166 | 85% |
| MCW04-12D15 | | ±15 | ±133 | 86% |
| MCW04-24S05 | 24 (18 - 36) | 5 | 800 | 81% |
| MCW04-24S12 | | 12 | 333 | 86% |
| MCW04-24S15 | | 15 | 266 | 86% |
| MCW04-24S24 | | 24 | 166 | 86% |
| MCW04-24D12 | | ±12 | ±166 | 86% |
| MCW04-24D15 | | ±15 | ±133 | 85% |
| MCW04-48S05 | 48 (36 - 75) | 5 | 800 | 80% |
| MCW04-48S12 | | 12 | 333 | 85% |
| MCW04-48S15 | | 15 | 266 | 83% |
| MCW04-48S24 | | 24 | 166 | 86% |
| MCW04-48D12 | | ±12 | ±166 | 84% |
| MCW04-48D15 | | ±15 | ±133 | 85% |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | Remote On/Off |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC= No Connection

MCWI04 Series | 4W

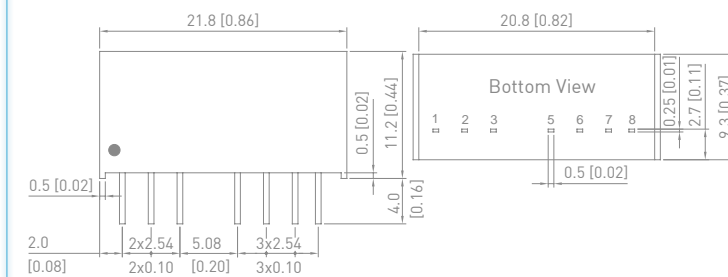


- Compact SIP-8 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1600 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1 Safety Approval, CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MCWI04-24S05 | 24 (9 - 36) | 5 | 800 | 79 |
| MCWI04-24S12 | | 12 | 333 | 83 |
| MCWI04-24S15 | | 15 | 266 | 83 |
| MCWI04-24S24 | | 24 | 166 | 83 |
| MCWI04-24D12 | | ±12 | ±166 | 83 |
| MCWI04-24D15 | | ±15 | ±133 | 83 |
| MCWI04-48S05 | 48 (18 - 75) | 5 | 800 | 78 |
| MCWI04-48S12 | | 12 | 333 | 82 |
| MCWI04-48S15 | | 15 | 266 | 82 |
| MCWI04-48S24 | | 24 | 166 | 82 |
| MCWI04-48D12 | | ±12 | ±166 | 82 |
| MCWI04-48D15 | | ±15 | ±133 | 82 |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | Remote On/Off |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC= No Connection

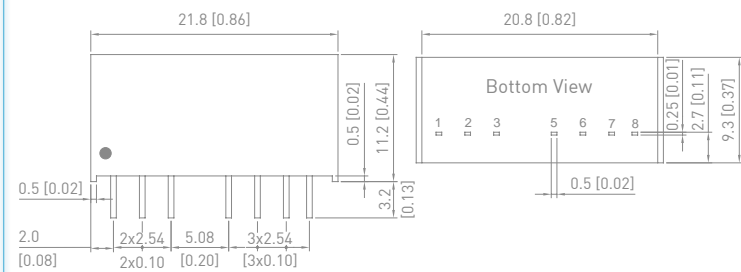
MCWI05 Series | 5W



- Smallest Encapsulated 5W Converter
- Ultra-compact SIP-8 Package
- Ultra-wide 4 : 1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +75°C
- No Min. Load Requirement
- Under-Voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MCWI05-12S033 | 12 (4.5 - 18) | 3.3 | 1,075 | 76% |
| MCWI05-12S05 | | 5 | 1,000 | 81% |
| MCWI05-12S12 | | 12 | 417 | 83% |
| MCWI05-12S15 | | 15 | 334 | 83% |
| MCWI05-12S24 | | 24 | 209 | 82% |
| MCWI05-12D12 | | ±12 | ±209 | 81% |
| MCWI05-12D15 | ±15 | ±167 | 82% | |
| MCWI05-24S033 | 24 (9 - 36) | 3.3 | 1,075 | 76% |
| MCWI05-24S05 | | 5 | 1,000 | 81% |
| MCWI05-24S12 | | 12 | 417 | 83% |
| MCWI05-24S15 | | 15 | 334 | 84% |
| MCWI05-24S24 | | 24 | 209 | 83% |
| MCWI05-24D12 | | ±12 | ±209 | 82% |
| MCWI05-24D15 | ±15 | ±167 | 82% | |
| MCWI05-48S033 | 48 (18 - 75) | 3.3 | 1,075 | 76% |
| MCWI05-48S05 | | 5 | 1,000 | 80% |
| MCWI05-48S12 | | 12 | 417 | 83% |
| MCWI05-48S15 | | 15 | 334 | 84% |
| MCWI05-48S24 | | 24 | 209 | 82% |
| MCWI05-48D12 | | ±12 | ±209 | 82% |
| MCWI05-48D15 | ±15 | ±167 | 83% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | Remote On/Off |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC= No Connection

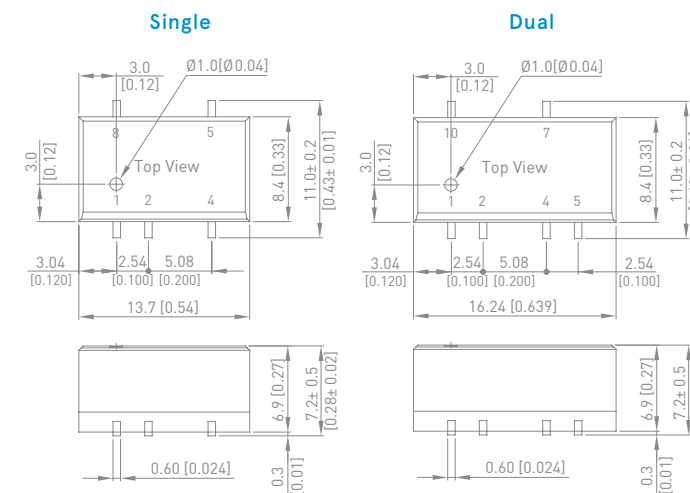
MSLU100 Series | 1W



- Industrial SMD Package
 - Unregulated Output Voltage
 - I/O Isolation 1500 VDC
 - Operating Ambient Temp. Range -40°C to +90°C
 - Cleaning-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
 - UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MSLU101 | 5 (4.5 - 5.5) | 3.3 | 300 | 73% |
| MSLU102 | | 5 | 200 | 78% |
| MSLU103 | | 9 | 110 | 78% |
| MSLU104 | | 12 | 84 | 78% |
| MSLU105 | | 15 | 67 | 79% |
| MSLU106 | | ±5 | ±100 | 74% |
| MSLU108 | ±12 | ±42 | 78% | |
| MSLU109 | ±15 | ±33 | 78% | |
| MSLU111 | 12 (10.8 - 13.2) | 3.3 | 300 | 74% |
| MSLU112 | | 5 | 200 | 76% |
| MSLU113 | | 9 | 110 | 78% |
| MSLU114 | | 12 | 84 | 79% |
| MSLU115 | | 15 | 67 | 80% |
| MSLU116 | | ±5 | ±100 | 74% |
| MSLU118 | ±12 | ±42 | 78% | |
| MSLU119 | ±15 | ±33 | 79% | |
| MSLU154 | 15 (13.5 - 16.5) | 12 | 84 | 78% |
| MSLU155 | | 15 | 67 | 78% |
| MSLU121 | 24 (21.6 - 26.4) | 3.3 | 300 | 72% |
| MSLU122 | | 5 | 200 | 78% |
| MSLU123 | | 9 | 110 | 77% |
| MSLU124 | | 12 | 84 | 77% |
| MSLU125 | | 15 | 67 | 79% |
| MSLU126 | | ±5 | ±100 | 73% |
| MSLU128 | ±12 | ±42 | 78% | |
| MSLU129 | ±15 | ±33 | 78% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | No Pin | No Pin |
| 4 | -Vout | Common |
| 5 | +Vout | -Vout |
| 6 | No Pin | No Pin |
| 7 | No Pin | +Vout |
| 8 | NA | No Pin |
| 9 | --- | No Pin |
| 10 | --- | NA |

NA : Not Available for Electrical Connection

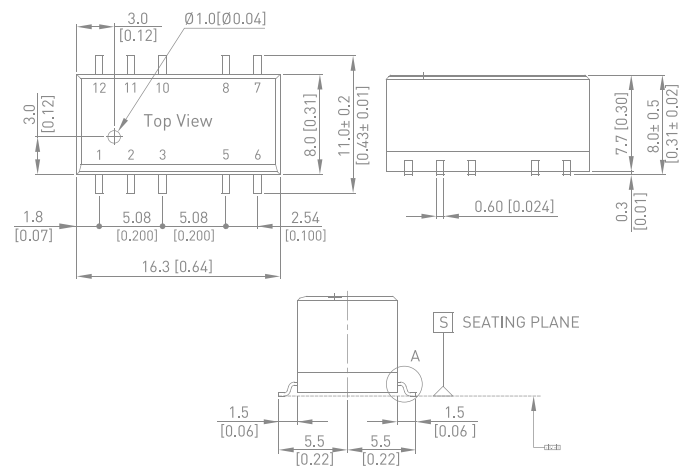
MSLU300 Series | 1W



- Industrial SMD Package
 - Unregulated Output Voltage
 - I/O Isolation 3000 VDC
 - Operating Ambient Temp. Range -40°C to +90°C
 - Cleaning-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency | |
|--------------|---------------------|----------------------|---------------------|------------|-----|
| MSLU301 | 5 (4.5 - 5.5) | 3.3 | 260 | 72% | |
| MSLU302 | | 5 | 200 | 75% | |
| MSLU304 | | 12 | 84 | 79% | |
| MSLU305 | | 15 | 67 | 80% | |
| MSLU306 | | ±5 | ±100 | 75% | |
| MSLU308 | | ±12 | ±42 | 79% | |
| MSLU309 | | ±15 | ±34 | 80% | |
| MSLU311 | | 12 (10.8 - 13.2) | 3.3 | 260 | 73% |
| MSLU312 | | | 5 | 200 | 76% |
| MSLU314 | 12 | | 84 | 80% | |
| MSLU315 | 15 | | 67 | 81% | |
| MSLU316 | ±5 | | ±100 | 76% | |
| MSLU318 | ±12 | | ±42 | 80% | |
| MSLU319 | ±15 | | ±34 | 80% | |
| MSLU321 | 24 (21.6 - 26.4) | | 3.3 | 260 | 70% |
| MSLU322 | | | 5 | 200 | 73% |
| MSLU324 | | 12 | 84 | 79% | |
| MSLU325 | | 15 | 67 | 79% | |
| MSLU326 | | ±5 | ±100 | 73% | |
| MSLU328 | | ±12 | ±42 | 79% | |
| MSLU329 | | ±15 | ±34 | 79% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|----------|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | NA | NA |
| 5 | -Vout | Common |
| 6 | NA | -Vout |
| 7 | NA | NA |
| 8 | +Vout | +Vout |
| 10,11,12 | NA | NA |

NA : Not Available for Electrical Connection

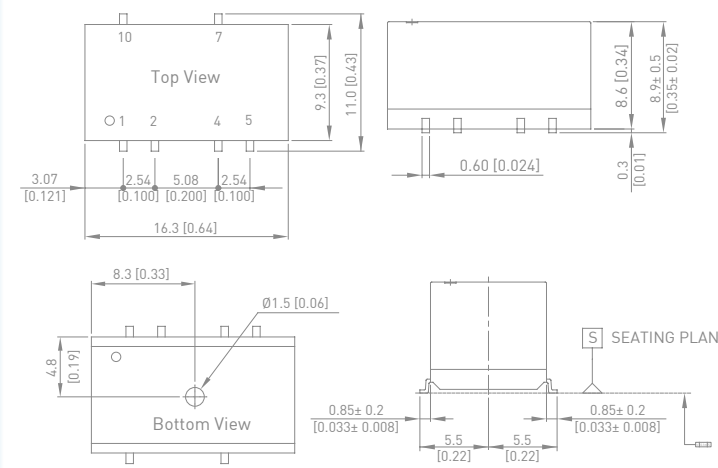
MSPU01H Series | 1W



- Industrial SMD Package
 - Unregulated Output Voltage
 - I/O Isolation 3000 VDC
 - Operating Ambient Temp. Range -40°C to +85°C
 - Overload and Short Circuit Protection
 - Cleaning-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
 - UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency | |
|-----------------|----------------------|----------------------|---------------------|------------|-----|
| MSPU01-033S033H | 3.3 (2.97 - 3.63) | 3.3 | 300 | 77% | |
| MSPU01-033S05H | | 5 | 200 | 79% | |
| MSPU01-033S12H | | 12 | 84 | 81% | |
| MSPU01-033S15H | | 15 | 67 | 80% | |
| MSPU01-033D05H | | ±5 | ±100 | 79% | |
| MSPU01-033D12H | | ±12 | ±42 | 81% | |
| MSPU01-033D15H | | ±15 | ±33 | 80% | |
| MSPU01-05S033H | | 5 (4.5 - 5.5) | 3.3 | 300 | 79% |
| MSPU01-05S05H | | | 5 | 200 | 82% |
| MSPU01-05S12H | 12 | | 84 | 84% | |
| MSPU01-05S15H | 15 | | 67 | 85% | |
| MSPU01-05D05H | ±5 | | ±100 | 82% | |
| MSPU01-05D12H | ±12 | | ±42 | 84% | |
| MSPU01-05D15H | ±15 | | ±33 | 84% | |
| MSPU01-12S033H | 12 (10.8 - 13.2) | | 3.3 | 300 | 78% |
| MSPU01-12S05H | | | 5 | 200 | 81% |
| MSPU01-12S12H | | 12 | 84 | 83% | |
| MSPU01-12S15H | | 15 | 67 | 83% | |
| MSPU01-12D05H | | ±5 | ±100 | 82% | |
| MSPU01-12D12H | | ±12 | ±42 | 83% | |
| MSPU01-12D15H | | ±15 | ±33 | 83% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | No Pin | No Pin |
| 4 | -Vout | Common |
| 5 | NC | -Vout |
| 6 | No Pin | No Pin |
| 7 | +Vout | +Vout |
| 8 | No Pin | No Pin |
| 9 | No Pin | No Pin |
| 10 | NC | NC |

NC: No Connection

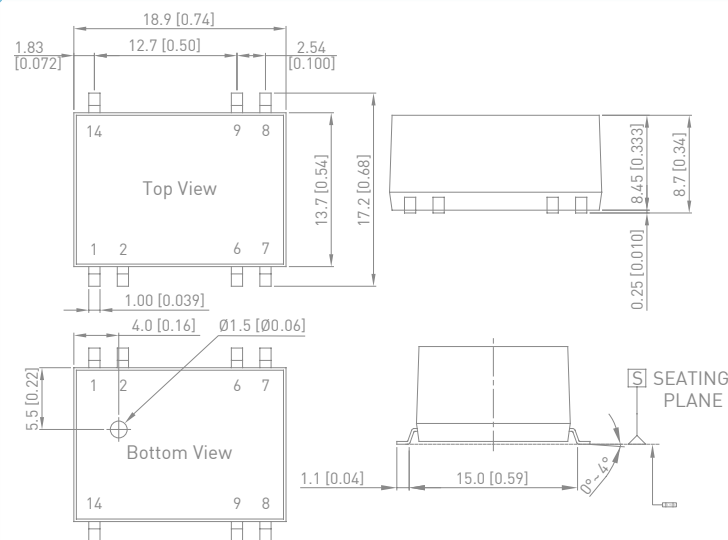
MSCW01 Series | 1W



- Industrial SMD Package
 - Wide 2:1 Input Voltage Range
 - Fully Regulated Output Voltage
 - I/O Isolation 1500 VDC
 - Operating Ambient Temp. Range -40°C to +85°C
 - No Min. Load Requirement
 - Overload and Short Circuit Protection
 - Remote On/Off Function
 - Water-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
 - UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MSCW01-05S05 | 5 (4.5 - 9) | 5 | 200 | 78% |
| MSCW01-05S12 | | 12 | 83 | 79% |
| MSCW01-05S15 | | 15 | 67 | 81% |
| MSCW01-05D12 | | ±12 | ±42 | 79% |
| MSCW01-05D15 | | ±15 | ±33 | 80% |
| MSCW01-12S05 | 12 (9 - 18) | 5 | 200 | 79% |
| MSCW01-12S12 | | 12 | 83 | 79% |
| MSCW01-12S15 | | 15 | 67 | 82% |
| MSCW01-12D12 | | ±12 | ±42 | 81% |
| MSCW01-12D15 | ±15 | ±33 | 80% | |
| MSCW01-24S05 | 24 (18 - 36) | 5 | 200 | 79% |
| MSCW01-24S12 | | 12 | 83 | 82% |
| MSCW01-24S15 | | 15 | 67 | 82% |
| MSCW01-24D12 | | ±12 | ±42 | 82% |
| MSCW01-24D15 | | ±15 | ±33 | 82% |
| MSCW01-48S05 | 48 (36 - 75) | 5 | 200 | 79% |
| MSCW01-48S12 | | 12 | 83 | 80% |
| MSCW01-48S15 | | 15 | 67 | 80% |
| MSCW01-48D12 | | ±12 | ±42 | 81% |
| MSCW01-48D15 | | ±15 | ±33 | 81% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | Remote On/Off | Remote On/Off |
| 6 | NC | Common |
| 7 | NC | -Vout |
| 8 | +Vout | +Vout |
| 9 | -Vout | Common |
| 14 | +Vin | +Vin |

NC= No Connection

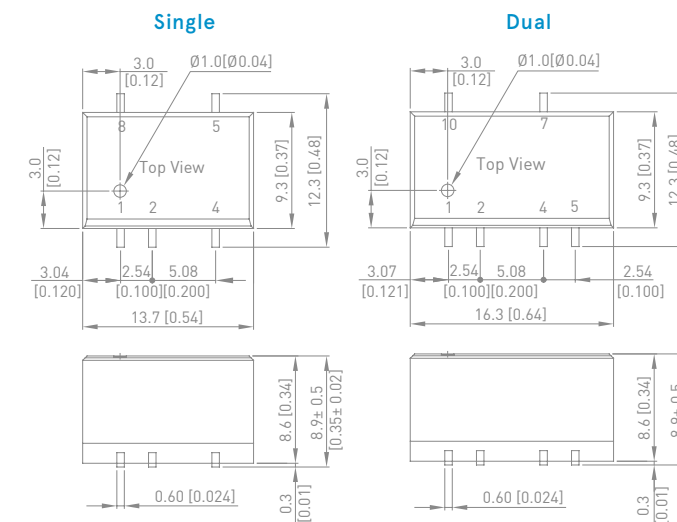
MSLU400 Series | 2W



- Industrial SMD Package
 - Unregulated Output Voltage
 - I/O Isolation 1500 VDC
 - Operating Ambient Temp. Range -40°C to +92.5°C
 - Cleaning-washable Process Available (option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MSLU401 | 5 (4.5 ~ 5.5) | 3.3 | 500 | 70% |
| MSLU402 | | 5 | 400 | 73% |
| MSLU404 | | 12 | 165 | 77% |
| MSLU406 | | ±5 | ±200 | 74% |
| MSLU408 | | ±12 | ±83 | 76% |
| MSLU409 | ±15 | ±66 | 76% | |
| MSLU411 | 12 (10.8 ~ 13.2) | 3.3 | 500 | 72% |
| MSLU412 | | 5 | 400 | 75% |
| MSLU414 | | 12 | 165 | 79% |
| MSLU418 | | ±12 | ±83 | 80% |
| MSLU419 | ±15 | ±66 | 80% | |
| MSLU421 | 24 (21.6 ~ 26.4) | 3.3 | 500 | 72% |
| MSLU422 | | 5 | 400 | 75% |
| MSLU424 | | 12 | 165 | 79% |
| MSLU428 | | ±12 | ±83 | 79% |
| MSLU429 | | ±15 | ±66 | 79% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 4 | -Vout | Common |
| 5 | +Vout | -Vout |
| 7 | No Pin | +Vout |
| 8 | NA | No Pin |
| 10 | No Pin | NA |

NA : Not Available for Electrical Connection

MSDW1000 Series | 2W

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MSDW1011 | 5 (4.5 - 9) | 3.3 | 500 | 70% |
| MSDW1012 | | 5 | 400 | 73% |
| MSDW1013 | | 12 | 167 | 75% |
| MSDW1014 | | 15 | 134 | 73% |
| MSDW1015 | | ±5 | ±200 | 64% |
| MSDW1016 | | ±12 | ±83 | 69% |
| MSDW1017 | | ±15 | ±67 | 71% |
| MSDW1021 | 12 (9 - 18) | 3.3 | 500 | 73% |
| MSDW1022 | | 5 | 400 | 77% |
| MSDW1023 | | 12 | 167 | 80% |
| MSDW1024 | | 15 | 134 | 80% |
| MSDW1025 | | ±5 | ±200 | 73% |
| MSDW1026 | | ±12 | ±83 | 78% |
| MSDW1027 | | ±15 | ±67 | 78% |
| MSDW1031 | 24 (18 - 36) | 3.3 | 500 | 72% |
| MSDW1032 | | 5 | 400 | 77% |
| MSDW1033 | | 12 | 167 | 80% |
| MSDW1034 | | 15 | 134 | 81% |
| MSDW1035 | | ±5 | ±200 | 74% |
| MSDW1036 | | ±12 | ±83 | 78% |
| MSDW1037 | | ±15 | ±67 | 80% |
| MSDW1041 | 48 (36 - 75) | 3.3 | 500 | 71% |
| MSDW1042 | | 5 | 400 | 73% |
| MSDW1043 | | 12 | 167 | 79% |
| MSDW1044 | | 15 | 134 | 79% |
| MSDW1045 | | ±5 | ±200 | 71% |
| MSDW1046 | | ±12 | ±83 | 77% |
| MSDW1047 | | ±15 | ±67 | 77% |



- Industrial SMD Package
 - Wide 2:1 Input Voltage Range
 - Fully Regulated Output Voltage
 - I/O Isolation 1500 VDC
 - Operating Ambient Temp. Range -40°C to +85°C
 - Under-voltage and Short Circuit Protection
 - Cleaning-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
 - UL/cUL/IEC/EN 60950-1 Safety Approval

MSCWI02 Series | 2W

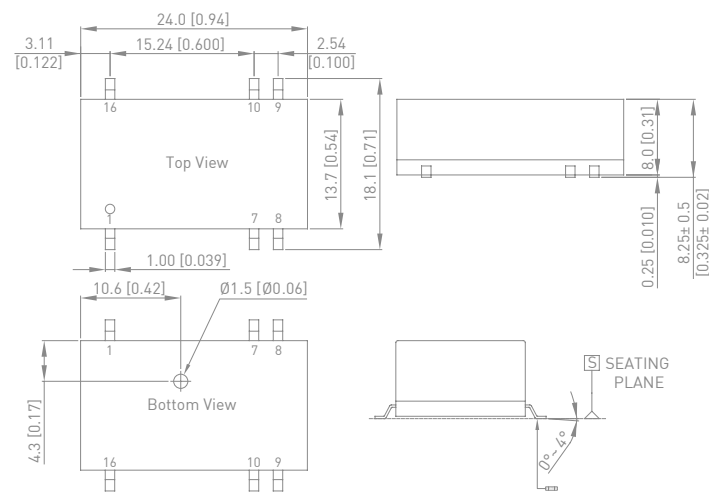
| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MSCWI02-05S05 | 5 (4.5 - 12) | 5 | 400 | 80% |
| MSCWI02-05S12 | | 12 | 167 | 84% |
| MSCWI02-05S15 | | 15 | 134 | 83% |
| MSCWI02-05S24 | | 24 | 83 | 84% |
| MSCWI02-05D12 | | ±12 | ±83 | 83% |
| MSCWI02-05D15 | | ±15 | ±67 | 82% |
| MSCWI02-24S05 | | 24 (9 - 36) | 5 | 400 |
| MSCWI02-24S12 | 12 | | 167 | 84% |
| MSCWI02-24S15 | 15 | | 134 | 85% |
| MSCWI02-24S24 | 24 | | 83 | 85% |
| MSCWI02-24D12 | ±12 | | ±83 | 83% |
| MSCWI02-24D15 | ±15 | | ±67 | 83% |
| MSCWI02-48S05 | 48 (18 - 75) | | 5 | 400 |
| MSCWI02-48S12 | | 12 | 167 | 82% |
| MSCWI02-48S15 | | 15 | 134 | 83% |
| MSCWI02-48S24 | | 24 | 83 | 84% |
| MSCWI02-48D12 | | ±12 | ±83 | 82% |
| MSCWI02-48D15 | | ±15 | ±67 | 82% |



- Very Compact SMD Package
 - Ultra-wide 4:1 Input Voltage Range
 - Fully Regulated Output Voltage
 - I/O Isolation 1500VDC
 - Operating Ambient Temp. Range -40°C to +80°C
 - No Min. Load Requirement
 - Under-voltage, Overload and Short Circuit Protection
 - Remote On/Off Control
 - EMI Emission EN55032 Class A Approved
 - Cleaning-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
 - UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

Mechanical Dimensions

Pin Connections

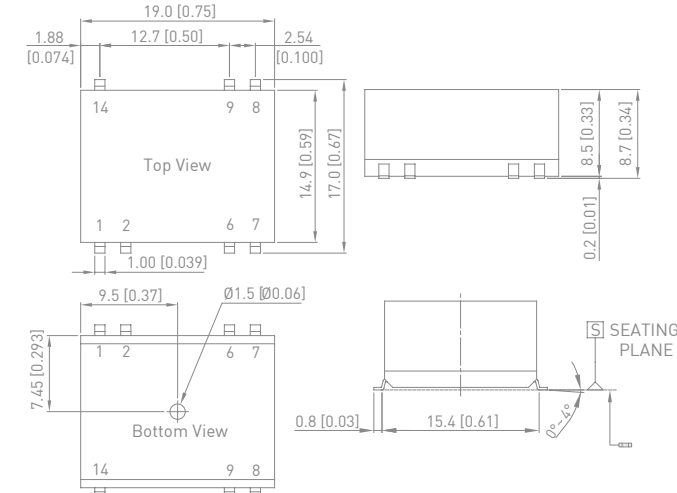


| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | Remote On/Off | Remote On/Off |
| 6 | NC | Common |
| 7 | NC | -Vout |
| 8 | +Vout | +Vout |
| 9 | -Vout | Common |
| 14 | +Vin | +Vin |

NC= No Connection

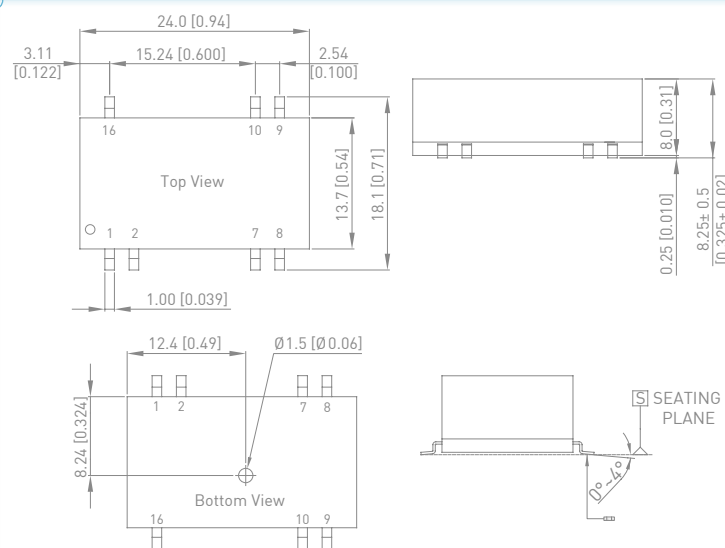
MSDWI03 Series | 3W



- Compact SMD Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- Cleaning-washable Process Available(option)
- Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDECJ-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MSDWI03-24S033 | 24 (9 ~ 36) | 3.3 | 600 | 75% |
| MSDWI03-24S05 | | 5 | 600 | 78% |
| MSDWI03-24S12 | | 12 | 250 | 80% |
| MSDWI03-24S15 | | 15 | 200 | 80% |
| MSDWI03-24S24 | | 24 | 125 | 80% |
| MSDWI03-24D05 | | ±5 | ±300 | 77% |
| MSDWI03-24D12 | | ±12 | ±125 | 80% |
| MSDWI03-24D15 | | ±15 | ±100 | 80% |
| MSDWI03-48S033 | 48 (18 ~ 75) | 3.3 | 600 | 75% |
| MSDWI03-48S05 | | 5 | 600 | 78% |
| MSDWI03-48S12 | | 12 | 250 | 80% |
| MSDWI03-48S15 | | 15 | 200 | 80% |
| MSDWI03-48S24 | | 24 | 125 | 80% |
| MSDWI03-48D05 | | ±5 | ±300 | 77% |
| MSDWI03-48D12 | | ±12 | ±125 | 80% |
| MSDWI03-48D15 | | ±15 | ±100 | 80% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | Remote On/Off | Remote On/Off |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

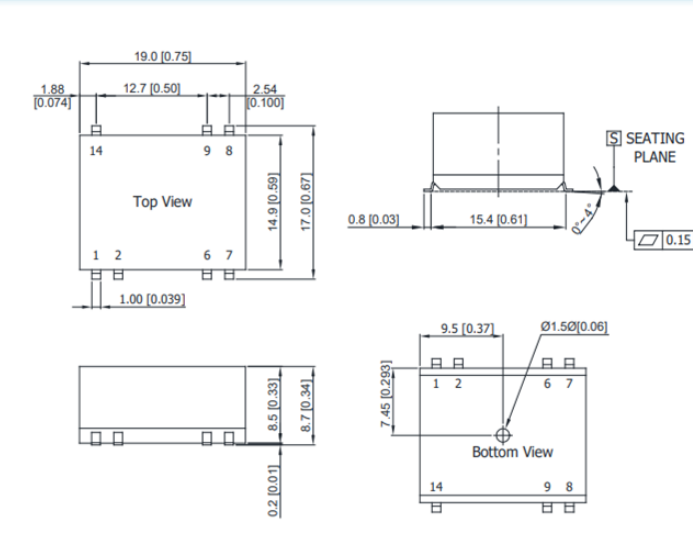
MSCWI03 Series | 3W



- Very Compact SMD Package
 - Ultra-wide 4:1 Input Voltage Range
 - Fully Regulated Output Voltage
 - I/O Isolation 1500VDC
 - Operating Ambient Temp. Range -40°C to +80°C
 - No Min. Load Requirement
 - Under-voltage, Overload and Short Circuit Protection
 - Remote On/Off Control
 - EMI Emission EN 55032 Class A Approved
 - Cleaning-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
 - UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MSCWI03-05S05 | 5 (4.5 - 12) | 5 | 600 | 81% |
| MSCWI03-05S12 | | 12 | 250 | 84% |
| MSCWI03-05S15 | | 15 | 200 | 84% |
| MSCWI03-05S24 | | 24 | 125 | 84% |
| MSCWI03-05D12 | 24 (9 - 36) | ±12 | ±125 | 83% |
| MSCWI03-05D15 | | ±15 | ±100 | 83% |
| MSCWI03-24S05 | | 5 | 600 | 80% |
| MSCWI03-24S12 | | 12 | 250 | 85% |
| MSCWI03-24S15 | | 15 | 200 | 85% |
| MSCWI03-24S24 | | 24 | 125 | 85% |
| MSCWI03-24D12 | | ±12 | ±125 | 84% |
| MSCWI03-24D15 | | ±15 | ±100 | 84% |
| MSCWI03-48S05 | 48 (18 - 75) | 5 | 600 | 80% |
| MSCWI03-48S12 | | 12 | 250 | 84% |
| MSCWI03-48S15 | | 15 | 200 | 84% |
| MSCWI03-48S24 | | 24 | 125 | 85% |
| MSCWI03-48D12 | | ±12 | ±125 | 83% |
| MSCWI03-48D15 | | ±15 | ±100 | 82% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | Remote On/Off | Remote On/Off |
| 6 | NC | Common |
| 7 | NC | -Vout |
| 8 | +Vout | +Vout |
| 9 | -Vout | Common |
| 14 | +Vin | +Vin |

NC= No Connection

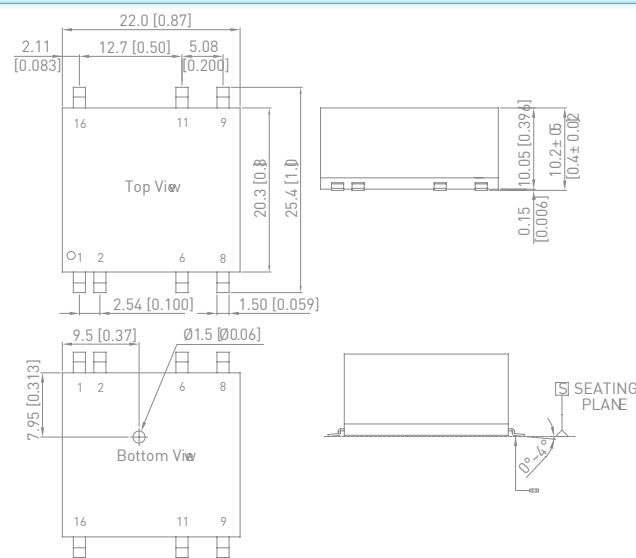
MSGWI06 Series | 6W



- Industrial SMD Package
 - Ultra-wide 4:1 Input Voltage Range
 - Fully Regulated Output Voltage
 - I/O Isolation 1500 VDC
 - Operating Ambient Temp. Range -40°C to +80°C
 - Under-voltage, Overload and Short Circuit Protection
 - Remote On/Off Control
 - Cleaning-washable Process Available(option)
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
 - UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MSGWI06-24S033 | 24 (9 - 36) | 3.3 | 1,450 | 76% |
| MSGWI06-24S05 | | 5 | 1,200 | 79% |
| MSGWI06-24S12 | | 12 | 500 | 83% |
| MSGWI06-24S15 | | 15 | 400 | 83% |
| MSGWI06-24S24 | | 24 | 250 | 83% |
| MSGWI06-24D05 | | ±5 | ±600 | 82% |
| MSGWI06-24D12 | | ±12 | ±250 | 83% |
| MSGWI06-24D15 | | ±15 | ±200 | 83% |
| MSGWI06-48S033 | 48 (18 - 75) | 3.3 | 1,450 | 76% |
| MSGWI06-48S05 | | 5 | 1,200 | 79% |
| MSGWI06-48S12 | | 12 | 500 | 83% |
| MSGWI06-48S15 | | 15 | 400 | 83% |
| MSGWI06-48S24 | | 24 | 250 | 83% |
| MSGWI06-48D05 | | ±5 | ±600 | 82% |
| MSGWI06-48D12 | | ±12 | ±250 | 83% |
| MSGWI06-48D15 | | ±15 | ±200 | 83% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 6 | NC | Common |
| 8 | NC | -Vout |
| 9 | +Vout | +Vout |
| 11 | -Vout | Common |
| 16 | +Vin | +Vin |

NC: No Connection

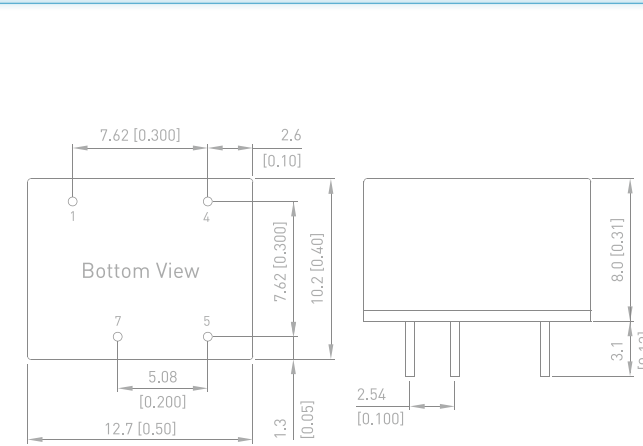
MFSU01 Series | 1W



- Industrial Standard DIP-8 Package
- Unregulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Short Circuit Protection

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MFSU01-05S05 | 5 (4.5 - 5.5) | 5 | 200 | 80% |
| MFSU01-05S12 | | 12 | 84 | 82% |
| MFSU01-05S15 | | 15 | 67 | 83% |
| MFSU01-12S05 | 12 (10.8 - 13.2) | 5 | 200 | 79% |
| MFSU01-12S12 | | 12 | 84 | 81% |
| MFSU01-12S15 | | 15 | 67 | 82% |
| MFSU01-24S05 | 24 (21.6 - 26.4) | 5 | 200 | 78% |
| MFSU01-24S12 | | 12 | 84 | 80% |
| MFSU01-24S15 | | 15 | 67 | 81% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | -Vin |
| 4 | +Vin |
| 5 | +Vout |
| 7 | -Vout |

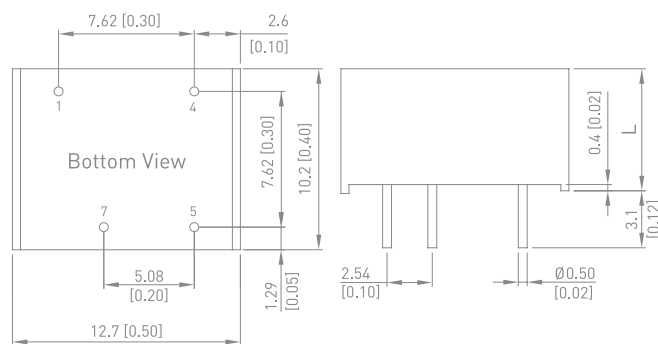
MFU100 Series | 1W



- Industrial Standard DIP-8 Package
- I/O Isolation 3000 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- UL/cUL/IEC/EN 60950-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MFU102 | 5 (4.5 ~ 5.5) | 5 | 200 | 69% |
| MFU103 | | 9 | 110 | 76% |
| MFU104 | | 12 | 84 | 77% |
| MFU105 | | 15 | 67 | 78% |
| MFU112 | | 5 | 200 | 71% |
| MFU113 | 12 (10.8 ~ 13.2) | 9 | 110 | 77% |
| MFU114 | | 12 | 84 | 79% |
| MFU115 | | 15 | 67 | 79% |
| MFU122 | | 5 | 200 | 70% |
| MFU123 | 24 (21.6 ~ 26.4) | 9 | 110 | 76% |
| MFU124 | | 12 | 84 | 79% |
| MFU125 | | 15 | 67 | 79% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | -Vin |
| 4 | +Vin |
| 5 | +Vout |
| 7 | -Vout |

L:7.0 [0.28] for 5V & 12V Input Models
L:8.0 [0.31] for 24V Input Models

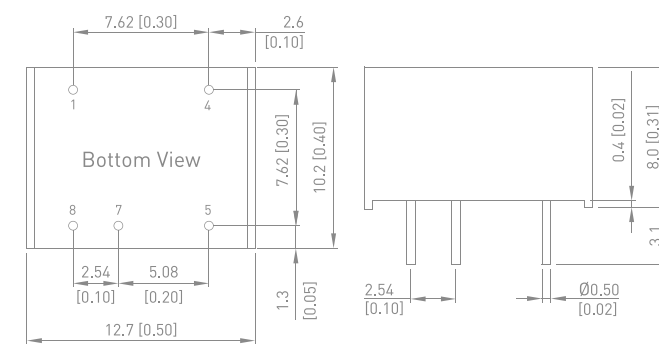
MFPU01H Series | 1W



- Industrial Standard DIP-8 Package
- Unregulated Output Voltage
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|-----------------|----------------------|----------------------|---------------------|------------|
| MFPU01-033S033H | 3.3 (2.97 - 3.63) | 3.3 | 300 | 75% |
| MFPU01-033S05H | | 5 | 200 | 79% |
| MFPU01-033S12H | | 12 | 84 | 80% |
| MFPU01-033S15H | | 15 | 67 | 81% |
| MFPU01-033D05H | | ±5 | ±100 | 78% |
| MFPU01-033D12H | | ±12 | ±42 | 80% |
| MFPU01-033D15H | ±15 | ±33 | 81% | |
| MFPU01-05S033H | 5 (4.5 - 5.5) | 3.3 | 300 | 77% |
| MFPU01-05S05H | | 5 | 200 | 80% |
| MFPU01-05S12H | | 12 | 84 | 82% |
| MFPU01-05S15H | | 15 | 67 | 83% |
| MFPU01-05D05H | | ±5 | ±100 | 80% |
| MFPU01-05D12H | | ±12 | ±42 | 83% |
| MFPU01-05D15H | ±15 | ±33 | 83% | |
| MFPU01-12S033H | 12 (10.8 - 13.2) | 3.3 | 300 | 77% |
| MFPU01-12S05H | | 5 | 200 | 79% |
| MFPU01-12S12H | | 12 | 84 | 81% |
| MFPU01-12S15H | | 15 | 67 | 82% |
| MFPU01-12D05H | | ±5 | ±100 | 80% |
| MFPU01-12D12H | | ±12 | ±42 | 82% |
| MFPU01-12D15H | ±15 | ±33 | 82% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 4 | +Vin | +Vin |
| 5 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | No Pin | -Vout |

MFW02 Series | 2W

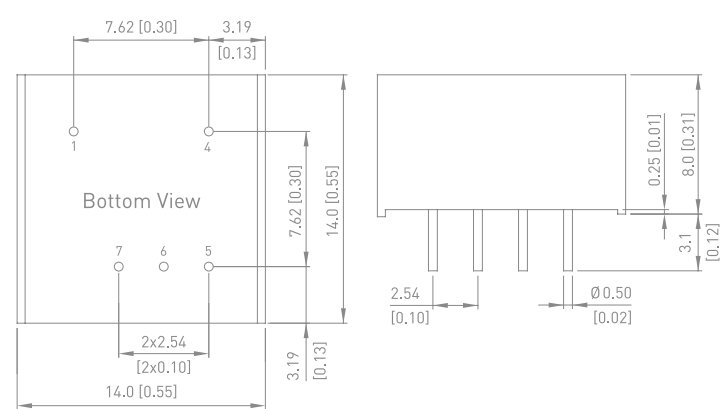


- Smallest Encapsulated 2W Converter
- Ultra-compact DIP-8 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MFW02-05S033 | 5 (4.5 - 10) | 3.3 | 400 | 79% |
| MFW02-05S05 | | 5 | 400 | 81% |
| MFW02-05S12 | | 12 | 167 | 85% |
| MFW02-05S15 | | 15 | 134 | 87% |
| MFW02-05D05 | | ±5 | ±200 | 83% |
| MFW02-05D12 | | ±12 | ±83 | 85% |
| MFW02-05D15 | | ±15 | ±67 | 85% |
| MFW02-12S033 | 12 (9 - 18) | 3.3 | 400 | 80% |
| MFW02-12S05 | | 5 | 400 | 83% |
| MFW02-12S12 | | 12 | 167 | 87% |
| MFW02-12S15 | | 15 | 134 | 87% |
| MFW02-12D05 | | ±5 | ±200 | 84% |
| MFW02-12D12 | | ±12 | ±83 | 86% |
| MFW02-12D15 | | ±15 | ±67 | 86% |
| MFW02-24S033 | 24 (18 - 36) | 3.3 | 400 | 79% |
| MFW02-24S05 | | 5 | 400 | 84% |
| MFW02-24S12 | | 12 | 167 | 86% |
| MFW02-24S15 | | 15 | 134 | 87% |
| MFW02-24D05 | | ±5 | ±200 | 84% |
| MFW02-24D12 | | ±12 | ±83 | 86% |
| MFW02-24D15 | | ±15 | ±67 | 86% |
| MFW02-48S033 | 48 (36 - 75) | 3.3 | 400 | 79% |
| MFW02-48S05 | | 5 | 400 | 83% |
| MFW02-48S12 | | 12 | 167 | 85% |
| MFW02-48S15 | | 15 | 134 | 86% |
| MFW02-48D05 | | ±5 | ±200 | 82% |
| MFW02-48D12 | | ±12 | ±83 | 84% |
| MFW02-48D15 | | ±15 | ±67 | 84% |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 4 | +Vin | +Vin |
| 5 | +Vout | +Vout |
| 6 | No Pin | Common |
| 7 | -Vout | -Vout |

MDW1000 Series 2W

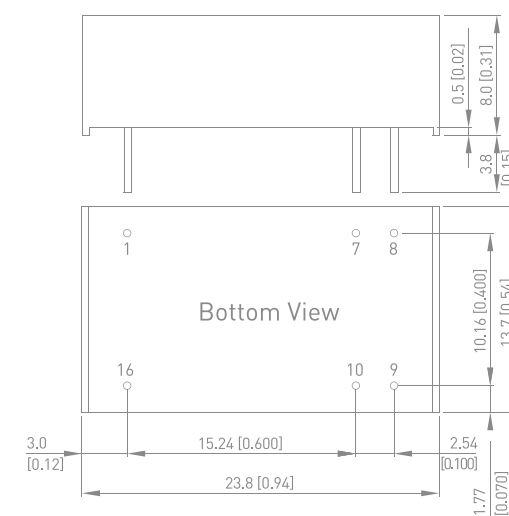


- Industrial Standard DIP-16 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Short Circuit Protection
- UL/cUL/IEC/EN 60950-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MDW1011 | 5 (4.5 ~ 9) | 3.3 | 500 | 70% |
| MDW1012 | | 5 | 400 | 73% |
| MDW1013 | | 12 | 167 | 75% |
| MDW1014 | | 15 | 134 | 73% |
| MDW1015 | | ±5 | ±200 | 64% |
| MDW1016 | | ±12 | ±83 | 69% |
| MDW1017 | | ±15 | ±67 | 71% |
| MDW1021 | 12 (9 ~ 18) | 3.3 | 500 | 73% |
| MDW1022 | | 5 | 400 | 77% |
| MDW1023 | | 12 | 167 | 80% |
| MDW1024 | | 15 | 134 | 80% |
| MDW1025 | | ±5 | ±200 | 73% |
| MDW1026 | | ±12 | ±83 | 78% |
| MDW1027 | | ±15 | ±67 | 78% |
| MDW1031 | 24 (18 ~ 36) | 3.3 | 500 | 72% |
| MDW1032 | | 5 | 400 | 77% |
| MDW1033 | | 12 | 167 | 80% |
| MDW1034 | | 15 | 134 | 81% |
| MDW1035 | | ±5 | ±200 | 74% |
| MDW1036 | | ±12 | ±83 | 78% |
| MDW1037 | | ±15 | ±67 | 80% |
| MDW1041 | 48 (36 ~ 75) | 3.3 | 500 | 71% |
| MDW1042 | | 5 | 400 | 73% |
| MDW1043 | | 12 | 167 | 79% |
| MDW1044 | | 15 | 134 | 79% |
| MDW1045 | | ±5 | ±200 | 71% |
| MDW1046 | | ±12 | ±83 | 77% |
| MDW1047 | | ±15 | ±67 | 77% |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

MFW03 Series | 3W

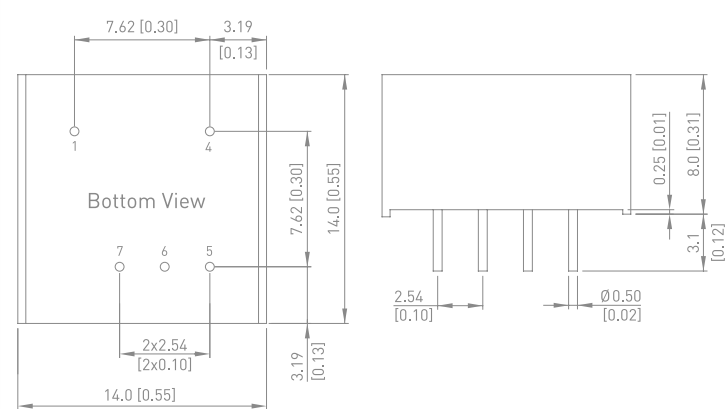


- Smallest Encapsulated 3W Converter
- Ultra-compact DIP-8 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MFW03-05S033 | 5 (4.5 - 10) | 3.3 | 600 | 79% |
| MFW03-05S05 | | 5 | 600 | 81% |
| MFW03-05S12 | | 12 | 250 | 85% |
| MFW03-05S15 | | 15 | 200 | 85% |
| MFW03-05D05 | | ±5 | ±300 | 82% |
| MFW03-05D12 | | ±12 | ±125 | 84% |
| MFW03-05D15 | ±15 | ±100 | 85% | |
| MFW03-12S033 | 12 (9 - 18) | 3.3 | 600 | 80% |
| MFW03-12S05 | | 5 | 600 | 83% |
| MFW03-12S12 | | 12 | 250 | 87% |
| MFW03-12S15 | | 15 | 200 | 87% |
| MFW03-12D05 | | ±5 | ±300 | 84% |
| MFW03-12D12 | | ±12 | ±125 | 86% |
| MFW03-12D15 | ±15 | ±100 | 87% | |
| MFW03-24S033 | 24 (18 - 36) | 3.3 | 600 | 80% |
| MFW03-24S05 | | 5 | 600 | 83% |
| MFW03-24S12 | | 12 | 250 | 87% |
| MFW03-24S15 | | 15 | 200 | 87% |
| MFW03-24D05 | | ±5 | ±300 | 84% |
| MFW03-24D12 | | ±12 | ±125 | 86% |
| MFW03-24D15 | ±15 | ±100 | 87% | |
| MFW03-48S033 | 48 (36 - 75) | 3.3 | 600 | 79% |
| MFW03-48S05 | | 5 | 600 | 82% |
| MFW03-48S12 | | 12 | 250 | 86% |
| MFW03-48S15 | | 15 | 200 | 86% |
| MFW03-48D05 | | ±5 | ±300 | 82% |
| MFW03-48D12 | | ±12 | ±125 | 85% |
| MFW03-48D15 | ±15 | ±100 | 85% | |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 4 | +Vin | +Vin |
| 5 | +Vout | +Vout |
| 6 | No Pin | Common |
| 7 | -Vout | -Vout |

MDWI03 Series | 3W

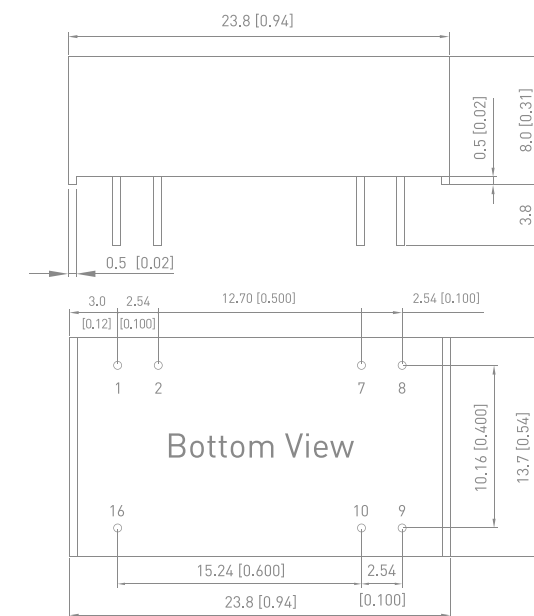


- Compact DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MDWI03-24S033 | 24 (9 - 36) | 3.3 | 600 | 75% |
| MDWI03-24S05 | | 5 | 600 | 78% |
| MDWI03-24S12 | | 12 | 250 | 80% |
| MDWI03-24S15 | | 15 | 200 | 80% |
| MDWI03-24S24 | | 24 | 125 | 80% |
| MDWI03-24D05 | | ±5 | ±300 | 77% |
| MDWI03-24D12 | ±12 | ±125 | 80% | |
| MDWI03-24D15 | ±15 | ±100 | 80% | |
| MDWI03-48S033 | 48 (18 - 75) | 3.3 | 600 | 75% |
| MDWI03-48S05 | | 5 | 600 | 78% |
| MDWI03-48S12 | | 12 | 250 | 80% |
| MDWI03-48S15 | | 15 | 200 | 80% |
| MDWI03-48S24 | | 24 | 125 | 80% |
| MDWI03-48D05 | | ±5 | ±300 | 77% |
| MDWI03-48D12 | ±12 | ±125 | 80% | |
| MDWI03-48D15 | ±15 | ±100 | 80% | |

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | -Vin | -Vin |
| 2 | Remote On/Off | Remote On/Off |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

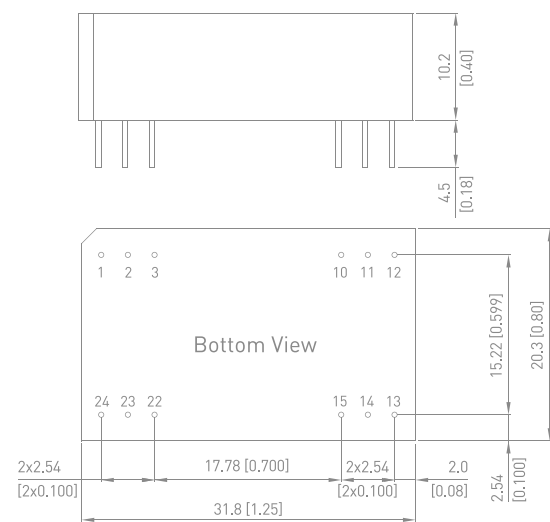
MIAR03 Series 3W



- Industrial Standard DIP-24 Package
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIAR03-05S05 | 5 ±10% | 5 | 600 | 70% |
| MIAR03-05S12 | | 12 | 250 | 78% |
| MIAR03-05S15 | | 15 | 200 | 78% |
| MIAR03-05D12 | | ±12 | ±125 | 78% |
| MIAR03-05D15 | | ±15 | ±100 | 78% |
| MIAR03-12S05 | 12 ±10% | 5 | 600 | 74% |
| MIAR03-12S12 | | 12 | 250 | 80% |
| MIAR03-12S15 | | 15 | 200 | 80% |
| MIAR03-12D12 | | ±12 | ±125 | 81% |
| MIAR03-12D15 | | ±15 | ±100 | 82% |
| MIAR03-24S05 | 24 ±10% | 5 | 600 | 75% |
| MIAR03-24S12 | | 12 | 250 | 80% |
| MIAR03-24S15 | | 15 | 200 | 80% |
| MIAR03-24D12 | | ±12 | ±125 | 81% |
| MIAR03-24D15 | | ±15 | ±100 | 82% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | NC | -Vout |
| 3 | NC | Common |
| 10 | -Vout | Common |
| 11 | +Vout | +Vout |
| 12 | -Vin | -Vin |
| 13 | -Vin | -Vin |
| 14 | +Vout | +Vout |
| 15 | -Vout | Common |
| 22 | NC | Common |
| 23 | NC | -Vout |
| 24 | +Vin | +Vin |

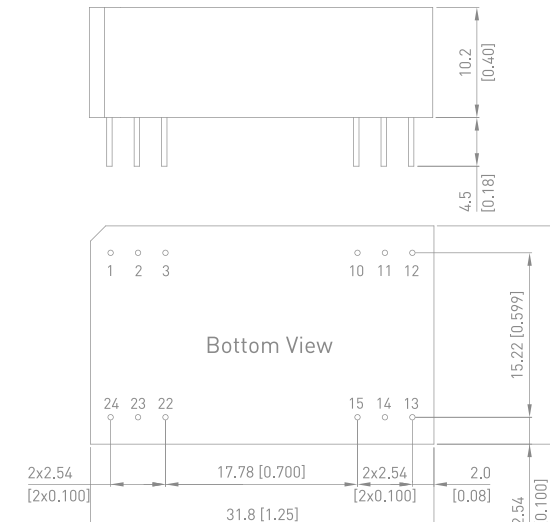
MIW1100 Series | 3W



- Industrial Standard DIP-24 Package
- Wide 2:1 & 3:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 60950-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIW1111 | 5 [4.5 ~ 9] | 5 | 600 | 70% |
| MIW1112 | | 12 | 250 | 74% |
| MIW1113 | | 15 | 200 | 74% |
| MIW1114 | | ±12 | ±125 | 74% |
| MIW1115 | | ±15 | ±100 | 74% |
| MIW1121 | 12 [9 ~ 18] | 5 | 600 | 76% |
| MIW1122 | | 12 | 250 | 80% |
| MIW1123 | | 15 | 200 | 80% |
| MIW1124 | | ±12 | ±125 | 80% |
| MIW1125 | | ±15 | ±100 | 80% |
| MIW1131 | 24 [18 ~ 36] | 5 | 600 | 77% |
| MIW1132 | | 12 | 250 | 81% |
| MIW1133 | | 15 | 200 | 81% |
| MIW1134 | | ±12 | ±125 | 81% |
| MIW1135 | | ±15 | ±100 | 81% |
| MIW1141 | 48 [36 ~ 75] | 5 | 600 | 77% |
| MIW1142 | | 12 | 250 | 81% |
| MIW1143 | | 15 | 200 | 81% |
| MIW1144 | | ±12 | ±125 | 81% |
| MIW1145 | | ±15 | ±100 | 81% |
| MIW1151 | 20 [10 ~ 30] | 5 | 600 | 80% |
| MIW1152 | | 12 | 250 | 80% |
| MIW1153 | | 15 | 200 | 80% |
| MIW1154 | | ±12 | ±125 | 80% |
| MIW1155 | | ±15 | ±100 | 80% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | NC | -Vout |
| 3 | NC | Common |
| 10 | -Vout | Common |
| 11 | +Vout | +Vout |
| 12 | -Vin | -Vin |
| 13 | -Vin | -Vin |
| 14 | +Vout | +Vout |
| 15 | -Vout | Common |
| 22 | NC | Common |
| 23 | NC | -Vout |
| 24 | +Vin | +Vin |

NC: No Connection

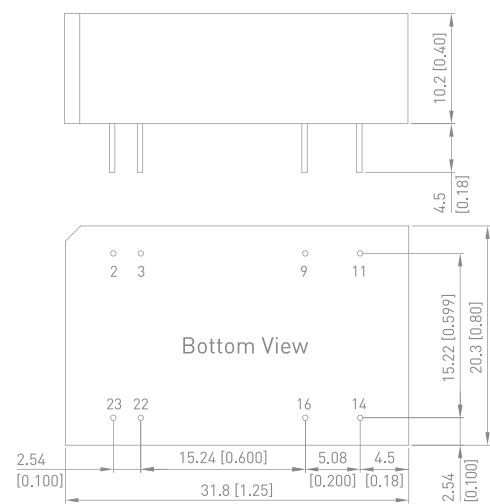
MIW03 Series | 3W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- EMI Emission EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE-Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIW03-05S033 | 5 (4.5 - 9) | 3.3 | 750 | 77% |
| MIW03-05S05 | | 5 | 600 | 80% |
| MIW03-05S12 | | 12 | 250 | 82% |
| MIW03-05S15 | | 15 | 200 | 82% |
| MIW03-05S24 | | 24 | 125 | 81% |
| MIW03-05D05 | | ±5 | ±250 | 80% |
| MIW03-05D12 | | ±12 | ±125 | 82% |
| MIW03-05D15 | | ±15 | ±100 | 82% |
| MIW03-12S033 | | 12 (9 - 18) | 3.3 | 750 |
| MIW03-12S05 | 5 | | 600 | 81% |
| MIW03-12S12 | 12 | | 250 | 85% |
| MIW03-12S15 | 15 | | 200 | 85% |
| MIW03-12S24 | 24 | | 125 | 84% |
| MIW03-12D05 | ±5 | | ±250 | 80% |
| MIW03-12D12 | ±12 | | ±125 | 84% |
| MIW03-12D15 | ±15 | | ±100 | 84% |
| MIW03-24S033 | 24 (18 - 36) | | 3.3 | 750 |
| MIW03-24S05 | | 5 | 600 | 81% |
| MIW03-24S12 | | 12 | 250 | 85% |
| MIW03-24S15 | | 15 | 200 | 85% |
| MIW03-24S24 | | 24 | 125 | 84% |
| MIW03-24D05 | | ±5 | ±250 | 80% |
| MIW03-24D12 | | ±12 | ±125 | 84% |
| MIW03-24D15 | | ±15 | ±100 | 84% |
| MIW03-48S033 | | 48 (36 - 75) | 3.3 | 750 |
| MIW03-48S05 | 5 | | 600 | 81% |
| MIW03-48S12 | 12 | | 250 | 85% |
| MIW03-48S15 | 15 | | 200 | 85% |
| MIW03-48S24 | 24 | | 125 | 84% |
| MIW03-48D05 | ±5 | | ±250 | 80% |
| MIW03-48D12 | ±12 | | ±125 | 84% |
| MIW03-48D15 | ±15 | | ±100 | 84% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-------|--------|--------|
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

NC: No Connection

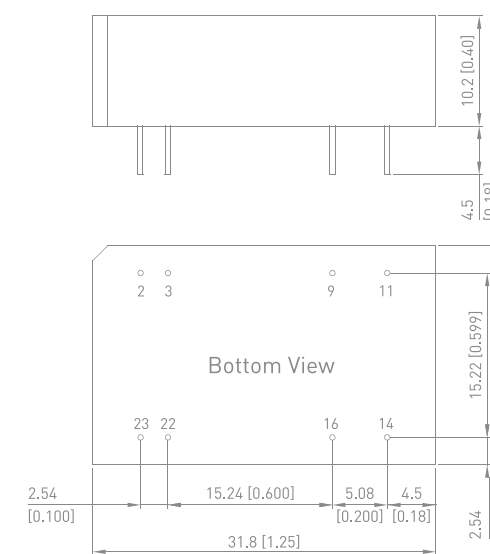
MIWI03 Series | 3W



- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- EMI Emission EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE-Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MIWI03-24S033 | 24 (9 - 36) | 3.3 | 750 | 77% |
| MIWI03-24S05 | | 5 | 600 | 79% |
| MIWI03-24S12 | | 12 | 250 | 82% |
| MIWI03-24S15 | | 15 | 200 | 83% |
| MIWI03-24S24 | | 24 | 125 | 81% |
| MIWI03-24D05 | | ±5 | ±300 | 80% |
| MIWI03-24D12 | | ±12 | ±125 | 82% |
| MIWI03-24D15 | | ±15 | ±100 | 82% |
| MIWI03-48S033 | | 48 (18 - 75) | 3.3 | 750 |
| MIWI03-48S05 | 5 | | 600 | 80% |
| MIWI03-48S12 | 12 | | 250 | 83% |
| MIWI03-48S15 | 15 | | 200 | 84% |
| MIWI03-48S24 | 24 | | 125 | 82% |
| MIWI03-48D05 | ±5 | | ±300 | 80% |
| MIWI03-48D12 | ±12 | | ±125 | 82% |
| MIWI03-48D15 | ±15 | | ±100 | 82% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-------|--------|--------|
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

NC: No Connection

MDWI06 Series | 6W



- Smallest Encapsulated 6W Converter
- Industrial Standard DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Temp. Range -40°C to +90°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MDWI06-24S033 | 24 (9 - 36) | 3.3 | 1,500 | 78% |
| MDWI06-24S05 | | 5 | 1,200 | 82% |
| MDWI06-24S12 | | 12 | 500 | 86% |
| MDWI06-24S15 | | 15 | 400 | 86% |
| MDWI06-24S24 | | 24 | 250 | 87% |
| MDWI06-24D12 | | ±12 | ±250 | 86% |
| MDWI06-24D15 | ±15 | ±200 | 87% | |
| MDWI06-48S033 | 48 (18 - 75) | 3.3 | 1,500 | 78% |
| MDWI06-48S05 | | 5 | 1,200 | 82% |
| MDWI06-48S12 | | 12 | 500 | 86% |
| MDWI06-48S15 | | 15 | 400 | 86% |
| MDWI06-48S24 | | 24 | 250 | 87% |
| MDWI06-48D12 | | ±12 | ±250 | 87% |
| MDWI06-48D15 | ±15 | ±200 | 87% | |

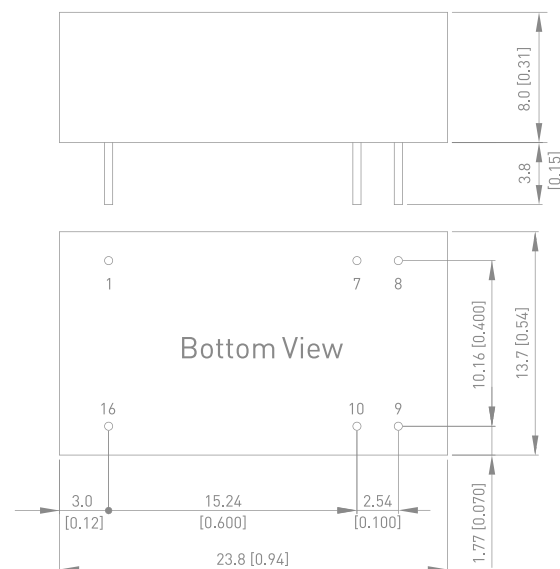
MIW06 Series | 6W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIW06-12S033 | 12 (9 - 18) | 3.3 | 1,200 | 75% |
| MIW06-12S05 | | 5 | 1,200 | 78% |
| MIW06-12S12 | | 12 | 500 | 82% |
| MIW06-12S15 | | 15 | 400 | 82% |
| MIW06-12S24 | | 24 | 250 | 84% |
| MIW06-12D05 | | ±5 | ±500 | 78% |
| MIW06-12D12 | ±12 | ±250 | 82% | |
| MIW06-12D15 | ±15 | ±200 | 82% | |
| MIW06-24S033 | 24 (18 - 36) | 3.3 | 1,200 | 77% |
| MIW06-24S05 | | 5 | 1,200 | 80% |
| MIW06-24S12 | | 12 | 500 | 84% |
| MIW06-24S15 | | 15 | 400 | 84% |
| MIW06-24S24 | | 24 | 250 | 84% |
| MIW06-24D05 | | ±5 | ±500 | 80% |
| MIW06-24D12 | ±12 | ±250 | 84% | |
| MIW06-24D15 | ±15 | ±200 | 84% | |
| MIW06-48S033 | 48 (36 - 75) | 3.3 | 1,200 | 77% |
| MIW06-48S05 | | 5 | 1,200 | 80% |
| MIW06-48S12 | | 12 | 500 | 84% |
| MIW06-48S15 | | 15 | 400 | 84% |
| MIW06-48S24 | | 24 | 250 | 84% |
| MIW06-48D05 | | ±5 | ±500 | 80% |
| MIW06-48D12 | ±12 | ±250 | 84% | |
| MIW06-48D15 | ±15 | ±200 | 84% | |

Mechanical Dimensions

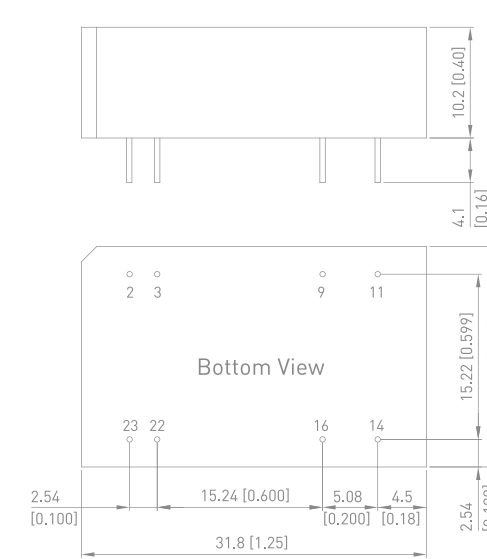


Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-------|--------|--------|
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

NC= No Connection

MIWI06 Series | 6W



- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MIWI06-24S033 | 24 (9 - 36) | 3.3 | 1,200 | 77% |
| MIWI06-24S05 | | 5 | 1,200 | 80% |
| MIWI06-24S12 | | 12 | 500 | 84% |
| MIWI06-24S15 | | 15 | 400 | 84% |
| MIWI06-24S24 | | 24 | 250 | 84% |
| MIWI06-24D05 | | ±5 | ±500 | 80% |
| MIWI06-24D12 | ±12 | ±250 | 84% | |
| MIWI06-24D15 | ±15 | ±200 | 84% | |
| MIWI06-48S033 | 48 (18 - 75) | 3.3 | 1,200 | 77% |
| MIWI06-48S05 | | 5 | 1,200 | 80% |
| MIWI06-48S12 | | 12 | 500 | 84% |
| MIWI06-48S15 | | 15 | 400 | 84% |
| MIWI06-48S24 | | 24 | 250 | 84% |
| MIWI06-48D05 | | ±5 | ±500 | 80% |
| MIWI06-48D12 | ±12 | ±250 | 84% | |
| MIWI06-48D15 | ±15 | ±200 | 84% | |

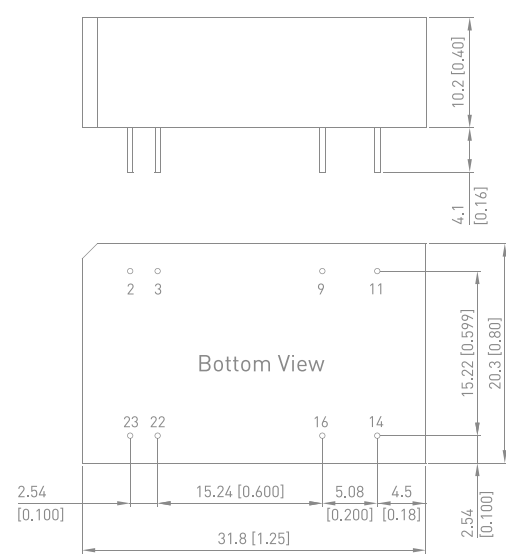
MDW08 Series | 8W



- Smallest Encapsulated 8W Converter
- Industrial Standard DIP-16 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MDW08-12S033 | 12 (9 - 18) | 3.3 | 1,600 | 78% |
| MDW08-12S05 | | 5 | 1,600 | 81% |
| MDW08-12S12 | | 12 | 665 | 84% |
| MDW08-12S15 | | 15 | 535 | 84% |
| MDW08-12S24 | | 24 | 335 | 85% |
| MDW08-12D12 | | ±12 | ±335 | 85% |
| MDW08-12D15 | ±15 | ±265 | 84% | |
| MDW08-24S033 | 24 (18 - 36) | 3.3 | 1,600 | 78% |
| MDW08-24S05 | | 5 | 1,600 | 82% |
| MDW08-24S12 | | 12 | 665 | 85% |
| MDW08-24S15 | | 15 | 535 | 85% |
| MDW08-24S24 | | 24 | 335 | 86% |
| MDW08-24D12 | | ±12 | ±335 | 85% |
| MDW08-24D15 | ±15 | ±265 | 86% | |
| MDW08-48S033 | 48 (36 - 75) | 3.3 | 1,600 | 78% |
| MDW08-48S05 | | 5 | 1,600 | 81% |
| MDW08-48S12 | | 12 | 665 | 85% |
| MDW08-48S15 | | 15 | 535 | 85% |
| MDW08-48S24 | | 24 | 335 | 86% |
| MDW08-48D12 | | ±12 | ±335 | 86% |
| MDW08-48D15 | ±15 | ±265 | 86% | |

Mechanical Dimensions

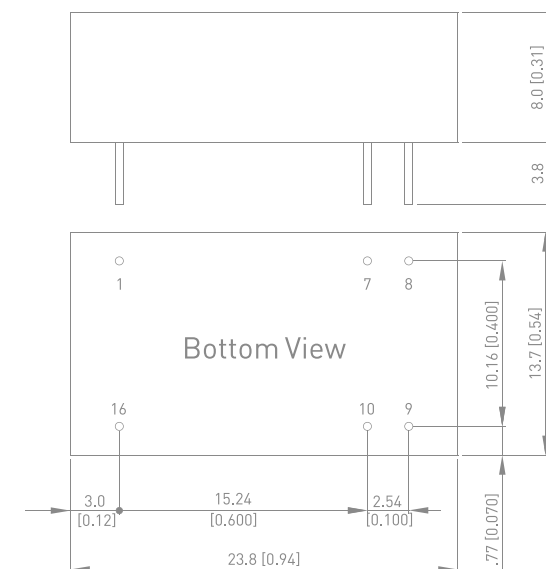


Pin Connections

| Pin | Single | Dual |
|-------|--------|--------|
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

NC: No Connection

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC= No Connection

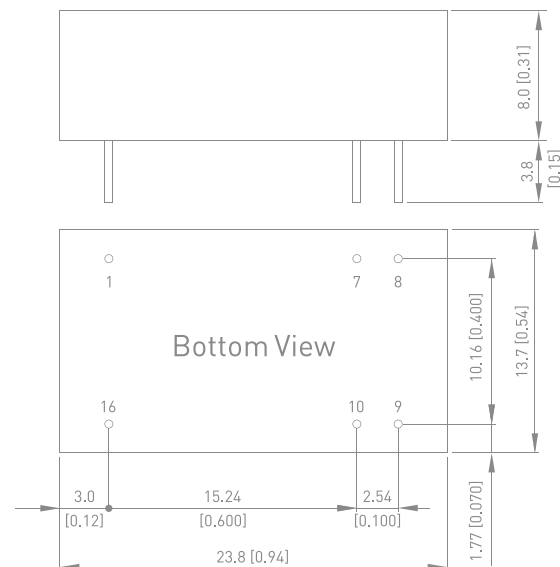
MDWI08 Series | 8W



- Smallest Encapsulated 8W Converter
- Industrial Standard DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MDWI08-24S033 | 24 (9 - 36) | 3.3 | 2,000 | 78% |
| MDWI08-24S05 | | 5 | 1,600 | 82% |
| MDWI08-24S12 | | 12 | 665 | 85% |
| MDWI08-24S15 | | 15 | 535 | 85% |
| MDWI08-24S24 | | 24 | 335 | 86% |
| MDWI08-24D12 | | ±12 | ±335 | 85% |
| MDWI08-24D15 | ±15 | ±265 | 86% | |
| MDWI08-48S033 | 48 (18 - 75) | 3.3 | 2,000 | 78% |
| MDWI08-48S05 | | 5 | 1,600 | 81% |
| MDWI08-48S12 | | 12 | 665 | 85% |
| MDWI08-48S15 | | 15 | 535 | 85% |
| MDWI08-48S24 | | 24 | 335 | 86% |
| MDWI08-48D12 | | ±12 | ±335 | 86% |
| MDWI08-48D15 | ±15 | ±265 | 86% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

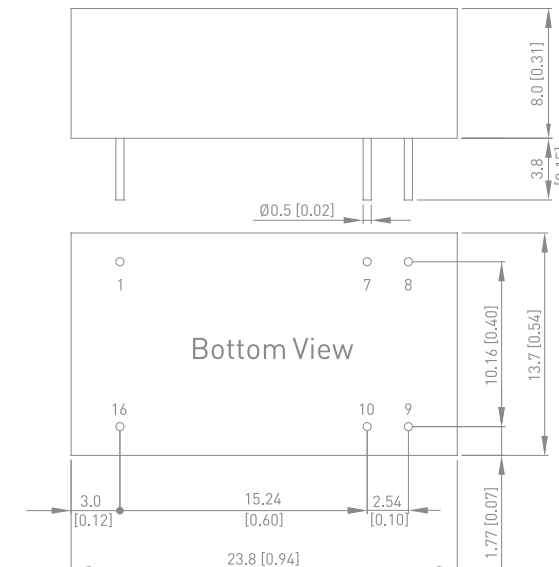
MDW10 Series | 10W



- Smallest Encapsulated 10W Converter
- Industrial Standard DIP-16 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +88°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A & FCC Level A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MDW10-12S033 | 12 (9 - 18) | 3.3 | 2,700 | 79% |
| MDW10-12S05 | | 5 | 2,000 | 82% |
| MDW10-12S051 | | 5.1 | 2,000 | 82% |
| MDW10-12S12 | | 12 | 833 | 86% |
| MDW10-12S15 | | 15 | 666 | 87% |
| MDW10-12S24 | | 24 | 416 | 87% |
| MDW10-12D12 | ±12 | ±416 | 86% | |
| MDW10-12D15 | ±15 | ±333 | 86% | |
| MDW10-24S033 | 24 (18 - 36) | 3.3 | 2,700 | 80% |
| MDW10-24S05 | | 5 | 2,000 | 83% |
| MDW10-24S051 | | 5.1 | 2,000 | 83% |
| MDW10-24S12 | | 12 | 833 | 87% |
| MDW10-24S15 | | 15 | 666 | 88% |
| MDW10-24S24 | | 24 | 416 | 88% |
| MDW10-24D12 | ±12 | ±416 | 87% | |
| MDW10-24D15 | ±15 | ±333 | 87% | |
| MDW10-48S033 | 48 (36 - 75) | 3.3 | 2,700 | 80% |
| MDW10-48S05 | | 5 | 2,000 | 83% |
| MDW10-48S051 | | 5.1 | 2,000 | 83% |
| MDW10-48S12 | | 12 | 833 | 87% |
| MDW10-48S15 | | 15 | 666 | 88% |
| MDW10-48S24 | | 24 | 416 | 88% |
| MDW10-48D12 | ±12 | ±416 | 87% | |
| MDW10-48D15 | ±15 | ±333 | 87% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

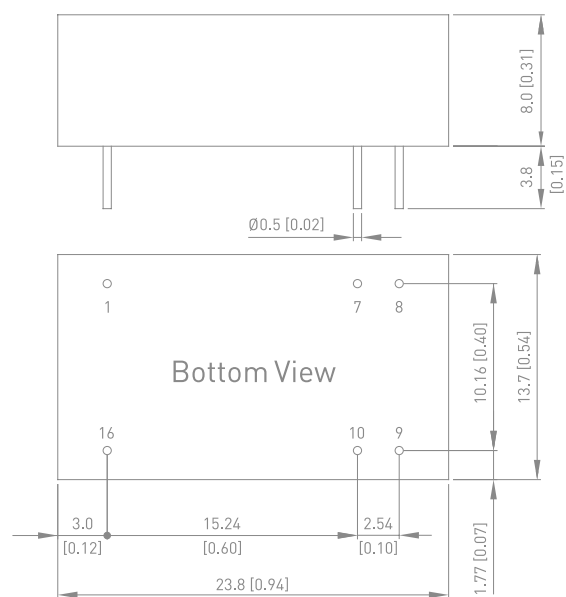
MDWI10 Series | 10W



- Smallest Encapsulated 10W Converter
- Industrial Standard DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +88°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MDWI10-24S033 | 24 (9 - 36) | 3.3 | 2,700 | 80% |
| MDWI10-24S05 | | 5 | 2,000 | 83% |
| MDWI10-24S051 | | 5.1 | 2,000 | 83% |
| MDWI10-24S12 | | 12 | 833 | 87% |
| MDWI10-24S15 | | 15 | 666 | 88% |
| MDWI10-24S24 | | 24 | 416 | 88% |
| MDWI10-24D12 | | ±12 | ±416 | 87% |
| MDWI10-24D15 | | ±15 | ±333 | 87% |
| MDWI10-48S033 | 48 (18 - 75) | 3.3 | 2,700 | 80% |
| MDWI10-48S05 | | 5 | 2,000 | 83% |
| MDWI10-48S051 | | 5.1 | 2,000 | 83% |
| MDWI10-48S12 | | 12 | 833 | 87% |
| MDWI10-48S15 | | 15 | 666 | 88% |
| MDWI10-48S24 | | 24 | 416 | 88% |
| MDWI10-48D12 | | ±12 | ±416 | 87% |
| MDWI10-48D15 | | ±15 | ±333 | 87% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

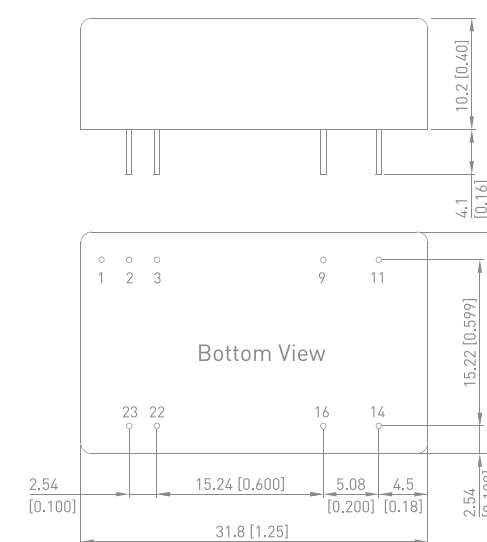
MIW10 Series | 10W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-Voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIW10-12S033 | 12 (9 - 18) | 3.3 | 2,700 | 86% |
| MIW10-12S05 | | 5 | 2,000 | 85% |
| MIW10-12S051 | | 5.1 | 2,000 | 85% |
| MIW10-12S12 | | 12 | 833 | 88% |
| MIW10-12S15 | | 15 | 666 | 89% |
| MIW10-12D12 | | ±12 | ±416 | 88% |
| MIW10-12D15 | | ±15 | ±333 | 89% |
| MIW10-24S033 | | 24 (18 - 36) | 3.3 | 2,700 |
| MIW10-24S05 | 5 | | 2,000 | 85% |
| MIW10-24S051 | 5.1 | | 2,000 | 85% |
| MIW10-24S12 | 12 | | 833 | 89% |
| MIW10-24S15 | 15 | | 666 | 89% |
| MIW10-24D12 | ±12 | | ±416 | 88% |
| MIW10-24D15 | ±15 | | ±333 | 89% |
| MIW10-48S033 | 48 (36 - 75) | | 3.3 | 2,700 |
| MIW10-48S05 | | 5 | 2,000 | 85% |
| MIW10-48S051 | | 5.1 | 2,000 | 85% |
| MIW10-48S12 | | 12 | 833 | 87% |
| MIW10-48S15 | | 15 | 666 | 88% |
| MIW10-48D12 | | ±12 | ±416 | 87% |
| MIW10-48D15 | | ±15 | ±333 | 88% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-------|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

NC= No Connection

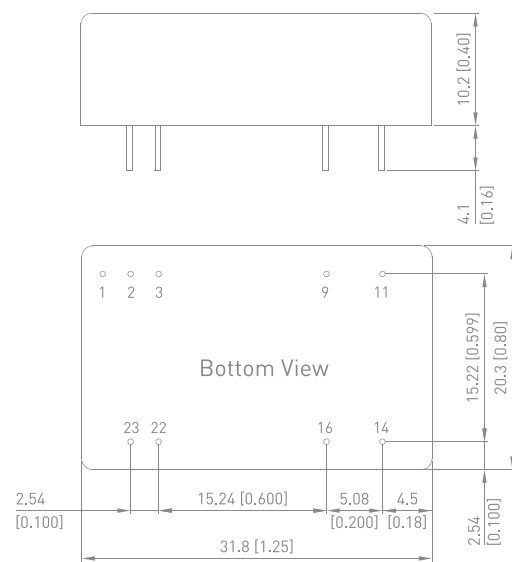
MIWI10 Series | 10W



- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 87%
- I/O Isolation 1500 VDC
- Operating Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MIWI10-24S033 | 24 (9 - 36) | 3.3 | 2,700 | 86% |
| MIWI10-24S05 | | 5 | 2,000 | 85% |
| MIWI10-24S051 | | 5.1 | 2,000 | 85% |
| MIWI10-24S12 | | 12 | 833 | 87% |
| MIWI10-24S15 | | 15 | 666 | 87% |
| MIWI10-24S24 | | 24 | 416 | 87% |
| MIWI10-24D12 | | ±12 | ±416 | 87% |
| MIWI10-24D15 | | ±15 | ±333 | 87% |
| MIWI10-48S033 | 48 (18 - 75) | 3.3 | 2,700 | 86% |
| MIWI10-48S05 | | 5 | 2,000 | 85% |
| MIWI10-48S051 | | 5.1 | 2,000 | 85% |
| MIWI10-48S12 | | 12 | 833 | 87% |
| MIWI10-48S15 | | 15 | 666 | 87% |
| MIWI10-48S24 | | 24 | 416 | 87% |
| MIWI10-48D12 | | ±12 | ±416 | 87% |
| MIWI10-48D15 | | ±15 | ±333 | 87% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-------|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

NC: No Connection

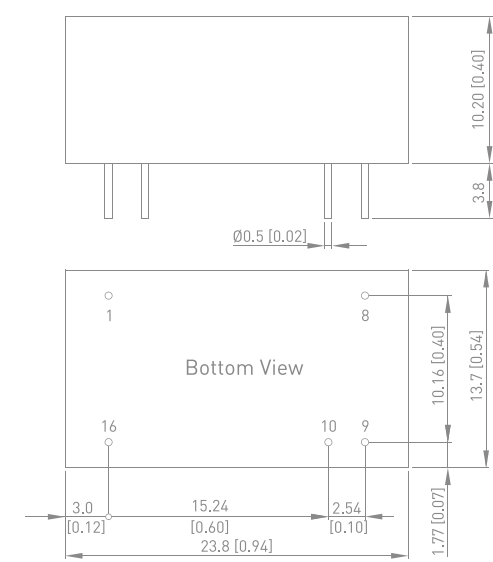
MDW12 Series | 12W



- Smallest Encapsulated 12W Converter
- Industrial Standard DIP-16 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MDW12-12S05 | 12 (9 - 18) | 5 | 2,400 | 83% |
| MDW12-12S051 | | 5.1 | 2,400 | 83% |
| MDW12-12S12 | | 12 | 1,000 | 87% |
| MDW12-12S15 | | 15 | 800 | 88% |
| MDW12-12S24 | | 24 | 500 | 88% |
| MDW12-12D12 | | ±12 | ±500 | 87% |
| MDW12-12D15 | | ±15 | ±400 | 87% |
| MDW12-24S05 | | 24 (18 - 36) | 5 | 2,400 |
| MDW12-24S051 | 5.1 | | 2,400 | 83% |
| MDW12-24S12 | 12 | | 1,000 | 87% |
| MDW12-24S15 | 15 | | 800 | 88% |
| MDW12-24S24 | 24 | | 500 | 88% |
| MDW12-24D12 | ±12 | | ±500 | 87% |
| MDW12-24D15 | ±15 | | ±400 | 87% |
| MDW12-48S05 | 48 (36 - 75) | | 5 | 2,400 |
| MDW12-48S051 | | 5.1 | 2,400 | 83% |
| MDW12-48S12 | | 12 | 1,000 | 87% |
| MDW12-48S15 | | 15 | 800 | 88% |
| MDW12-48S24 | | 24 | 500 | 88% |
| MDW12-48D12 | | ±12 | ±500 | 87% |
| MDW12-48D15 | | ±15 | ±400 | 87% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC= No Connection

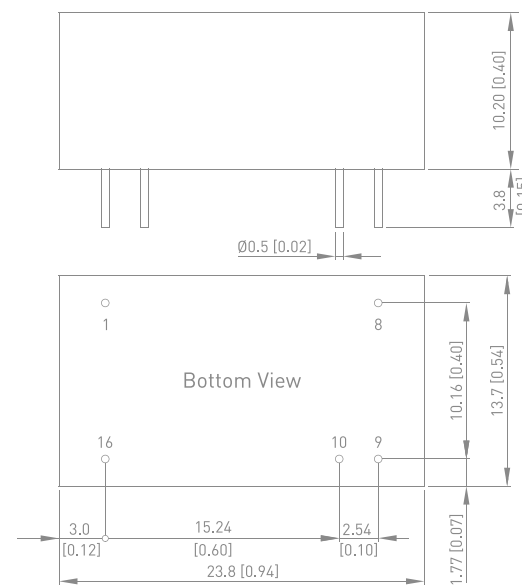
MDWI12 Series | 12W



- Smallest Encapsulated 12W Converter
- Industrial Standard DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MDWI12-24S05 | 24 (9 - 36) | 5 | 2,400 | 83% |
| MDWI12-24S051 | | 5.1 | 2,400 | 83% |
| MDWI12-24S12 | | 12 | 1,000 | 87% |
| MDWI12-24S15 | | 15 | 800 | 88% |
| MDWI12-24S24 | | 24 | 500 | 88% |
| MDWI12-24D12 | | ±12 | ±500 | 87% |
| MDWI12-24D15 | ±15 | ±400 | 87% | |
| MDWI12-48S05 | 48 (18 - 75) | 5 | 2,400 | 83% |
| MDWI12-48S051 | | 5.1 | 2,400 | 83% |
| MDWI12-48S12 | | 12 | 1,000 | 87% |
| MDWI12-48S15 | | 15 | 800 | 88% |
| MDWI12-48S24 | | 24 | 500 | 88% |
| MDWI12-48D12 | | ±12 | ±500 | 87% |
| MDWI12-48D15 | ±15 | ±400 | 87% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

NEW

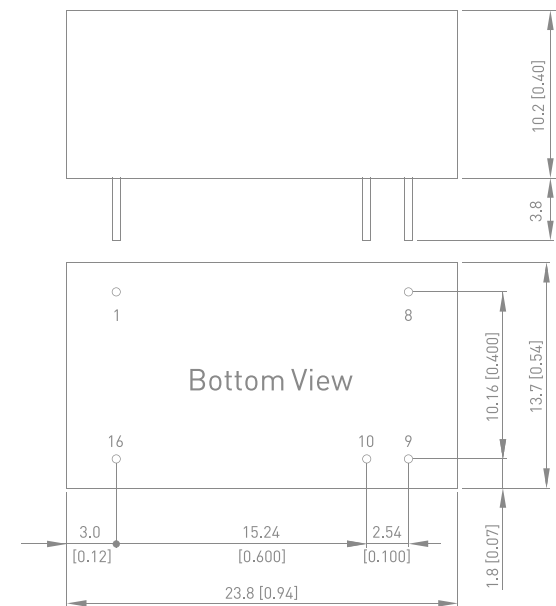
MDW15 Series | 15W



- Smallest Encapsulated 15W Converter
- Industrial Standard DIP-16 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MDW15-12S051 | 12 (9 - 18) | 5.1 | 2,940 | 86% |
| MDW15-12S12 | | 12 | 1,250 | 87% |
| MDW15-12S15 | | 15 | 1,000 | 87% |
| MDW15-12S24 | | 24 | 625 | 87% |
| MDW15-12D12 | | ±12 | ±625 | 87% |
| MDW15-12D15 | | ±15 | ±500 | 87% |
| MDW15-24S051 | 24 (18 - 36) | 5.1 | 2,940 | 86% |
| MDW15-24S12 | | 12 | 1,250 | 87% |
| MDW15-24S15 | | 15 | 1,000 | 87% |
| MDW15-24S24 | | 24 | 625 | 87% |
| MDW15-24D12 | | ±12 | ±625 | 87% |
| MDW15-24D15 | | ±15 | ±500 | 87% |
| MDW15-48S051 | 48 (36 - 75) | 5.1 | 2,940 | 86% |
| MDW15-48S12 | | 12 | 1,250 | 87% |
| MDW15-48S15 | | 15 | 1,000 | 87% |
| MDW15-48S24 | | 24 | 625 | 87% |
| MDW15-48D12 | | ±12 | ±625 | 87% |
| MDW15-48D15 | | ±15 | ±500 | 87% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC= No Connection

NEW

MDWI15 Series | 15W

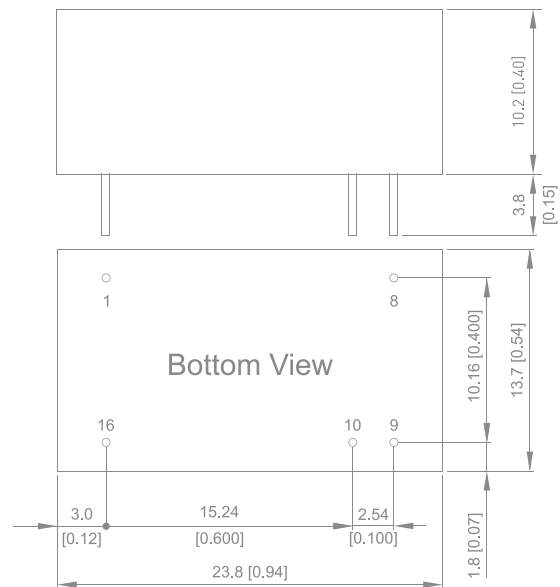


- Smallest Encapsulated 15W Converter
- Industrial Standard DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MDWI15-24S051 | 24 (9 - 36) | 5.1 | 2,940 | 86% |
| MDWI15-24S12 | | 12 | 1,250 | 87% |
| MDWI15-24S15 | | 15 | 1,000 | 87% |
| MDWI15-24S24 | | 24 | 625 | 87% |
| MDWI15-24D12 | | ±12 | ±625 | 87% |
| MDWI15-24D15 | | ±15 | ±500 | 87% |
| MDWI15-48S051 | 48 (18 - 75) | 5.1 | 2,940 | 86% |
| MDWI15-48S12 | | 12 | 1,250 | 87% |
| MDWI15-48S15 | | 15 | 1,000 | 87% |
| MDWI15-48S24 | | 24 | 625 | 87% |
| MDWI15-48D12 | | ±12 | ±625 | 87% |
| MDWI15-48D15 | | ±15 | ±500 | 87% |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

MJW10 Series | 10W

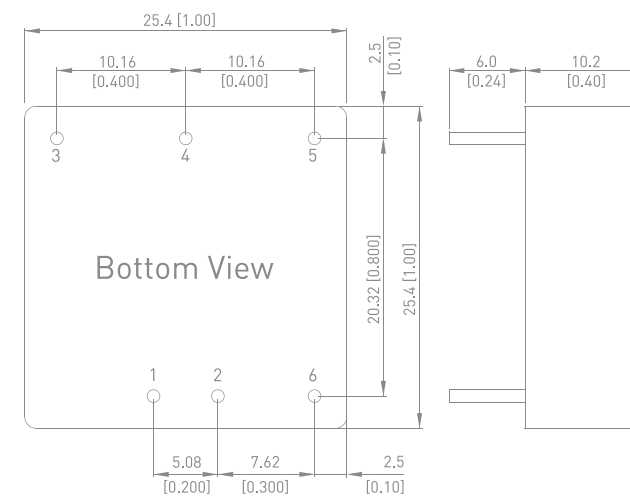


- Industrial Standard 1" x 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control (option)
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MJW10-12S033 | 12 (9 - 18) | 3.3 | 2,500 | 82% |
| MJW10-12S05 | | 5 | 2,000 | 85% |
| MJW10-12S051 | | 5.1 | 2,000 | 85% |
| MJW10-12S12 | | 12 | 830 | 87% |
| MJW10-12S15 | | 15 | 670 | 88% |
| MJW10-12D05 | | ±5 | ±1000 | 84% |
| MJW10-12D12 | ±12 | ±416 | 87% | |
| MJW10-12D15 | ±15 | ±333 | 87% | |
| MJW10-24S033 | 24 (18 - 36) | 3.3 | 2,500 | 83% |
| MJW10-24S05 | | 5 | 2,000 | 85% |
| MJW10-24S051 | | 5.1 | 2,000 | 85% |
| MJW10-24S12 | | 12 | 830 | 88% |
| MJW10-24S15 | | 15 | 670 | 89% |
| MJW10-24D05 | | ±5 | ±1000 | 85% |
| MJW10-24D12 | ±12 | ±416 | 88% | |
| MJW10-24D15 | ±15 | ±333 | 89% | |
| MJW10-48S033 | 48 (36 - 75) | 3.3 | 2,500 | 83% |
| MJW10-48S05 | | 5 | 2,000 | 86% |
| MJW10-48S051 | | 5.1 | 2,000 | 85% |
| MJW10-48S12 | | 12 | 830 | 89% |
| MJW10-48S15 | | 15 | 670 | 89% |
| MJW10-48D05 | | ±5 | ±1000 | 86% |
| MJW10-48D12 | ±12 | ±416 | 87% | |
| MJW10-48D15 | ±15 | ±333 | 88% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------------------------|--------------------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off [Optional] | Remote On/Off [Optional] |

MJWI10 Series | 10W

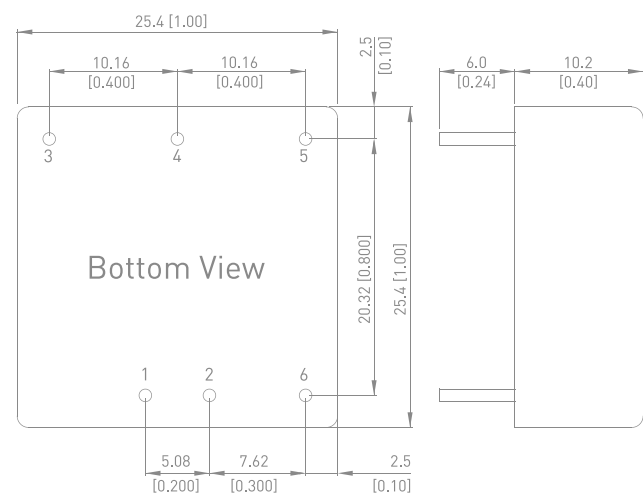


- Ultra-compact 1"x1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 87%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MJWI10-24S033 | 24 (9 - 36) | 3.3 | 2,200 | 86% |
| MJWI10-24S05 | | 5 | 2,000 | 84% |
| MJWI10-24S051 | | 5.1 | 2,000 | 84% |
| MJWI10-24S12 | | 12 | 830 | 86% |
| MJWI10-24S15 | | 15 | 660 | 87% |
| MJWI10-24S24 | | 24 | 410 | 86% |
| MJWI10-24D05 | | ±5 | ±1000 | 84% |
| MJWI10-24D12 | | ±12 | ±410 | 86% |
| MJWI10-24D15 | ±15 | ±330 | 87% | |
| MJWI10-48S033 | 48 (18 - 75) | 3.3 | 2,200 | 85% |
| MJWI10-48S05 | | 5 | 2,000 | 84% |
| MJWI10-48S051 | | 5.1 | 2,000 | 84% |
| MJWI10-48S12 | | 12 | 830 | 86% |
| MJWI10-48S15 | | 15 | 660 | 87% |
| MJWI10-48S24 | | 24 | 410 | 86% |
| MJWI10-48D05 | | ±5 | ±1000 | 84% |
| MJWI10-48D12 | | ±12 | ±410 | 86% |
| MJWI10-48D15 | ±15 | ±330 | 87% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

MJW15 Series | 15W

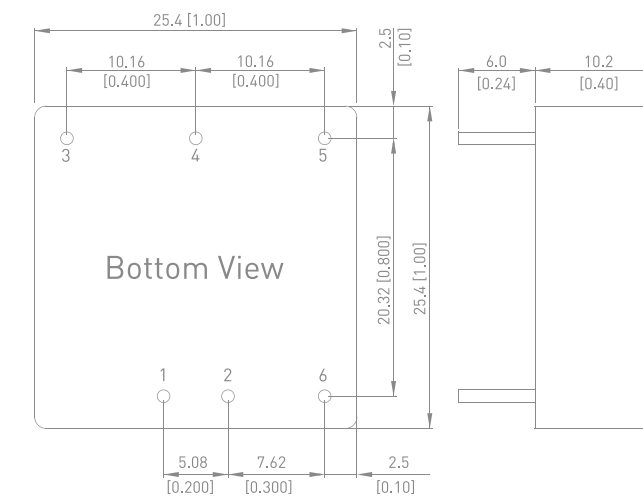


- Industrial Standard 1" x 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MJW15-12S033 | 12 (9 - 18) | 3.3 | 3,400 | 86% |
| MJW15-12S05 | | 5 | 3,000 | 89% |
| MJW15-12S12 | | 12 | 1,250 | 89% |
| MJW15-12S15 | | 15 | 1,000 | 89% |
| MJW15-12S24 | | 24 | 625 | 90% |
| MJW15-12D12 | | ±12 | ±625 | 89% |
| MJW15-12D15 | | ±15 | ±500 | 90% |
| MJW15-24S033 | | 24 (18 - 36) | 3.3 | 3,400 |
| MJW15-24S05 | 5 | | 3,000 | 88% |
| MJW15-24S12 | 12 | | 1,250 | 90% |
| MJW15-24S15 | 15 | | 1,000 | 90% |
| MJW15-24S24 | 24 | | 625 | 91% |
| MJW15-24D12 | ±12 | | ±625 | 90% |
| MJW15-24D15 | ±15 | | ±500 | 90% |
| MJW15-48S033 | 48 (36 - 75) | | 3.3 | 3,400 |
| MJW15-48S05 | | 5 | 3,000 | 88% |
| MJW15-48S12 | | 12 | 1,250 | 90% |
| MJW15-48S15 | | 15 | 1,000 | 90% |
| MJW15-48S24 | | 24 | 625 | 91% |
| MJW15-48D12 | | ±12 | ±625 | 89% |
| MJW15-48D15 | | ±15 | ±500 | 90% |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

MJWI15 Series | 15W

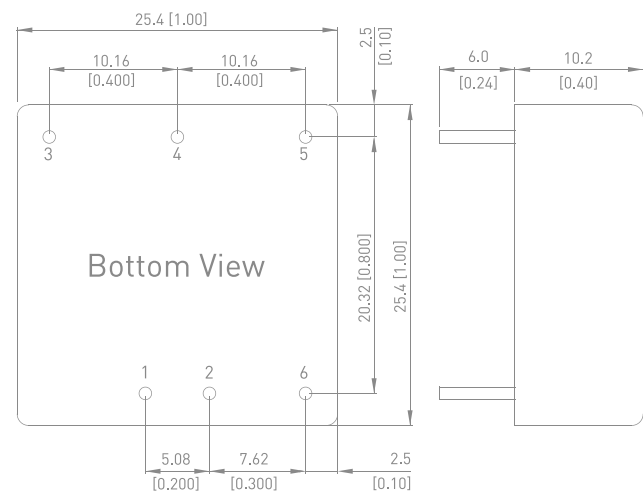


- Industrial Standard 1" X 1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 91%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MJWI15-24S033 | 24 (9 - 36) | 3.3 | 3,400 | 86% |
| MJWI15-24S05 | | 5 | 3,000 | 88% |
| MJWI15-24S12 | | 12 | 1,250 | 88% |
| MJWI15-24S15 | | 15 | 1,000 | 89% |
| MJWI15-24S24 | | 24 | 625 | 91% |
| MJWI15-24D12 | | ±12 | ±625 | 89% |
| MJWI15-24D15 | ±15 | ±500 | 89% | |
| MJWI15-48S033 | 48 (18 - 75) | 3.3 | 3,400 | 86% |
| MJWI15-48S05 | | 5 | 3,000 | 88% |
| MJWI15-48S12 | | 12 | 1,250 | 89% |
| MJWI15-48S15 | | 15 | 1,000 | 89% |
| MJWI15-48S24 | | 24 | 625 | 91% |
| MJWI15-48D12 | | ±12 | ±625 | 90% |
| MJWI15-48D15 | ±15 | ±500 | 89% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

MJWI20 Series | 20W

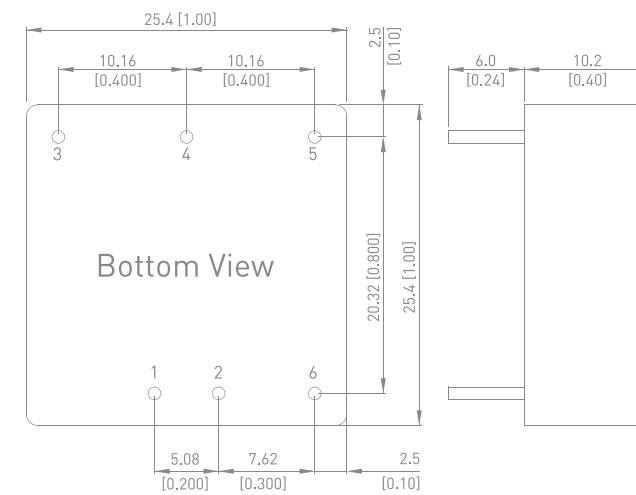


- Smallest Encapsulated 20W Converter
- Ultra-compact 1" X 1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 89%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MJWI20-24S033 | 24 (9 - 36) | 3.3 | 4,500 | 87% |
| MJWI20-24S05 | | 5 | 4,000 | 89% |
| MJWI20-24S12 | | 12 | 1,670 | 89% |
| MJWI20-24S15 | | 15 | 1,340 | 89% |
| MJWI20-24S24 | | 24 | 835 | 88% |
| MJWI20-24D12 | | ±12 | ±835 | 89% |
| MJWI20-24D15 | ±15 | ±670 | 89% | |
| MJWI20-48S033 | 48 (18 - 75) | 3.3 | 4,500 | 88% |
| MJWI20-48S05 | | 5 | 4,000 | 89% |
| MJWI20-48S12 | | 12 | 1,670 | 89% |
| MJWI20-48S15 | | 15 | 1,340 | 89% |
| MJWI20-48S24 | | 24 | 835 | 88% |
| MJWI20-48D12 | | ±12 | ±835 | 89% |
| MJWI20-48D15 | ±15 | ±670 | 89% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

MJW25 Series | 25W

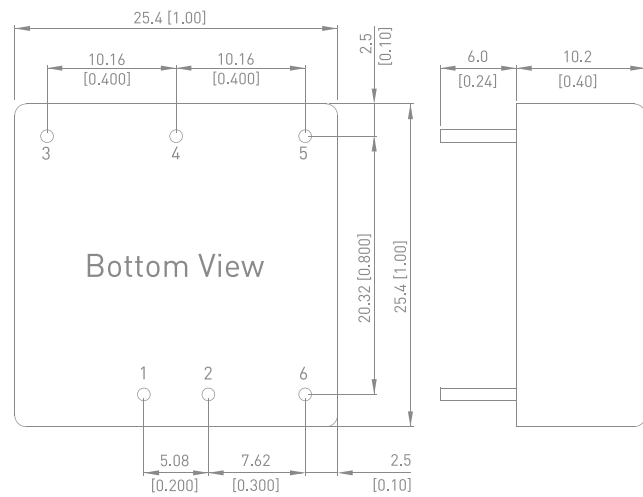


- Smallest Encapsulated 25W Converter
- Ultra-compact 1" X 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 90%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MJW25-12S033 | 12 (9 - 18) | 3.3 | 6,000 | 87% |
| MJW25-12S05 | | 5 | 5,000 | 89% |
| MJW25-12S12 | | 12 | 2,090 | 89% |
| MJW25-12S15 | | 15 | 1,670 | 89% |
| MJW25-12D12 | | ±12 | ±1040 | 89% |
| MJW25-12D15 | ±15 | ±840 | 89% | |
| MJW25-24S033 | 24 (18 - 36) | 3.3 | 6,000 | 88% |
| MJW25-24S05 | | 5 | 5,000 | 90% |
| MJW25-24S12 | | 12 | 2,090 | 90% |
| MJW25-24S15 | | 15 | 1,670 | 90% |
| MJW25-24D12 | | ±12 | ±1040 | 89% |
| MJW25-24D15 | ±15 | ±840 | 89% | |
| MJW25-48S033 | 48 (36 - 75) | 3.3 | 6,000 | 88% |
| MJW25-48S05 | | 5 | 5,000 | 90% |
| MJW25-48S12 | | 12 | 2,090 | 90% |
| MJW25-48S15 | | 15 | 1,670 | 90% |
| MJW25-48D12 | | ±12 | ±1040 | 89% |
| MJW25-48D15 | ±15 | ±840 | 89% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

MJWI25 Series | 25W

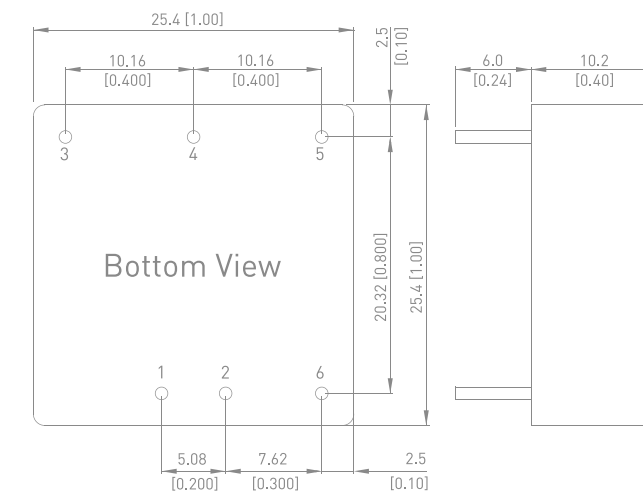


- Smallest Encapsulated 25W Converter
- Ultra-compact 1" X 1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 90%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MJWI25-24S033 | 24 (9 - 36) | 3.3 | 6,000 | 87% |
| MJWI25-24S05 | | 5 | 5,000 | 89% |
| MJWI25-24S12 | | 12 | 2,090 | 89% |
| MJWI25-24S15 | | 15 | 1,670 | 90% |
| MJWI25-24D12 | | ±12 | ±1040 | 89% |
| MJWI25-24D15 | ±15 | ±840 | 89% | |
| MJWI25-48S033 | 48 (18 - 75) | 3.3 | 6,000 | 88% |
| MJWI25-48S05 | | 5 | 5,000 | 90% |
| MJWI25-48S12 | | 12 | 2,090 | 90% |
| MJWI25-48S15 | | 15 | 1,670 | 90% |
| MJWI25-48D12 | | ±12 | ±1040 | 89% |
| MJWI25-48D15 | ±15 | ±840 | 89% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

MJWI30 Series | 30W

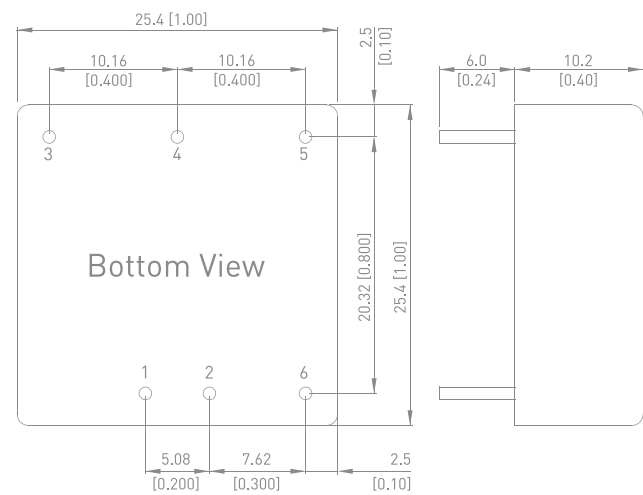


- Smallest Encapsulated 30W Converter
- Ultra-compact 1"x1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 90%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Very low no load power consumption
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MJWI30-24S033 | 24 (9 - 36) | 3.3 | 7,000 | 87% |
| MJWI30-24S05 | | 5 | 6,000 | 88% |
| MJWI30-24S12 | | 12 | 2,500 | 88% |
| MJWI30-24S15 | | 15 | 2,000 | 88% |
| MJWI30-24S24 | | 24 | 1,250 | 88% |
| MJWI30-24D12 | | ±12 | ±1250 | 88% |
| MJWI30-24D15 | ±15 | ±1000 | 88% | |
| MJWI30-48S033 | 48 (18 - 75) | 3.3 | 7,000 | 87% |
| MJWI30-48S05 | | 5 | 6,000 | 88% |
| MJWI30-48S12 | | 12 | 2,500 | 90% |
| MJWI30-48S15 | | 15 | 2,000 | 90% |
| MJWI30-48S24 | | 24 | 1,250 | 90% |
| MJWI30-48D12 | | ±12 | ±1250 | 90% |
| MJWI30-48D15 | ±15 | ±1000 | 90% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

MKW40 Series | 40W

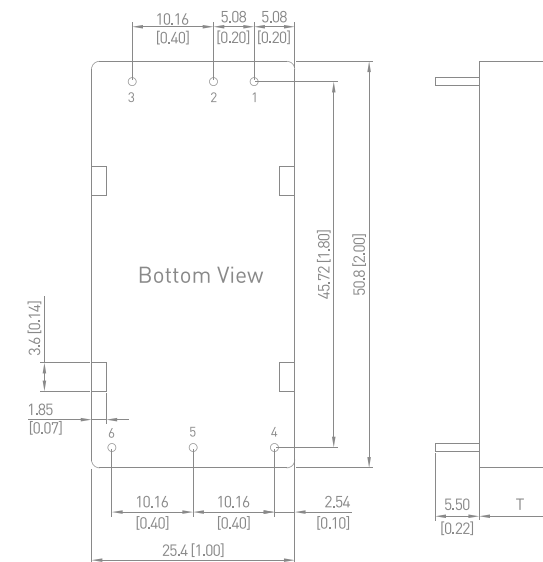


- Smallest Encapsulated 40W Converter
- Compact Size of 2" X 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MKW40-12S033 | 12 (9 - 18) | 3.3 | 8,000 | 89% |
| MKW40-12S05 | | 5 | 8,000 | 89% |
| MKW40-12S12 | | 12 | 3,330 | 89% |
| MKW40-12S15 | | 15 | 2,670 | 90% |
| MKW40-12S24 | | 24 | 1,670 | 91% |
| MKW40-12D12 | | ±12 | ±1670 | 88% |
| MKW40-12D15 | ±15 | ±1330 | 88% | |
| MKW40-24S033 | 24 (18 - 36) | 3.3 | 8,000 | 90% |
| MKW40-24S05 | | 5 | 8,000 | 91% |
| MKW40-24S12 | | 12 | 3,330 | 91% |
| MKW40-24S15 | | 15 | 2,670 | 91% |
| MKW40-24S24 | | 24 | 1,670 | 91% |
| MKW40-24D12 | | ±12 | ±1670 | 89% |
| MKW40-24D15 | ±15 | ±1330 | 89% | |
| MKW40-48S033 | 48 (36 - 75) | 3.3 | 8,000 | 90% |
| MKW40-48S05 | | 5 | 8,000 | 91% |
| MKW40-48S12 | | 12 | 3,330 | 92% |
| MKW40-48S15 | | 15 | 2,670 | 92% |
| MKW40-48S24 | | 24 | 1,670 | 91% |
| MKW40-48D12 | | ±12 | ±1670 | 89% |
| MKW40-48D15 | ±15 | ±1330 | 89% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | Remote On/Off |
| 4 | +Vout | +Vout |
| 5 | -Vout | Common |
| 6 | Trim | -Vout |

T: 10.2[0.40] for other output models
T: 11.0[0.43] for 24V output models

MKWI40 Series | 40W

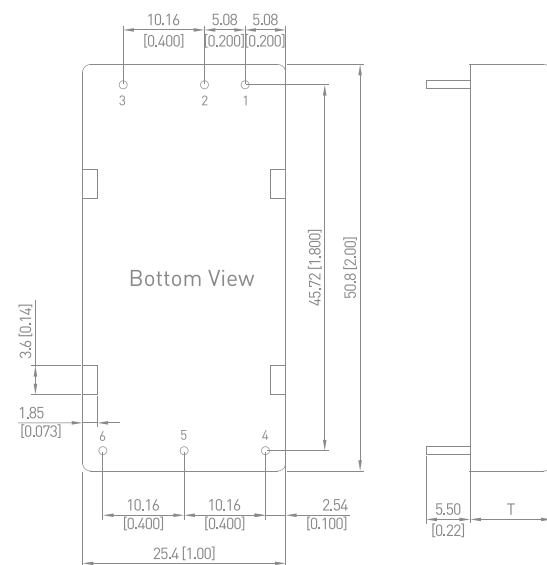


- Smallest Encapsulated 40W Converter
- Ultra-compact 2" X 1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 91%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MKWI40-24S033 | 24 (9 - 36) | 3.3 | 8,000 | 89% |
| MKWI40-24S05 | | 5 | 8,000 | 90% |
| MKWI40-24S12 | | 12 | 3,330 | 89% |
| MKWI40-24S15 | | 15 | 2,670 | 89% |
| MKWI40-24S24 | | 24 | 1,670 | 91% |
| MKWI40-24D12 | | ±12 | ±1670 | 88% |
| MKWI40-24D15 | | ±15 | ±1330 | 88% |
| MKWI40-48S033 | 48 (18 - 75) | 3.3 | 8,000 | 89% |
| MKWI40-48S05 | | 5 | 8,000 | 90% |
| MKWI40-48S12 | | 12 | 3,330 | 90% |
| MKWI40-48S15 | | 15 | 2,670 | 90% |
| MKWI40-48S24 | | 24 | 1,670 | 91% |
| MKWI40-48D12 | | ±12 | ±1670 | 88% |
| MKWI40-48D15 | | ±15 | ±1330 | 88% |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | Remote On/Off |
| 4 | +Vout | +Vout |
| 5 | -Vout | Common |
| 6 | Trim | -Vout |

T: 10.2[0.40] for other output models
T: 11.0[0.43] for 24V output models

MKW50 Series | 50W

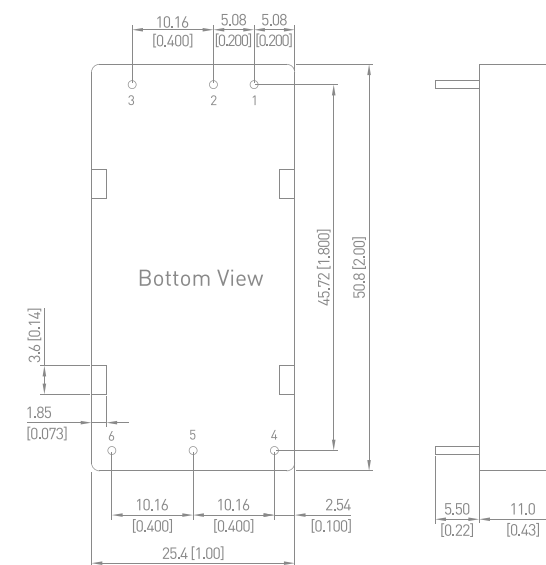


- Smallest Encapsulated 50W Converter
- Ultra-compact 2" X 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency | |
|--------------|---------------------|----------------------|---------------------|------------|-----|
| MKW50-12S033 | 12 (9 - 18) | 3.3 | 10,000 | 89% | |
| MKW50-12S05 | | 5 | 10,000 | 90% | |
| MKW50-12S12 | | 12 | 4,170 | 91% | |
| MKW50-12S15 | | 15 | 3,330 | 91% | |
| MKW50-12S24 | | 24 | 2,080 | 91% | |
| MKW50-24S033 | 24 (18 - 36) | 3.3 | 10,000 | 89% | |
| MKW50-24S05 | | 5 | 10,000 | 92% | |
| MKW50-24S12 | | 12 | 4,170 | 92% | |
| MKW50-24S15 | | 15 | 3,330 | 92% | |
| MKW50-24S24 | | 24 | 2,080 | 91% | |
| MKW50-48S033 | | 48 (36 - 75) | 3.3 | 10,000 | 89% |
| MKW50-48S05 | | | 5 | 10,000 | 92% |
| MKW50-48S12 | 12 | | 4,170 | 92% | |
| MKW50-48S15 | 15 | | 3,330 | 92% | |
| MKW50-48S24 | 24 | | 2,080 | 91% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | Remote On/Off |
| 4 | +Vout |
| 5 | -Vout |
| 6 | Trim |

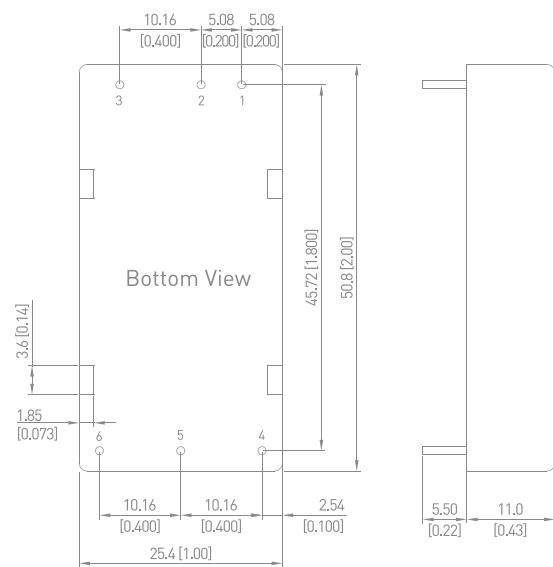
MKWI50 Series | 50W



- Smallest Encapsulated 50W Converter
- Compact Size of 2" X 1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 1500 VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MKWI50-24S033 | 24 (9 - 36) | 3.3 | 10,000 | 90% |
| MKWI50-24S05 | | 5 | 10,000 | 91% |
| MKWI50-24S12 | | 12 | 4,170 | 92% |
| MKWI50-24S15 | | 15 | 3,330 | 92% |
| MKWI50-24S24 | | 24 | 2,080 | 91% |
| MKWI50-48S033 | 48 (18 - 75) | 3.3 | 10,000 | 90% |
| MKWI50-48S05 | | 5 | 10,000 | 91% |
| MKWI50-48S12 | | 12 | 4,170 | 92% |
| MKWI50-48S15 | | 15 | 3,330 | 92% |
| MKWI50-48S24 | | 24 | 2,080 | 91% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | Remote On/Off |
| 4 | +Vout |
| 5 | -Vout |
| 6 | Trim |

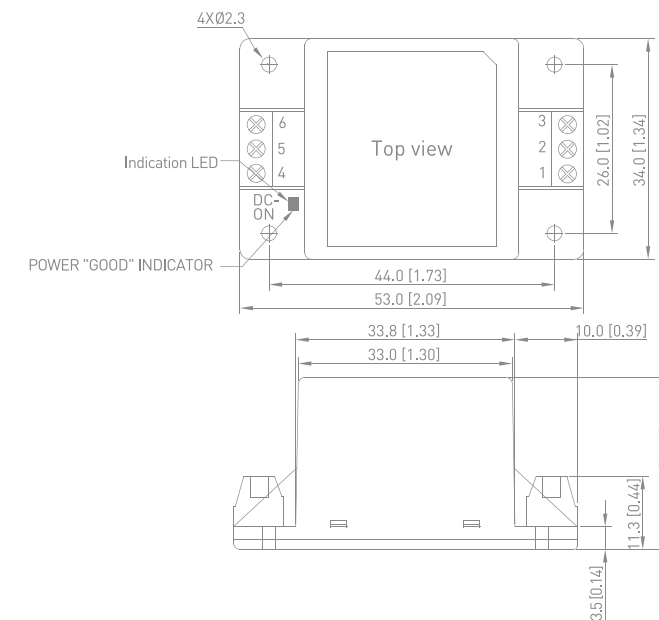
MJWI06C Series | 6W



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 85%
- I/O Isolation 3000 VDC
- Operating Ambient Temp. Range -40°C to +92.5°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- EMI Emission EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MJWI06-24S05C | 24 (9 - 36) | 5 | 1,200 | 81% |
| MJWI06-24S051C | | 5.1 | 1,200 | 81% |
| MJWI06-24S12C | | 12 | 500 | 84% |
| MJWI06-24S15C | | 15 | 400 | 84% |
| MJWI06-24S24C | | 24 | 250 | 85% |
| MJWI06-24S48C | | 48 | 125 | 83% |
| MJWI06-24D12C | | ±12 | ±250 | 84% |
| MJWI06-24D15C | | ±15 | ±200 | 85% |
| MJWI06-24D24C | | ±24 | ±125 | 84% |
| MJWI06-48S05C | | 48 (18 - 75) | 5 | 1,200 |
| MJWI06-48S051C | 5.1 | | 1,200 | 80% |
| MJWI06-48S12C | 12 | | 500 | 84% |
| MJWI06-48S15C | 15 | | 400 | 84% |
| MJWI06-48S24C | 24 | | 250 | 85% |
| MJWI06-48S48C | 48 | | 125 | 83% |
| MJWI06-48D12C | ±12 | | ±250 | 85% |
| MJWI06-48D15C | ±15 | | ±200 | 85% |
| MJWI06-48D24C | ±24 | | ±125 | 84% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 3 | +Vin | +Vin |
| 4 | -Vout | -Vout |
| 5 | NC | Common |
| 6 | +Vout | +Vout |

NC= No Connection

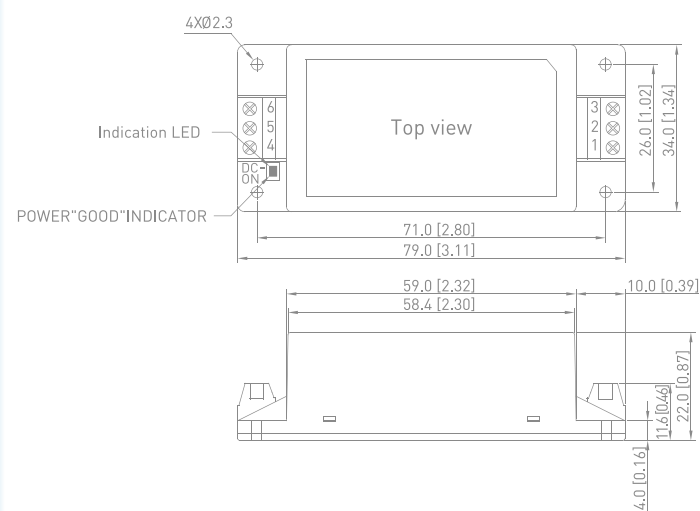
MKWI10C Series | 10W



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 86%
- I/O Isolation 3000 VDC
- Operating Ambient Temp. Range -40°C to +92.5°C
- No Min. Load Requirement
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- EMI Emission EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MKWI10-24S05C | 24 [9 - 36] | 5 | 2,000 | 84% |
| MKWI10-24S051C | | 5.1 | 2,000 | 84% |
| MKWI10-24S12C | | 12 | 833 | 86% |
| MKWI10-24S15C | | 15 | 666 | 86% |
| MKWI10-24S24C | | 24 | 416 | 86% |
| MKWI10-24S48C | | 48 | 208 | 84% |
| MKWI10-24D12C | | ±12 | ±416 | 86% |
| MKWI10-24D15C | | ±15 | ±333 | 86% |
| MKWI10-24D24C | | ±24 | ±208 | 85% |
| MKWI10-48S05C | | 24 [18 - 36] | 5 | 2,000 |
| MKWI10-48S051C | 5.1 | | 2,000 | 84% |
| MKWI10-48S12C | 12 | | 833 | 86% |
| MKWI10-48S15C | 15 | | 666 | 86% |
| MKWI10-48S24C | 24 | | 416 | 86% |
| MKWI10-48S48C | 48 | | 208 | 84% |
| MKWI10-48D12C | ±12 | | ±416 | 86% |
| MKWI10-48D15C | ±15 | | ±333 | 86% |
| MKWI10-48D24C | ±24 | ±208 | 85% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 3 | +Vin | +Vin |
| 4 | -Vout | -Vout |
| 5 | NC | Common |
| 6 | +Vout | +Vout |

NC: No Connection

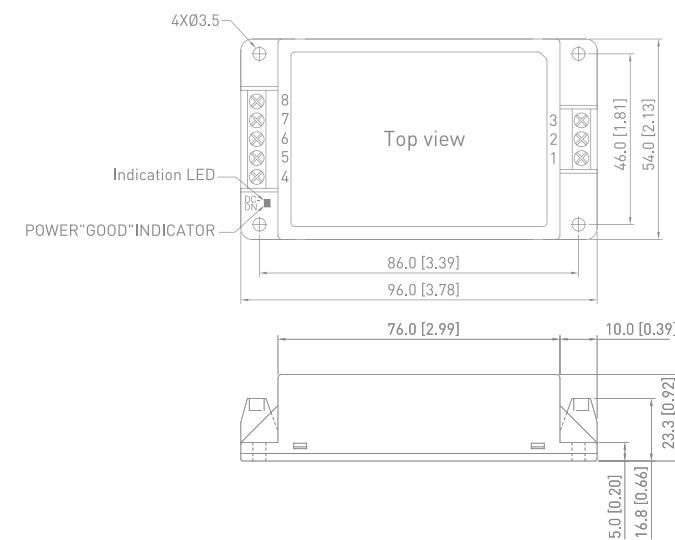
MOWI20C Series | 20W



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 91%
- I/O Isolation 2500 VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Under-voltage, Overload/Voltage and Short Circuit Protection
- No Min. Load Requirement
- Remote On/Off Control
- Conducted EMI EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MOWI20-24S051C | 24 [9 - 36] | 5.1 | 4,000 | 90% |
| MOWI20-24S12C | | 12 | 1,670 | 91% |
| MOWI20-24S24C | | 24 | 835 | 91% |
| MOWI20-24S48C | | 48 | 420 | 89% |
| MOWI20-48S051C | 48 [18 - 75] | 5.1 | 4,000 | 90% |
| MOWI20-48S12C | | 12 | 1,670 | 91% |
| MOWI20-48S24C | | 24 | 835 | 91% |
| MOWI20-48S48C | | 48 | 420 | 89% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | Remote On/Off |
| 2 | -Vin |
| 3 | +Vin |
| 4 | NC |
| 5 | -Vout |
| 6 | NC |
| 7 | +Vout |
| 8 | NC |

NC= No Connection

MQWI40C Series | 40W

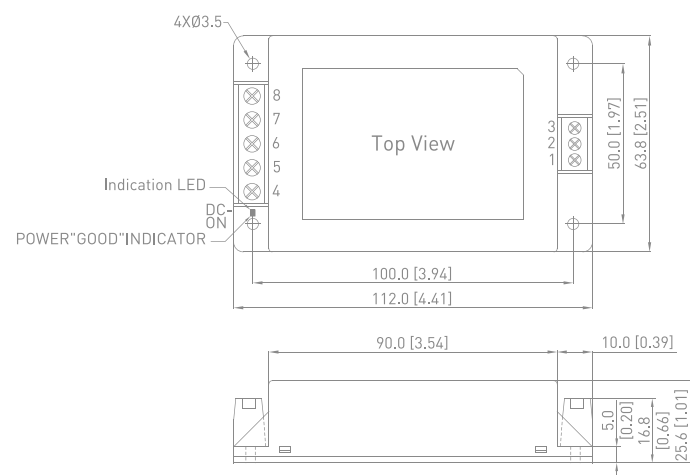


| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MQWI40-24S051C | 24 (9 - 36) | 5.1 | 8,000 | 90% |
| MQWI40-24S12C | | 12 | 3,330 | 90% |
| MQWI40-24S24C | | 24 | 1,670 | 90% |
| MQWI40-24S48C | | 48 | 835 | 89% |
| MQWI40-48S051C | 48 (18 - 75) | 5.1 | 8,000 | 89% |
| MQWI40-48S12C | | 12 | 3,330 | 91% |
| MQWI40-48S24C | | 24 | 1,670 | 92% |
| MQWI40-48S48C | | 48 | 835 | 90% |



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 2500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Under-voltage, Overload/Voltage and Short Circuit Protection
- No Min. Load Requirement
- Remote On/Off Control
- Conducted EMI EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | Remote On/Off |
| 2 | -Vin |
| 3 | +Vin |
| 4 | +Vout |
| 5 | NC |
| 6 | -Vout |
| 7 | NC |
| 8 | NC |

NC= No Connection

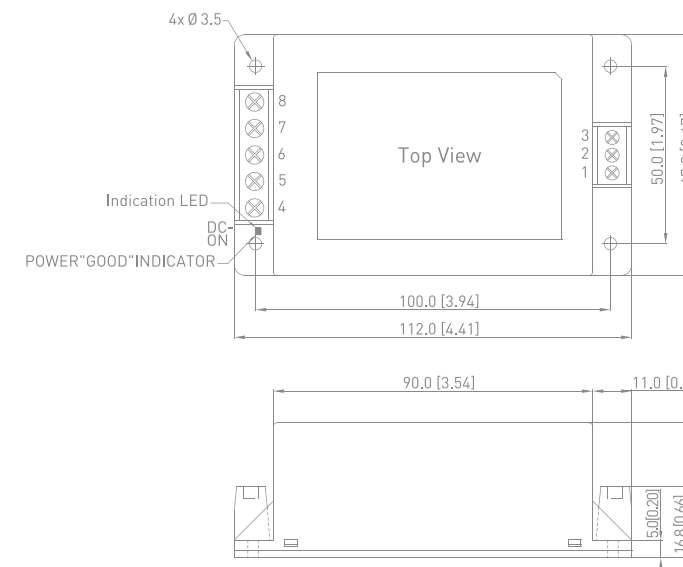
MRWI60C Series | 60W



| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MRWI60-24S051C | 24 (9 - 36) | 5.1 | 12,000 | 90% |
| MRWI60-24S12C | | 12 | 5,000 | 91% |
| MRWI60-24S24C | | 24 | 2,500 | 91% |
| MRWI60-24S48C | | 48 | 1,250 | 91% |
| MRWI60-48S051C | 48 (18 - 75) | 5.1 | 12,000 | 91% |
| MRWI60-48S12C | | 12 | 5,000 | 92% |
| MRWI60-48S24C | | 24 | 2,500 | 91% |
| MRWI60-48S48C | | 48 | 1,250 | 91% |

- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 2500 VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Under-voltage, Overload/Voltage and Short Circuit Protection
- No Min. Load Requirement
- Remote On/Off Control
- Conducted EMI EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | Remote On/Off |
| 2 | -Vin |
| 3 | +Vin |
| 4 | NC |
| 5 | +Vout |
| 6 | NC |
| 7 | -Vout |
| 8 | NC |

NC= No Connection

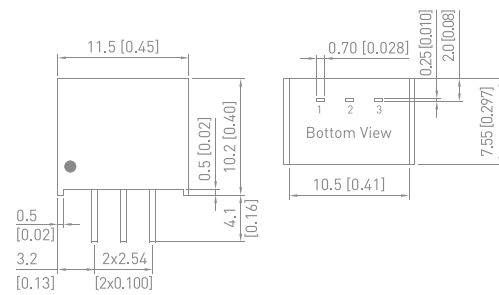
M78AR-0.5 Series | 0.5A



- Industrial Standard SIP-3 Package
- Pin-out compatible with LM78xx Linear Regulators
- Fully Regulated Output Voltage
- Low Ripple & Noise
- Excellent Efficiency up to 97%
- Operating Ambient Temp. Range -40°C to +90°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Over Temp. and Short Circuit Protection

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| M78AR015-0.5 | 4.75 - 32 | 1.5 | 500 | 63% |
| M78AR018-0.5 | | 1.8 | 500 | 71% |
| M78AR025-0.5 | | 2.5 | 500 | 77% |
| M78AR033-0.5 | | 3.3 | 500 | 81% |
| M78AR05-0.5 | 6.5 - 32 | 5 | 500 | 86% |
| M78AR065-0.5 | 8 - 32 | 6.5 | 500 | 88% |
| M78AR09-0.5 | 11 - 32 | 9 | 500 | 92% |
| M78AR12-0.5 | 15 - 32 | 12 | 500 | 94% |
| M78AR15-0.5 | 18 - 32 | 15 | 500 | 95% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | +Vin |
| 2 | GND |
| 3 | +Vout |

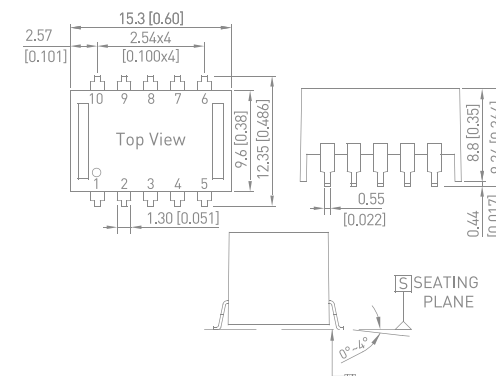
M78SAR-0.5 Series | 0.5A



- Industrial SMD Package
 - Fully Regulated Output Voltage
 - Low Ripple & Noise
 - Excellent Efficiency up to 97%
 - Operating Ambient Temp. Range -40°C to +90°C
 - No Min. Load Requirement
 - Over Temp. and Short Circuit Protection
 - Remote ON/OFF Control, Output Voltage Trim
 - Qualified for Lead-free Reflow Solder Process
- According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| M78SAR015-0.5 | 4.75 - 32 | 1.5 | 500 | 63% |
| M78SAR018-0.5 | | 1.8 | 500 | 71% |
| M78SAR025-0.5 | | 2.5 | 500 | 77% |
| M78SAR033-0.5 | | 3.3 | 500 | 81% |
| M78SAR05-0.5 | 6.5 - 32 | 5 | 500 | 86% |
| M78SAR065-0.5 | 8 - 32 | 6.5 | 500 | 88% |
| M78SAR09-0.5 | 11 - 32 | 9 | 500 | 92% |
| M78SAR12-0.5 | 15 - 32 | 12 | 500 | 94% |
| M78SAR15-0.5 | 18 - 32 | 15 | 500 | 95% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | +Vin |
| 3 | GND |
| 4 | +Vout |
| 5 | +Vout |
| 6 | Vadj. |
| 7 | GND |
| 8 | GND |
| 9 | GND |
| 10 | Remote On/Off |

M78AR-1 Series | 1A

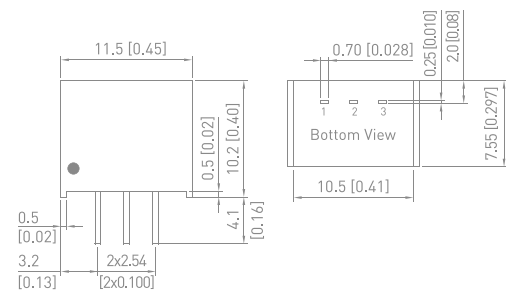


| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| M78AR033-1 | 6.5 - 32 | 3.3 | 1,000 | 87% |
| M78AR05-1 | 6.5 - 32 | 5 | 1,000 | 90% |
| M78AR12-1 | 6.5 - 32 | 12 | 1,000 | 94% |



- Industrial Standard SIP-3 Package
- Pin-out compatible with LM78xx Linear Regulators
- Fully Regulated Output Voltage
- Low Ripple & Noise
- Excellent Efficiency up to 96%
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Over Temp. and Short Circuit Protection

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | +Vin |
| 2 | GND |
| 3 | +Vout |

AAF-03 Series | 3W

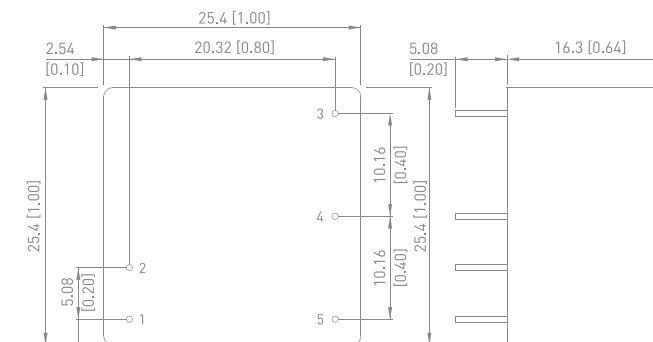


| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| AAF-03S03 | 85-264VAC 120-370VDC | 3.3 | 900 | 70% |
| AAF-03S05 | | 5 | 600 | 72% |
| AAF-03S09 | | 9 | 333 | 77% |
| AAF-03S12 | | 12 | 250 | 78% |
| AAF-03S15 | | 15 | 200 | 78% |
| AAF-03S24 | | 24 | 125 | 78% |



- Ultra Compact Size 1.0" x 1.0" x 0.64"
- Fully Encapsulated Plastic Case for PCB Mounting
- Universal Input 85-264VAC
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +70°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55032/14-1 Class B Approved
- EMS Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Eco Design, Low No Load Power Consumption < 150mW
- UL/cUL/IEC/EN 62368-1(60950-1), TUV/IEC/EN 60335-1 Safety Approval & CE Marking

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|------------|
| 1 | AC Neutral |
| 2 | AC Line |
| 3 | NC |
| 4 | -Vout |
| 5 | +Vout |

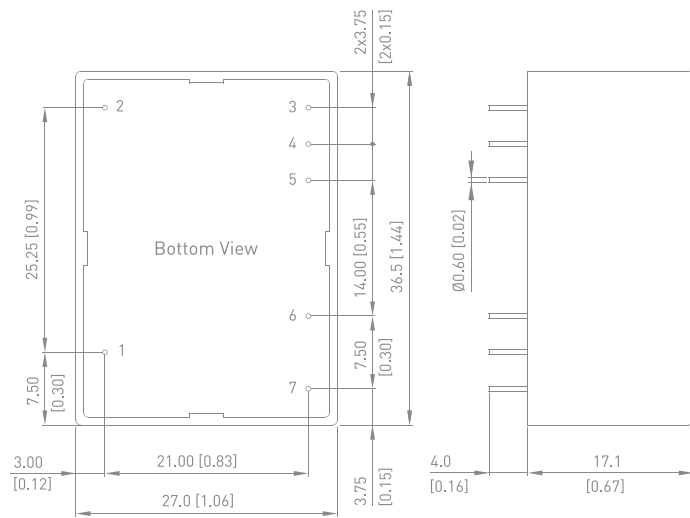
ABF-04 Series | 4W



- Fully Encapsulated Plastic Case for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +60°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN55032 Class B Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Eco Design, Compliant to Energy Star Specification and ErP Directive 2009/125/EC
- UL/cUL/IEC/EN (62368-1)60950-1 Safety Approval & CE Marking

| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| ABF-04S03 | 85-264VAC 120-370VDC | 3.3 | 1,200 | 70% |
| ABF-04S05 | | 5 | 800 | 72% |
| ABF-04S09 | | 9 | 444 | 75% |
| ABF-04S12 | | 12 | 333 | 76% |
| ABF-04S15 | | 15 | 267 | 76% |
| ABF-04S24 | | 24 | 167 | 77% |
| ABF-04D53 | | +5 | 600 | 72% |
| | | +3.3 | 150 | |
| | | +12 | 250 | |
| ABF-04D125 | | +15 | 120 | 75% |
| ABF-04D12 | | ±12 | ±166 | 77% |
| ABF-04D15 | | ±15 | ±133 | 77% |

Mechanical Dimensions



Pin Connections

| Pin | Single | D12/D15 | D53/D125 |
|-----|--------|------------|----------|
| 1 | | NC | |
| 2 | | NC | |
| 3 | +Vout | +Vout | +Vout1 |
| 4 | -Vout | Common | Common |
| 5 | No Pin | -Vout | +Vout2 |
| 6 | | AC Netural | |
| 7 | | AC Line | |

NC: No Connection

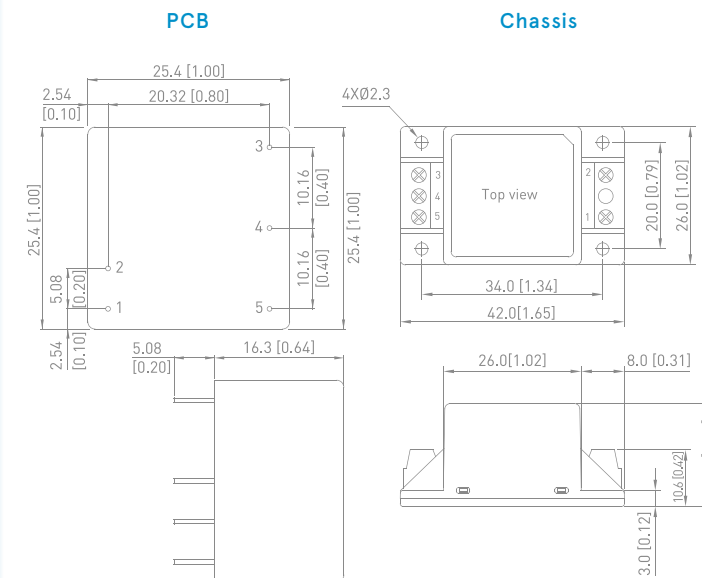
AAF-05 Series | 5W



- Ultra Compact Size 1.0 x 1.0 x 0.64"
- Fully Encapsulated Plastic Case for PCB and Chassis Mounting Version
- Universal Input 85-264VAC
- I/O Isolation 3000VAC with Reinforced Insulation
- No Min. Load Requirement
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55032/14-1 Class B Approved
- EMS Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Eco Design, No Load Input Power 300mW max.
- Safety Approval to UL/cUL/IEC/EN 62368-1(60950-1), TUV IEC/EN 60335-1 & CE Marking

| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| AAF-05S03 | 85-264VAC 120-370VDC | 3.3 | 1,515 | 74% |
| AAF-05S05 | | 5 | 1,000 | 80% |
| AAF-05S09 | | 9 | 555 | 82% |
| AAF-05S12 | | 12 | 416 | 82% |
| AAF-05S15 | | 15 | 333 | 83% |
| AAF-05S24 | | 24 | 208 | 83% |
| AAF-05S48 | | 48 | 104 | 85% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|------------|
| 1 | AC Netural |
| 2 | AC Line |
| 3 | NC |
| 4 | -Vout |
| 5 | +Vout |

NC= No Connection

NEW

AMF-07 Series | 7W



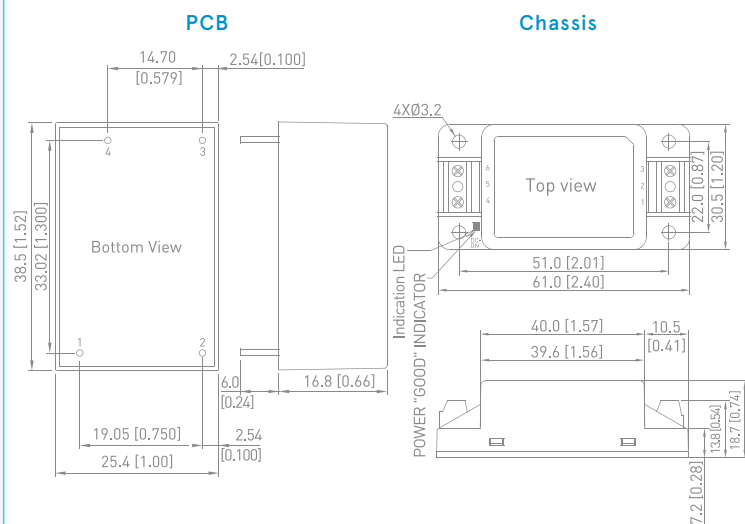
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|------------------------|----------------------|---------------------|------------|
| AMF-07S05 | 85-264VAC 90-370VDC | 5 | 1,400 | 80% |
| AMF-07S12 | | 12 | 585 | 84% |
| AMF-07S15 | | 15 | 467 | 84% |
| AMF-07S24 | | 24 | 292 | 85% |
| AMF-07S48 | | 48 | 146 | 84% |



- Ultra Compact Size 1.52x1.00x0.66"
- Fully Encapsulated Plastic Case for PCB and Chassis Mounting Version
- Universal Input 85-264VAC, 90-370VDC, 47-440Hz
- I/O Isolation 3000VAC with Reinforced Insulation
- No Min. Load Requirement & Low no-load power consumption
- Operating Ambient Temp. Range -40°C to +80°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN55014-1/55032 Class B Approved
- EMS Immunity EN61000-4-2,3,4,5,6,8,11 Approved
- Safety Approval to UL/cUL/IEC/EN 62368-1, IEC/EN 60335-1 & CE Marking

Mechanical Dimensions

Pin Connections



| Pin | PCB | Chassis |
|-----|------------|------------|
| 1 | AC Netural | AC Netural |
| 2 | AC Line | No Pin |
| 3 | -Vout | AC Line |
| 4 | +Vout | -Vout |
| 5 | - | No Pin |
| 6 | - | +Vout |

ACF-10 Series | 10W



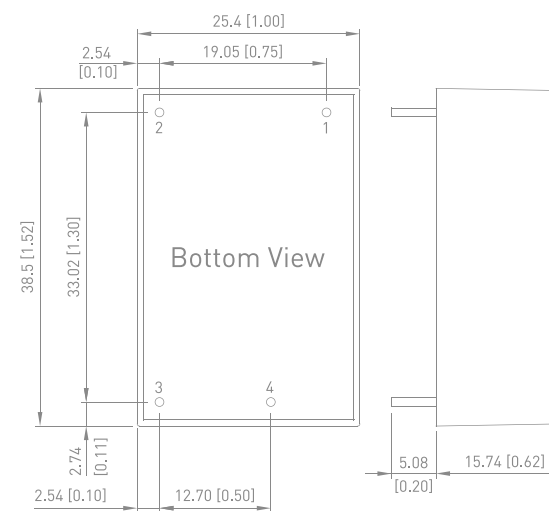
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| ACF-10S03 | 85-264VAC 120-370VDC | 3.3 | 2,600 | 77% |
| ACF-10S05 | | 5 | 2,000 | 80% |
| ACF-10S09 | | 9 | 1,100 | 83% |
| ACF-10S12 | | 12 | 830 | 84% |
| ACF-10S15 | | 15 | 660 | 84% |
| ACF-10S24 | | 24 | 410 | 86% |
| ACF-10S48 | | 48 | 210 | 84% |



- Ultra Compact Size 1.5 x 1.0 x 0.6"
- Fully Encapsulated Module for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- I/O Isolation 4000VAC with Reinforced Insulation
- No Min. Load Requirement
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55032/14-1 Class B Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Eco Design, Low No Load Power Consumption < 150mW
- Safety Approval to UL/cUL/IEC/EN 62368-1(60950-1), TUV IEC/EN 60335-1 & CE Marking

Mechanical Dimensions

Pin Connections



| Pin | Function |
|-----|------------|
| 1 | AC Netural |
| 2 | AC Line |
| 3 | -Vout |
| 4 | +Vout |

NEW

AMF-15 Series | 15W



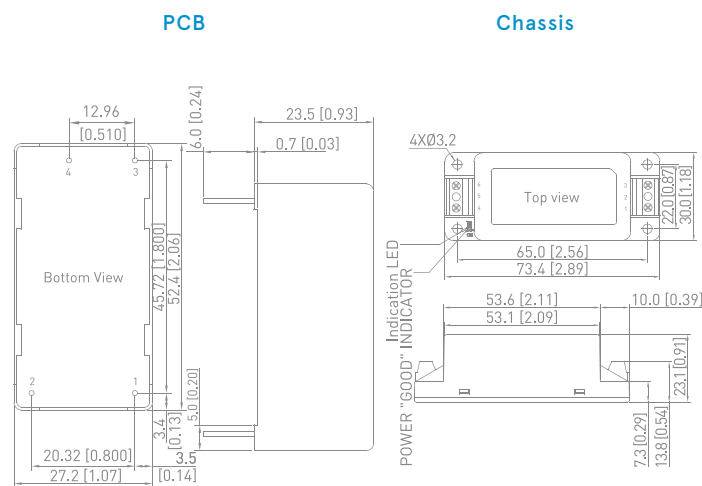
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|------------------------|----------------------|---------------------|------------|
| AMF-15S051 | 85-264VAC 90-370VDC | 5.1 | 3,000 | 80% |
| AMF-15S12 | | 12 | 1,250 | 85% |
| AMF-15S15 | | 15 | 1,000 | 86% |
| AMF-15S24 | | 24 | 625 | 86% |
| AMF-15S48 | | 48 | 313 | 86% |



- Ultra Compact Size 2.52x1.77x0.94 "
- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 90-370VDC, 47-440Hz
- I/O Isolation 3000VAC with Reinforced Insulation
- No Min. Load Requirement & Low no-load power consumption
- Operating Ambient Temp. Range -40°C to +70°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN55014-1/55032 Class B Approved
- EMS Immunity EN61000-4-2,3,4,5,6,8,11 Approved
- Safety Approval to UL/cUL/IEC/EN 62368-1, IEC/EN 60335-1 & CE Marking

Mechanical Dimensions

Pin Connections



| Pin | PCB | Chassis |
|-----|------------|------------|
| 1 | AC Neutral | AC Neutral |
| 2 | AC Line | No Pin |
| 3 | -Vout | AC Line |
| 4 | +Vout | +Vout |
| 5 | - | No Pin |
| 6 | - | -Vout |

AGF-15 Series | 15W



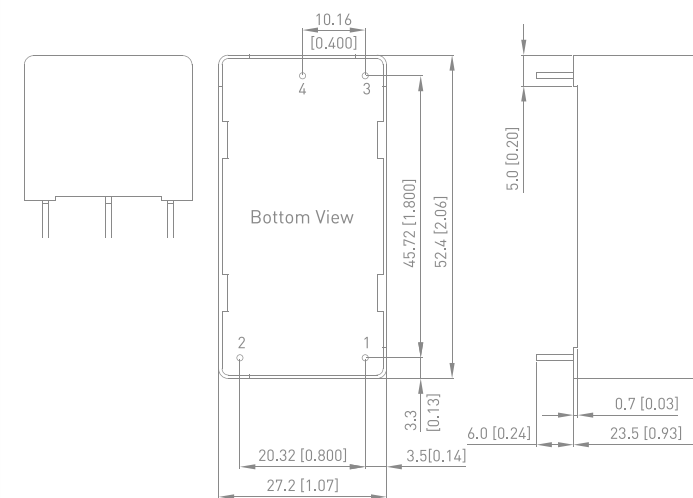
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| AGF-15S033 | 85-264VAC 120-370VDC | 3.3 | 3,500 | 75% |
| AGF-15S05 | | 5 | 3,000 | 79% |
| AGF-15S09 | | 9 | 1,667 | 81% |
| AGF-15S12 | | 12 | 1,250 | 82% |
| AGF-15S15 | | 15 | 1,000 | 82% |
| AGF-15S24 | | 24 | 625 | 84% |
| AGF-15S48 | | 48 | 313 | 82% |



- Ultra Compact Size 2.06 x 1.07 x 0.93"
- Fully Encapsulated Module for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- I/O Isolation 3000VAC with Reinforced Insulation
- No Min. Load Requirement
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55032/14-1 Class B Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Eco Design, Low No Load Power Consumption < 100mW
- UL/cUL/IEC/EN 62368-1(60950-1), TUV IEC/EN 60335-1 Safety Approval & CE Marking

Mechanical Dimensions

Pin Connections



| Pin | Function |
|-----|------------|
| 1 | AC Neutral |
| 2 | AC Line |
| 3 | +Vout |
| 4 | -Vout |

NEW

AMF-30 Series | 30W



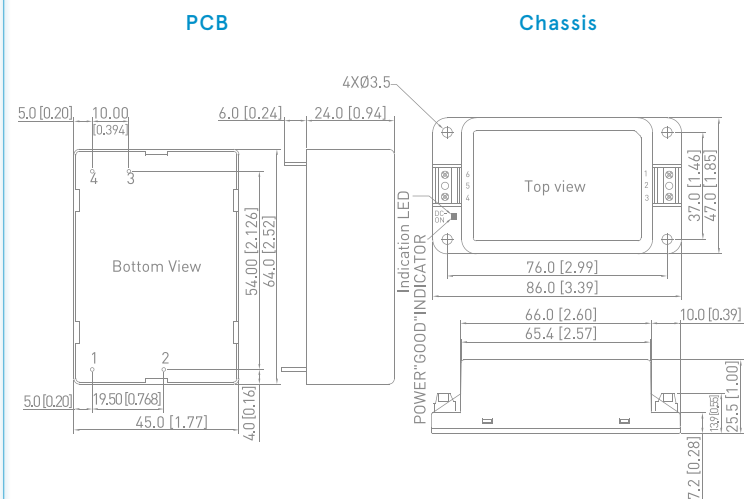
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|------------------------|----------------------|---------------------|------------|
| AMF-30S051 | 85-264VAC 90-370VDC | 5.1 | 5,000 | 86% |
| AMF-30S12 | | 12 | 2,500 | 88% |
| AMF-30S15 | | 15 | 2,000 | 88% |
| AMF-30S24 | | 24 | 1,250 | 88% |
| AMF-30S48 | | 48 | 625 | 88% |



- Ultra Compact Size 2.52x1.77x0.94 "
- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 90-370VDC, 47-440Hz
- I/O Isolation 3000VAC with Reinforced Insulation
- No Min. Load Requirement & Low no-load power consumption
- Operating Ambient Temp. Range -40°C to +70°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN55014-1/55032 Class B Approved
- EMS Immunity EN61000-4-2,3,4,5,6,8,11 Approved
- Safety Approval to UL/cUL/IEC/EN 62368-1, IEC/EN 60335-1 & CE Marking

Mechanical Dimensions

Pin Connections



| Pin | PCB | Chassis |
|-----|------------|------------|
| 1 | AC Line | AC Line |
| 2 | AC Neutral | No Pin |
| 3 | +Vout | AC Neutral |
| 4 | -Vout | +Vout |
| 5 | - | No Pin |
| 6 | - | -Vout |

NEW

AMF-60 Series 60W



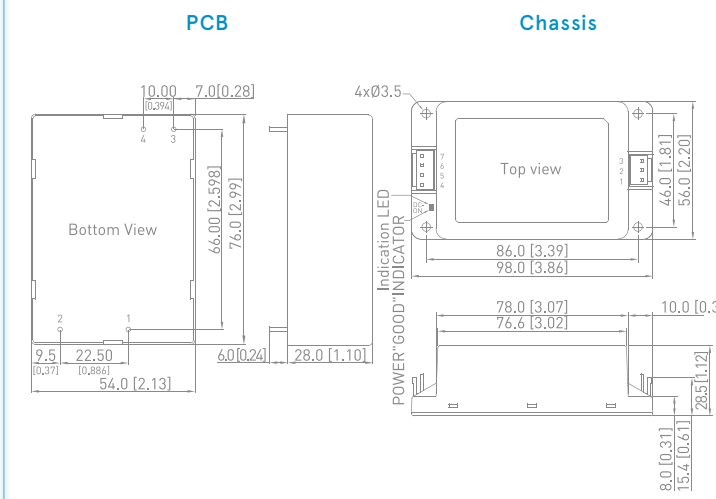
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|------------------------|----------------------|---------------------|------------|
| AMF-60S051 | 85-264VAC 90-370VDC | 5.1 | 10,000 | 87% |
| AMF-60S12 | | 12 | 5,000 | 89% |
| AMF-60S15 | | 15 | 4,000 | 89% |
| AMF-60S24 | | 24 | 2,500 | 89% |
| AMF-60S48 | | 48 | 1,250 | 89% |



- Ultra Compact Size 2.99x2.13x1.10 "
- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 90-370VDC, 47-440Hz
- I/O Isolation 3000VAC with Reinforced Insulation
- No Min. Load Requirement & Low no-load power consumption
- Operating Ambient Temp. Range -40°C to +70°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN55014-1/55032 Class B Approved
- EMC Immunity EN61000-4-2,3,4,5,6,8,11 Approved
- Safety Approval to UL/cUL/IEC/EN 62368-1, IEC/EN 60335-1 & CE Marking

Mechanical Dimensions

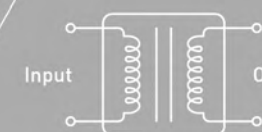
Pin Connections



| Pin | PCB | Chassis |
|-----|------------|------------|
| 1 | AC Line | AC Line |
| 2 | AC Neutral | No Pin |
| 3 | -Vout | AC Neutral |
| 4 | +Vout | -Vout |
| 5 | - | -Vout |
| 6 | - | +Vout |
| 7 | - | +Vout |

RAILWAY CERTIFIED POWER SOLUTIONS

POWER FOR
A BETTER FUTURE



-40°C



+88.5°C



5000M

MINMAX TECHNOLOGY



MIZI03 Series | 3W

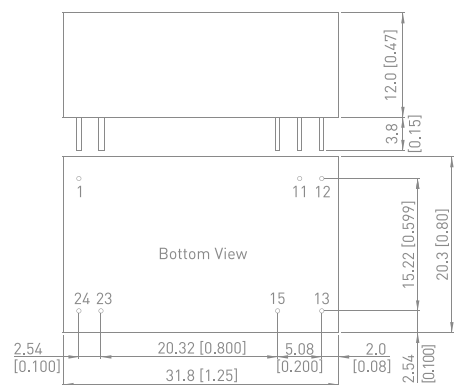


| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MIZI03-24S05 | 24 (9 - 36) | 5 | 600 | 80% |
| MIZI03-24S12 | | 12 | 250 | 84% |
| MIZI03-24S15 | | 15 | 200 | 85% |
| MIZI03-24D12 | | ±12 | ±125 | 83% |
| MIZI03-24D15 | | ±15 | ±100 | 84% |
| MIZI03-48S05 | 48 (18 - 75) | 5 | 600 | 80% |
| MIZI03-48S12 | | 12 | 250 | 83% |
| MIZI03-48S15 | | 15 | 200 | 84% |
| MIZI03-48D12 | | ±12 | ±125 | 83% |
| MIZI03-48D15 | | ±15 | ±100 | 83% |
| MIZI03-110S05 | 110 (40 - 160) | 5 | 600 | 80% |
| MIZI03-110S12 | | 12 | 250 | 84% |
| MIZI03-110S15 | | 15 | 200 | 84% |
| MIZI03-110D12 | | ±12 | ±125 | 83% |
| MIZI03-110D15 | | ±15 | ±100 | 85% |



- Industrial Standard DIP-24 Package
- Ultra-wide Input Ranges 9-36VDC, 18-75VDC, 40-160VDC
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +92°C
- No Min. Load Requirement
- Under-Voltage, Overload and Short Circuit Protection
- EMI Emission EN 55032/11 Class A Approved
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

MKZI10 Series | 10W



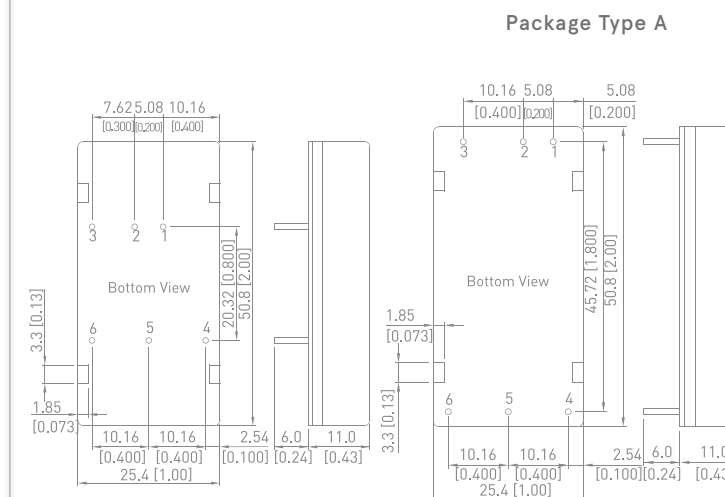
| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MKZI10-24S05 | 24 (9 - 36) | 5 | 2,000 | 84% |
| MKZI10-24S12 | | 12 | 835 | 86% |
| MKZI10-24S15 | | 15 | 670 | 87% |
| MKZI10-24S24 | | 24 | 417 | 88% |
| MKZI10-24D12 | | ±12 | ±417 | 86% |
| MKZI10-24D15 | ±15 | ±335 | 87% | |
| MKZI10-48S05 | 48 (18 - 75) | 5 | 2,000 | 85% |
| MKZI10-48S12 | | 12 | 835 | 87% |
| MKZI10-48S15 | | 15 | 670 | 87% |
| MKZI10-48S24 | | 24 | 417 | 86% |
| MKZI10-48D12 | | ±12 | ±417 | 89% |
| MKZI10-48D15 | ±15 | ±335 | 88% | |
| MKZI10-110S05 | 110 (40 - 160) | 5 | 2,000 | 82% |
| MKZI10-110S12 | | 12 | 835 | 85% |
| MKZI10-110S15 | | 15 | 670 | 85% |
| MKZI10-110S24 | | 24 | 417 | 85% |
| MKZI10-110D12 | | ±12 | ±417 | 86% |
| MKZI10-110D15 | ±15 | ±335 | 86% | |



- Industrial Standard 2"x1" Package
- Ultra-wide Input Range 9-36VDC, 18-75VDC, 40-160VDC
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +95°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off, Output Voltage Trim
- Conducted EMI EN 55032/11 Class A Approved
- Passed Temperature Cycling Test (TCT) 500 cycles (Only for the P/N with suffix P)
- Passed Temperature and Humidity Bias Test (THB) for 1000 hours
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

*To order the converter with heatsink, please add a suffix -HS.
*To order the converter with package type A, please add a suffix A.

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | Remote On/Off |
| 4 | +Vout | +Vout |
| 5 | Trim | Common |
| 6 | -Vout | -Vout |

Pin Connections(For Type A)

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | Remote On/Off |
| 4 | +Vout | +Vout |
| 5 | -Vout | Common |
| 6 | Trim | -Vout |

MKZI20 Series | 20W



- Industrial Standard 2"x1" Package
- Ultra-wide Input Range 9-36VDC, 18-75VDC, 40-160VDC
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +95°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off, Output Voltage Trim
- Conducted EMI EN 55032/11 Class A Approved
- Passed Temperature Cycling Test (TCT) 500 cycles (Only for the P/N with suffix P)
- Passed Temperature and Humidity Bias Test (THB) for 1000 hours
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

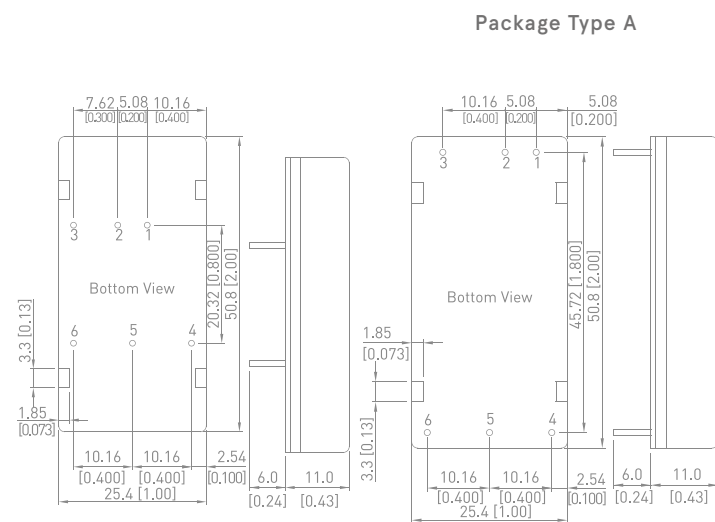
| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MKZI20-24S05 | 24 (9 - 36) | 5 | 4,000 | 87% |
| MKZI20-24S12 | | 12 | 1,670 | 87% |
| MKZI20-24S15 | | 15 | 1,330 | 87% |
| MKZI20-24S24 | | 24 | 833 | 87% |
| MKZI20-24D12 | | ±12 | ±833 | 86% |
| MKZI20-24D15 | | ±15 | ±667 | 86% |
| MKZI20-48S05 | 48 (18 - 75) | 5 | 4,000 | 87% |
| MKZI20-48S12 | | 12 | 1,670 | 88% |
| MKZI20-48S15 | | 15 | 1,330 | 88% |
| MKZI20-48S24 | | 24 | 833 | 88% |
| MKZI20-48D12 | | ±12 | ±833 | 87% |
| MKZI20-48D15 | | ±15 | ±667 | 87% |
| MKZI20-110S05 | 110 (40 - 160) | 5 | 4,000 | 84% |
| MKZI20-110S12 | | 12 | 1,670 | 86% |
| MKZI20-110S15 | | 15 | 1,330 | 86% |
| MKZI20-110S24 | | 24 | 833 | 86% |
| MKZI20-110D12 | | ±12 | ±833 | 86% |
| MKZI20-110D15 | | ±15 | ±667 | 86% |

*To order the converter with heatsink, please add a suffix -HS.

*To order the converter with package type A, please add a suffix A.

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | Remote On/Off |
| 4 | +Vout | +Vout |
| 5 | Trim | Common |
| 6 | -Vout | -Vout |

Pin Connections(For Type A)

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | Remote On/Off |
| 4 | +Vout | +Vout |
| 5 | -Vout | Common |
| 6 | Trim | -Vout |

MKZI40 Series | 40W



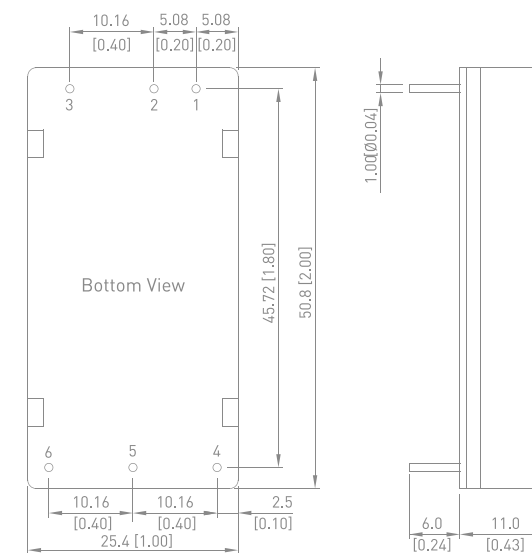
- Industrial Standard 2"x1" Package
- Ultra-wide Input Range 36-160VDC
- I/O Isolation 3000VAC with Reinforced Insulation
- Excellent Efficiency up to 90%
- Operating Ambient Temp. Range -40°C to +77.5°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MKZI40-110S05 | 110 (36 - 160) | 5 | 8,000 | 88% |
| MKZI40-110S12 | | 12 | 3,330 | 89% |
| MKZI40-110S15 | | 15 | 2,670 | 89% |
| MKZI40-110S24 | | 24 | 1,670 | 89% |
| MKZI40-110S54 | | 54 | 741 | 90% |
| MKZI40-110D12 | | ±12 | ±1670 | 89% |
| MKZI40-110D15 | ±15 | ±1330 | 89% | |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | Remote On/Off |
| 4 | +Vout | +Vout |
| 5 | -Vout | Common |
| 6 | Trim | -Vout |

MTQZ50 Series | 50W

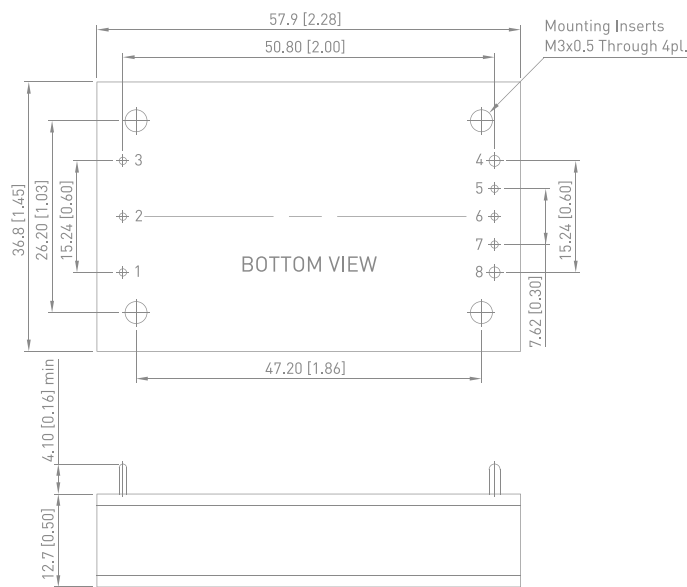


- Industrial Standard Quarter Brick Package
- Wide Input Range 43-101VDC & 66-160VDC
- Excellent Efficiency up to 92%
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off, Output Voltage Trim, Output Sensing
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MTQZ50-72S05 | 72 (43 - 101) | 5 | 10,000 | 90% |
| MTQZ50-72S12 | | 12 | 4,170 | 92% |
| MTQZ50-72S15 | | 15 | 3,330 | 92% |
| MTQZ50-72S24 | | 24 | 2,080 | 91% |
| MTQZ50-110S05 | 110 (66 - 160) | 5 | 10,000 | 90% |
| MTQZ50-110S12 | | 12 | 4,170 | 91% |
| MTQZ50-110S15 | | 15 | 3,330 | 92% |
| MTQZ50-110S24 | | 24 | 2,080 | 91% |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | Remote On/Off |
| 3 | -Vin |
| 4 | -Vout |
| 5 | * -Sense |
| 6 | Trim |
| 7 | * +Sense |
| 8 | +Vout |

*If remote sense not used the +sense should be connected to +output and -sense should be connected to -output
Maximum output deviation is 10% inclusive of trim

NEW

MRZI75 Series | 75W

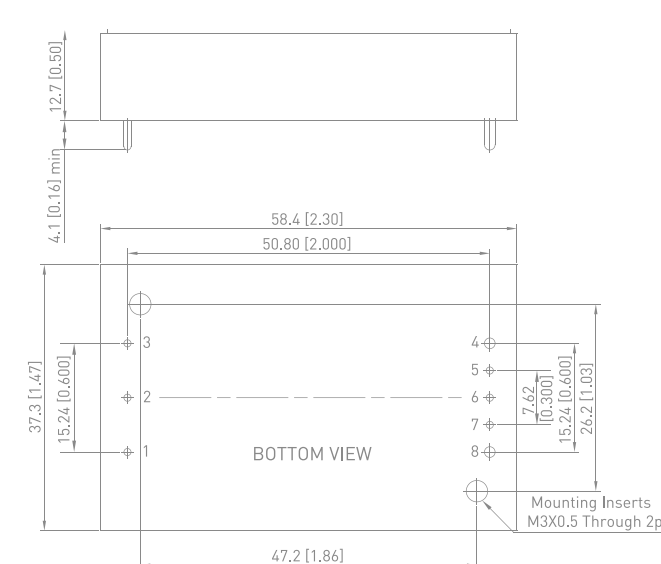


- Industrial Standard Quarter Brick Package
- Ultra-wide Input Range 36-160VDC
- Excellent Efficiency up to 91%
- I/O Isolation 2000VAC with Reinforced Insulation
- Operating Baseplate Temp. Range -40°C to +105°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim, Output Sense
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MRZI75-110S05 | 110 (36 - 160) | 5 | 15,000 | 89% |
| MRZI75-110S12 | | 12 | 6,250 | 91% |
| MRZI75-110S15 | | 15 | 5,000 | 91% |
| MRZI75-110S24 | | 24 | 3,125 | 90% |
| MRZI75-110S54 | | 54 | 1,390 | 89% |

*To order the converter with heatsink, please add a suffix -HS.

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | Remote On/Off |
| 3 | -Vin |
| 4 | -Vout |
| 5 | * -Sense |
| 6 | Trim |
| 7 | * +Sense |
| 8 | +Vout |

*If remote sense not used the +sense should be connected to +output and -sense should be connected to -output
Maximum output deviation is 10% inclusive of trim

MRZI100 Series | 100W



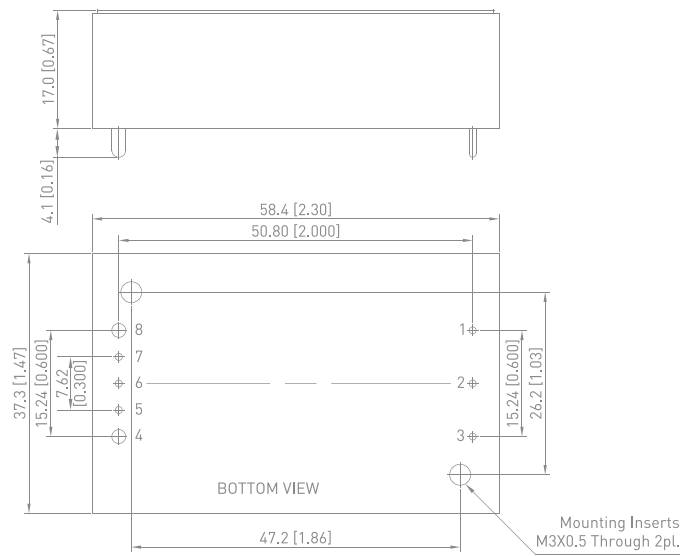
| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MRZI100-110S05 | 110 (36 - 160) | 5 | 20,000 | 91.5% |
| MRZI100-110S12 | | 12 | 8,400 | 91% |
| MRZI100-110S15 | | 15 | 6,700 | 90.5% |
| MRZI100-110S24 | | 24 | 4,200 | 89% |
| MRZI100-110S54 | | 54 | 1,850 | 89% |

*To order the converter with heatsink, please add a suffix -HS.



- Industrial Standard Quarter Brick Package
- Ultra-wide Input Range 36-160VDC
- I/O Isolation 2000VAC with Reinforced Insulation
- Excellent Efficiency up to 91.5%
- Operating Baseplate Temp. Range -40°C to +105°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim, Output Sense
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

Mechanical Dimensions



Mounting Inserts M3X0.5 Through 2pl.

Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | Remote On/Off |
| 3 | -Vin |
| 4 | -Vout |
| 5 | * -Sense |
| 6 | Trim |
| 7 | * +Sense |
| 8 | +Vout |

*If remote sense not used the +sense should be connected to +output and -sense should be connected to -output
 Maximum output deviation is 10% inclusive of trim

MRZI150 Series | 150W



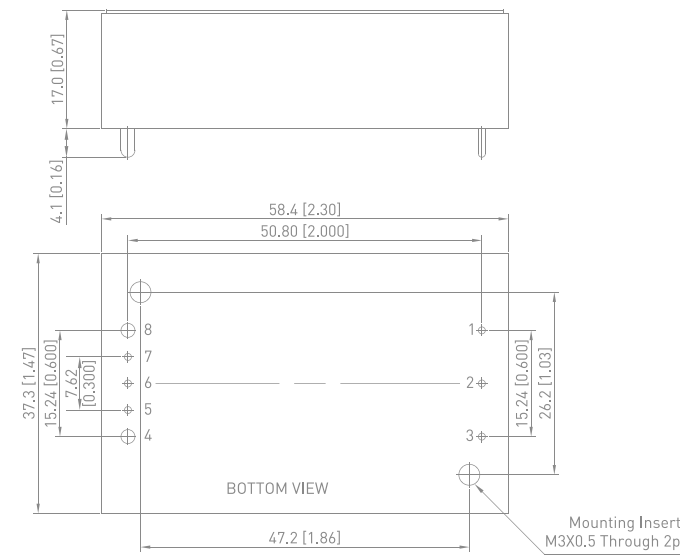
| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MRZI150-110S05 | 110 (36 - 160) | 5 | 27,000 | 90% |
| MRZI150-110S12 | | 12 | 12,500 | 90% |
| MRZI150-110S15 | | 15 | 10,000 | 89% |
| MRZI150-110S24 | | 24 | 6,250 | 88% |
| MRZI150-110S54 | | 54 | 2,780 | 88.5% |

*To order the converter with heatsink, please add a suffix -HS.



- Industrial Standard Quarter Brick Package
- Ultra-wide Input Range 36-160VDC
- I/O Isolation 2000VAC with Reinforced Insulation
- Excellent Efficiency up to 90%
- Operating Baseplate Temp. Range -40°C to +105°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim, Output Sense
- Vibration and Shock/Bump Test EN 61373 Approved
- Cooling, Dry & Damp Heat Test IEC/EN 60068-2-1, 2, 30 Approved
- Railway EMC Standard EN 50121-3-2 Approved
- Railway Certified EN 50155 (IEC60571) Approved
- Fire Protection Test EN 45545-2 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

Mechanical Dimensions



Mounting Inserts M3X0.5 Through 2pl.

Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | Remote On/Off |
| 3 | -Vin |
| 4 | -Vout |
| 5 | * -Sense |
| 6 | Trim |
| 7 | * +Sense |
| 8 | +Vout |

*If remote sense not used the +sense should be connected to +output and -sense should be connected to -output
 Maximum output deviation is 10% inclusive of trim

ULTRA-HIGH ISOLATION POWER SOLUTIONS

POWER FOR
A BETTER FUTURE

Input →



Output →

Reinforced Insulation

MINMAX TECHNOLOGY



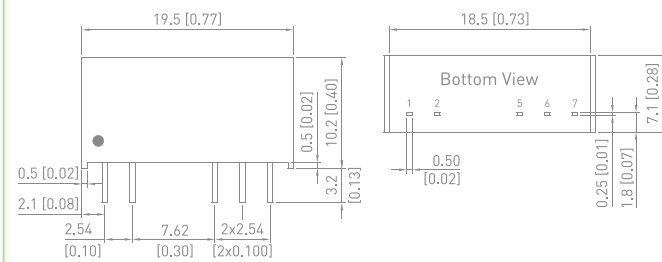
MA01-HI Series | 1W



- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- Ultra-high I/O Isolation 5200VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MA01-05S033HI | 5 (4.95-5.05) | 3.3 | 303 | 70% |
| MA01-05S05HI | | 5 | 200 | 70% |
| MA01-05S09HI | | 9 | 111 | 75% |
| MA01-05S12HI | | 12 | 84 | 77% |
| MA01-05S15HI | | 15 | 66 | 78% |
| MA01-05D05HI | | ±5 | ±100 | 71% |
| MA01-05D09HI | | ±9 | ±56 | 75% |
| MA01-05D12HI | | ±12 | ±42 | 77% |
| MA01-05D15HI | | ±15 | ±33 | 78% |
| MA01-05A1509HI | | 15 | 33 | 76% |
| | | -9 | -55 | 76% |
| MA01-12S033HI | 12 (11.88-12.12) | 3.3 | 303 | 71% |
| MA01-12S05HI | | 5 | 200 | 71% |
| MA01-12S09HI | | 9 | 111 | 76% |
| MA01-12S12HI | | 12 | 84 | 78% |
| MA01-12S15HI | | 15 | 66 | 79% |
| MA01-12D05HI | | ±5 | ±100 | 72% |
| MA01-12D09HI | | ±9 | ±56 | 76% |
| MA01-12D12HI | | ±12 | ±42 | 78% |
| MA01-12D15HI | | ±15 | ±33 | 79% |
| MA01-12A1509HI | | 15 | 33 | 77% |
| | | -9 | -55 | 77% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

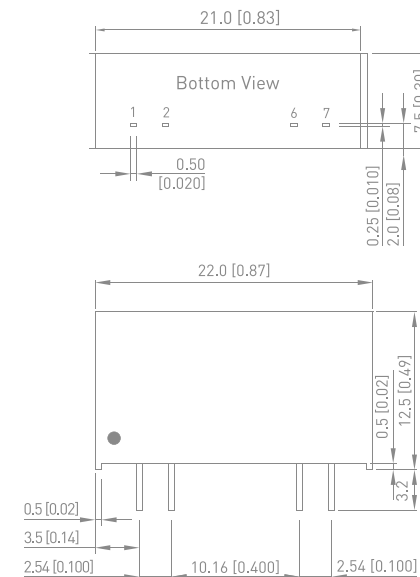
MAEU01-HI Series | 1W



- Industrial Standard SIP-7 Package
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rate for 480Vrms working voltage
- Operating Ambient Temp. Range -40°C to +95°C
- Short Circuit Protection
- UL/cUL/IEC/EN 62368-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MAEU01-05S05HI | 5 (4.5 - 5.5) | 5 | 200 | 79% |
| MAEU01-05S12HI | | 12 | 84 | 80% |
| MAEU01-05S15HI | | 15 | 68 | 81% |
| MAEU01-12S05HI | 12 (10.8 - 13.2) | 5 | 200 | 79% |
| MAEU01-12S12HI | | 12 | 84 | 81% |
| MAEU01-12S15HI | | 15 | 68 | 79% |
| MAEU01-24S05HI | 24 (21.6 - 26.4) | 5 | 200 | 76% |
| MAEU01-24S12HI | | 12 | 84 | 79% |
| MAEU01-24S15HI | | 15 | 68 | 79% |

Mechanical Dimensions



Pin Connections

| Pin | Function |
|-----|----------|
| 1 | +Vin |
| 2 | -Vin |
| 6 | -Vout |
| 7 | +Vout |

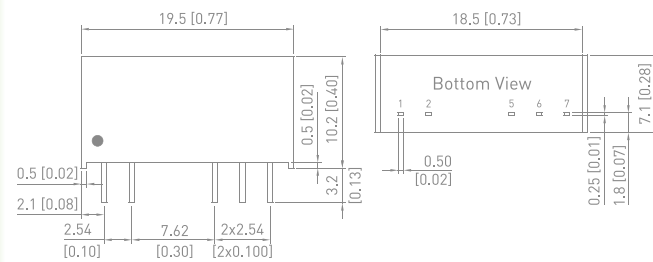
MAEU02-HI Series | 2W



- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- Ultra-high I/O Isolation 5700VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|------------------|---------------------|----------------------|---------------------|------------|
| MAEU02-05S033HI | 5 (4.95-5.05) | 3.3 | 500 | 74% |
| MAEU02-05S05HI | | 5 | 400 | 80% |
| MAEU02-05S09HI | | 9 | 222 | 81% |
| MAEU02-05S12HI | | 12 | 168 | 82% |
| MAEU02-05S15HI | | 15 | 132 | 79% |
| MAEU02-05D05HI | | ±5 | ±200 | 78% |
| MAEU02-05D09HI | | ±9 | ±112 | 80% |
| MAEU02-05D12HI | | ±12 | ±84 | 80% |
| MAEU02-05D15HI | | ±15 | ±66 | 79% |
| MAEU02-05A1509HI | | 15 | 66 | 80% |
| | | -9 | -110 | |
| MAEU02-12S033HI | 12 (11.88-12.12) | 3.3 | 500 | 76% |
| MAEU02-12S05HI | | 5 | 400 | 79% |
| MAEU02-12S09HI | | 9 | 222 | 81% |
| MAEU02-12S12HI | | 12 | 168 | 83% |
| MAEU02-12S15HI | | 15 | 132 | 82% |
| MAEU02-12D05HI | | ±5 | ±200 | 79% |
| MAEU02-12D09HI | | ±9 | ±112 | 81% |
| MAEU02-12D12HI | | ±12 | ±84 | 82% |
| MAEU02-12D15HI | | ±15 | ±66 | 83% |
| MAEU02-12A1509HI | | 15 | 66 | 81% |
| | | -9 | -110 | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

| | | | | |
|------------------|---------------------|-----|------|-----|
| MAEU02-15S033HI | 15 (14.85-15.15) | 3.3 | 500 | 77% |
| MAEU02-15S05HI | | 5 | 400 | 79% |
| MAEU02-15S09HI | | 9 | 222 | 83% |
| MAEU02-15S12HI | | 12 | 168 | 83% |
| MAEU02-15S15HI | | 15 | 132 | 85% |
| MAEU02-15D05HI | | ±5 | ±200 | 81% |
| MAEU02-15D09HI | | ±9 | ±112 | 84% |
| MAEU02-15D12HI | | ±12 | ±84 | 82% |
| MAEU02-15D15HI | | ±15 | ±66 | 82% |
| MAEU02-15A1509HI | | 15 | 66 | 83% |
| | | -9 | -110 | |
| MAEU02-24S033HI | 24 (23.76-24.24) | 3.3 | 500 | 76% |
| MAEU02-24S05HI | | 5 | 400 | 77% |
| MAEU02-24S09HI | | 9 | 222 | 81% |
| MAEU02-24S12HI | | 12 | 168 | 82% |
| MAEU02-24S15HI | | 15 | 132 | 82% |
| MAEU02-24D05HI | | ±5 | ±200 | 77% |
| MAEU02-24D09HI | | ±9 | ±112 | 81% |
| MAEU02-24D12HI | | ±12 | ±84 | 81% |
| MAEU02-24D15HI | | ±15 | ±66 | 80% |
| MAEU02-24A1509HI | | 15 | 66 | 81% |
| | | -9 | -110 | |

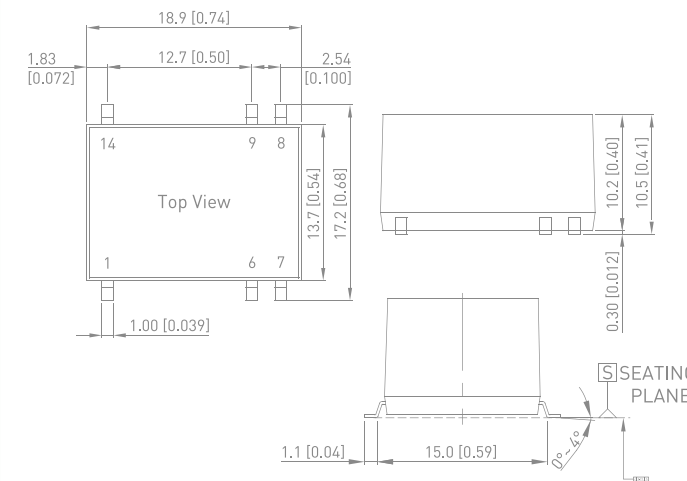
MSCEU01-HI Series | 1W



- Industrial Standard SMD Package
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rate for 480Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +95°C
- Short Circuit Protection
- UL/cUL/IEC/EN 62368-1 Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency | |
|-----------------|---------------------|----------------------|---------------------|------------|-----|
| MSCEU01-05S05HI | 5 (4.5 - 5.5) | 5 | 200 | 76% | |
| MSCEU01-05S12HI | | 12 | 84 | 80% | |
| MSCEU01-05S15HI | | 15 | 68 | 83% | |
| MSCEU01-05D12HI | | ±12 | ±42 | 80% | |
| MSCEU01-05D15HI | | ±15 | ±33 | 84% | |
| MSCEU01-12S05HI | | 12 (10.8 - 13.2) | 5 | 200 | 76% |
| MSCEU01-12S12HI | | | 12 | 84 | 79% |
| MSCEU01-12S15HI | | | 15 | 68 | 80% |
| MSCEU01-12D12HI | | | ±12 | ±42 | 79% |
| MSCEU01-12D15HI | | | ±15 | ±33 | 80% |
| MSCEU01-24S05HI | 24 (21.6 - 26.4) | | 5 | 200 | 76% |
| MSCEU01-24S12HI | | | 12 | 84 | 80% |
| MSCEU01-24S15HI | | | 15 | 68 | 80% |
| MSCEU01-24D12HI | | | ±12 | ±42 | 80% |
| MSCEU01-24D15HI | | | ±15 | ±33 | 80% |

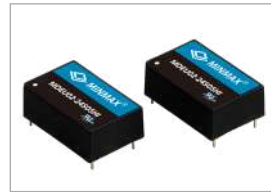
Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 6 | NC | Common |
| 7 | NC | -Vout |
| 8 | +Vout | +Vout |
| 9 | -Vout | Common |
| 14 | +Vin | +Vin |

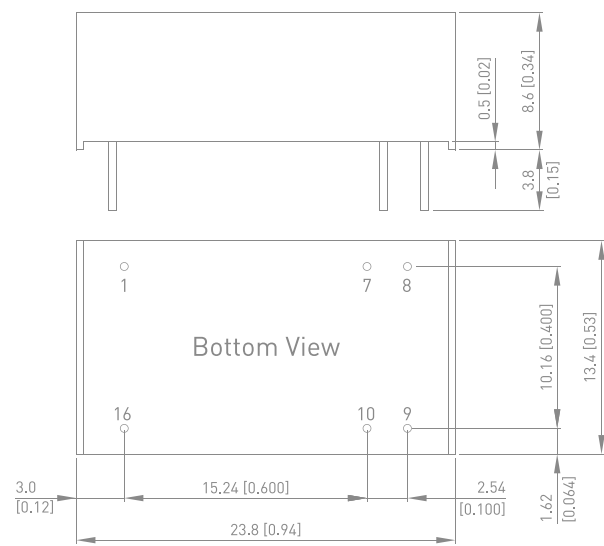
MDEU02-HI Series | 2W



- Industrial Standard DIP-16 Package
- Unregulated Output Voltage
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rate for 300Vrms Working Voltage
- Operating Ambient Temp. Range -25°C to +80°C
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MDEU02-05S05HI | 5 (4.5 - 5.5) | 5 | 400 | 65% |
| MDEU02-05S12HI | | 12 | 165 | 65% |
| MDEU02-05S15HI | | 15 | 133 | 66% |
| MDEU02-05D12HI | | ±12 | ±83 | 72% |
| MDEU02-05D15HI | | ±15 | ±66 | 73% |
| MDEU02-12S05HI | 12 (10.8 - 13.2) | 5 | 400 | 65% |
| MDEU02-12S12HI | | 12 | 165 | 65% |
| MDEU02-12S15HI | | 15 | 133 | 66% |
| MDEU02-12D12HI | | ±12 | ±83 | 74% |
| MDEU02-12D15HI | | ±15 | ±66 | 75% |
| MDEU02-24S05HI | 24 (21.6 - 26.4) | 5 | 400 | 65% |
| MDEU02-24S12HI | | 12 | 165 | 65% |
| MDEU02-24S15HI | | 15 | 133 | 66% |
| MDEU02-24D12HI | | ±12 | ±83 | 74% |
| MDEU02-24D15HI | | ±15 | ±66 | 75% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

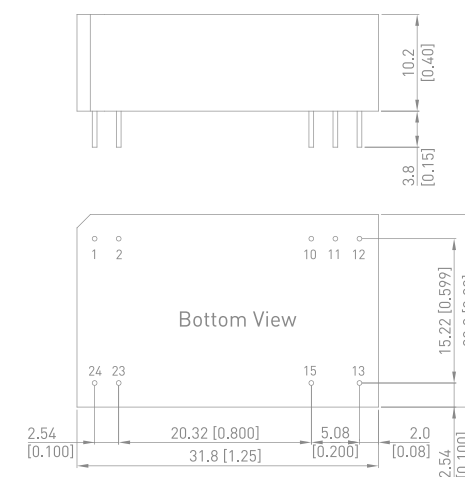
MIR500 Series | 2W



- Low Cost
- 6000VDC Isolation
- MTBF → 600,000 Hours
- Short Circuit Protection
- Input 5, 12 and 24VDC
- Output 5, 12, 15, ±5, ±12 and ±15VDC
- Regulated Outputs
- Low Isolation Capacitance
- Low Leakage Current
- 3 Years Product Warranty

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIR501 | 5 (4.5 ~ 5.5) | 5 | 400 | 62% |
| MIR502 | | 12 | 165 | 63% |
| MIR503 | | 15 | 133 | 64% |
| MIR504 | | ±5 | ±100 | 42% |
| MIR505 | | ±12 | ±83 | 57% |
| MIR506 | | ±15 | ±66 | 57% |
| MIR511 | 12 (10.8 ~ 13.2) | 5 | 400 | 62% |
| MIR512 | | 12 | 165 | 63% |
| MIR513 | | 15 | 133 | 64% |
| MIR514 | | ±5 | ±100 | 45% |
| MIR515 | | ±12 | ±83 | 59% |
| MIR516 | | ±15 | ±66 | 59% |
| MIR521 | 24 (21.6 ~ 26.4) | 5 | 400 | 62% |
| MIR522 | | 12 | 165 | 63% |
| MIR523 | | 15 | 133 | 64% |
| MIR524 | | ±5 | ±100 | 45% |
| MIR525 | | ±12 | ±83 | 58% |
| MIR526 | | ±15 | ±66 | 58% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | +Vin | +Vin |
| 10 | No Pin | Common |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

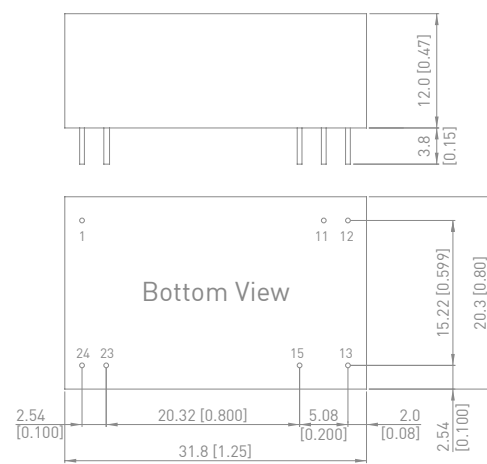
MIE03-HI Series | 3W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 9000VDC with Reinforced Insulation, rate for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +96°C
- No Min. Load Requirement
- Under-Voltage, Overload/Voltage and Short Circuit Protection
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MIE03-05S05HI | 5 (4.5 - 9) | 5 | 700 | 82% |
| MIE03-05S058HI | | 5.8 | 600 | 82% |
| MIE03-05S12HI | | 12 | 290 | 83% |
| MIE03-05S15HI | | 15 | 235 | 84% |
| MIE03-05S24HI | | 24 | 146 | 83% |
| MIE03-05D12HI | | ±12 | ±145 | 84% |
| MIE03-05D15HI | ±15 | ±115 | 84% | |
| MIE03-12S05HI | 12 (9 - 18) | 5 | 700 | 82% |
| MIE03-12S12HI | | 12 | 290 | 86% |
| MIE03-12S15HI | | 15 | 235 | 87% |
| MIE03-12S24HI | | 24 | 146 | 86% |
| MIE03-12D12HI | | ±12 | ±145 | 87% |
| MIE03-12D15HI | | ±15 | ±115 | 87% |
| MIE03-24S05HI | 24 (18 - 36) | 5 | 700 | 82% |
| MIE03-24S12HI | | 12 | 290 | 85% |
| MIE03-24S15HI | | 15 | 235 | 87% |
| MIE03-24S24HI | | 24 | 146 | 86% |
| MIE03-24D12HI | | ±12 | ±145 | 87% |
| MIE03-24D15HI | | ±15 | ±115 | 86% |
| MIE03-48S05HI | 48 (36 - 75) | 5 | 700 | 82% |
| MIE03-48S12HI | | 12 | 290 | 85% |
| MIE03-48S15HI | | 15 | 235 | 85% |
| MIE03-48S24HI | | 24 | 146 | 83% |
| MIE03-48D12HI | | ±12 | ±145 | 84% |
| MIE03-48D15HI | | ±15 | ±115 | 84% |

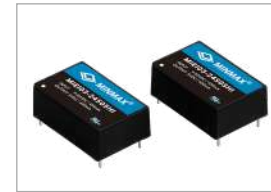
Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

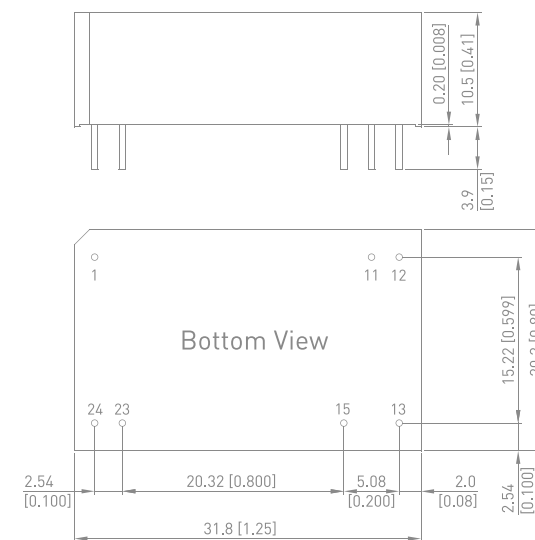
MIEI03-HI Series | 3W



- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high Isolation 8000VDC with Reinforced Insulation, rate for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN 55032 Class A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency | |
|----------------|---------------------|----------------------|---------------------|------------|-----|
| MIEI03-24S05HI | 24 (9 ~ 40) | 5 | 600 | 77% | |
| MIEI03-24S12HI | | 12 | 250 | 82% | |
| MIEI03-24D12HI | | ±12 | ±125 | 83% | |
| MIEI03-24D15HI | | ±15 | ±100 | 83% | |
| MIEI03-48S05HI | | 48 (18 ~ 80) | 5 | 600 | 77% |
| MIEI03-48S12HI | | | 12 | 250 | 82% |
| MIEI03-48D12HI | ±12 | | ±125 | 83% | |
| MIEI03-48D15HI | ±15 | | ±100 | 83% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

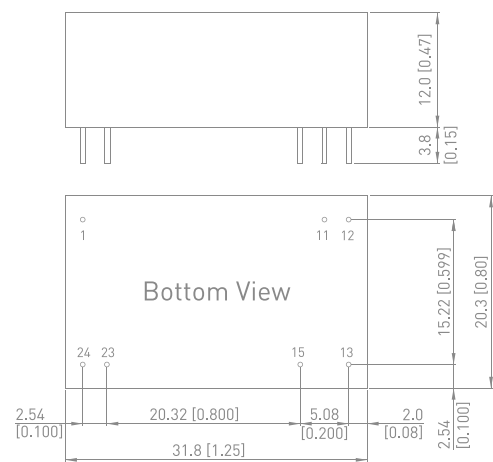
MIE06-HI Series | 6W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 9000VDC with Reinforced Insulation, rate for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +95°C
- No Min. Load Requirement
- Under-Voltage, Overload/Voltage and Short Circuit Protection
- Conducted EMI EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MIE06-12S05HI | 12 (9 - 18) | 5 | 1,200 | 83% |
| MIE06-12S12HI | | 12 | 500 | 86% |
| MIE06-12S15HI | | 15 | 400 | 86% |
| MIE06-12S24HI | | 24 | 250 | 86% |
| MIE06-12D12HI | | ±12 | ±250 | 87% |
| MIE06-12D15HI | ±15 | ±200 | 87% | |
| MIE06-24S05HI | 24 (18 - 36) | 5 | 1,200 | 83% |
| MIE06-24S12HI | | 12 | 500 | 86% |
| MIE06-24S15HI | | 15 | 400 | 87% |
| MIE06-24S24HI | | 24 | 250 | 85% |
| MIE06-24D12HI | | ±12 | ±250 | 86% |
| MIE06-24D15HI | ±15 | ±200 | 87% | |
| MIE06-48S05HI | 48 (36 - 75) | 5 | 1,200 | 83% |
| MIE06-48S12HI | | 12 | 500 | 86% |
| MIE06-48S15HI | | 15 | 400 | 89% |
| MIE06-48S24HI | | 24 | 250 | 86% |
| MIE06-48D12HI | | ±12 | ±250 | 87% |
| MIE06-48D15HI | ±15 | ±200 | 88% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

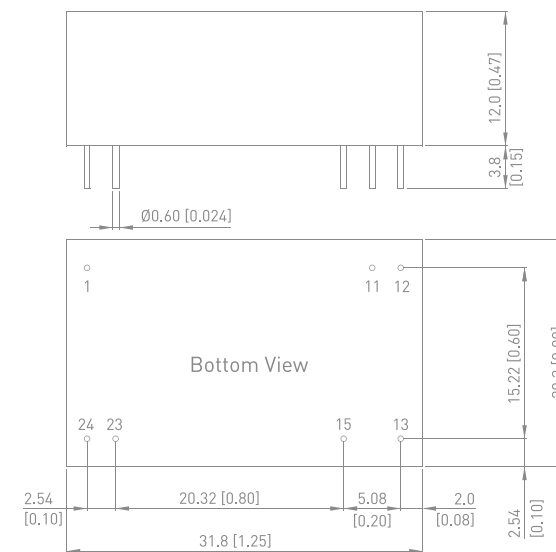
MIE10-HI Series | 10W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 9000VDC with reinforced Insulation, rate for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55032 Class A Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MIE10-12S033HI | 12 (9 - 18) | 3.3 | 2,700 | 81% |
| MIE10-12S05HI | | 5 | 2,000 | 83% |
| MIE10-12S051HI | | 5.1 | 2,000 | 83% |
| MIE10-12S12HI | | 12 | 833 | 86% |
| MIE10-12S15HI | | 15 | 666 | 88% |
| MIE10-12S24HI | 24 | 416 | 88% | |
| MIE10-12D12HI | ±12 | ±416 | 88% | |
| MIE10-12D15HI | ±15 | ±333 | 87% | |
| MIE10-24S033HI | 24 (18 - 36) | 3.3 | 2,700 | 81% |
| MIE10-24S05HI | | 5 | 2,000 | 84% |
| MIE10-24S051HI | | 5.1 | 2,000 | 84% |
| MIE10-24S12HI | | 12 | 833 | 87% |
| MIE10-24S15HI | | 15 | 666 | 88% |
| MIE10-24S24HI | 24 | 416 | 88% | |
| MIE10-24D12HI | ±12 | ±416 | 88% | |
| MIE10-24D15HI | ±15 | ±333 | 87% | |
| MIE10-48S033HI | 48 (36 - 75) | 3.3 | 2,700 | 81% |
| MIE10-48S05HI | | 5 | 2,000 | 84% |
| MIE10-48S051HI | | 5.1 | 2,000 | 84% |
| MIE10-48S12HI | | 12 | 833 | 87% |
| MIE10-48S15HI | | 15 | 666 | 88% |
| MIE10-48S24HI | 24 | 416 | 87% | |
| MIE10-48D12HI | ±12 | ±416 | 87% | |
| MIE10-48D15HI | ±15 | ±333 | 87% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

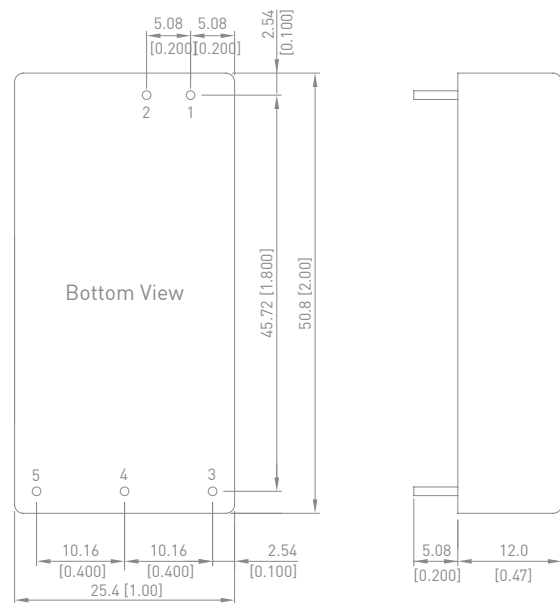
MKE15-HI Series | 15W



- Industrial Standard 2"x1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- EMI Emission EN55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MKE15-12S05HI | 12 (9 - 18) | 5 | 3,000 | 85% |
| MKE15-12S051HI | | 5.1 | 3,000 | 85% |
| MKE15-12S12HI | | 12 | 1,250 | 88% |
| MKE15-12S15HI | | 15 | 1,000 | 88% |
| MKE15-12S24HI | | 24 | 625 | 88% |
| MKE15-12D12HI | | ±12 | ±625 | 88% |
| MKE15-12D15HI | ±15 | ±500 | 89% | |
| MKE15-24S05HI | 24 (18 - 36) | 5 | 3,000 | 87% |
| MKE15-24S051HI | | 5.1 | 3,000 | 87% |
| MKE15-24S12HI | | 12 | 1,250 | 88% |
| MKE15-24S15HI | | 15 | 1,000 | 89% |
| MKE15-24S24HI | | 24 | 625 | 90% |
| MKE15-24D12HI | | ±12 | ±625 | 90% |
| MKE15-24D15HI | ±15 | ±500 | 89% | |
| MKE15-48S05HI | 48 (36 - 75) | 5 | 3,000 | 87% |
| MKE15-48S051HI | | 5.1 | 3,000 | 87% |
| MKE15-48S12HI | | 12 | 1,250 | 87% |
| MKE15-48S15HI | | 15 | 1,000 | 90% |
| MKE15-48S24HI | | 24 | 625 | 89% |
| MKE15-48D12HI | | ±12 | ±625 | 89% |
| MKE15-48D15HI | ±15 | ±500 | 88% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |

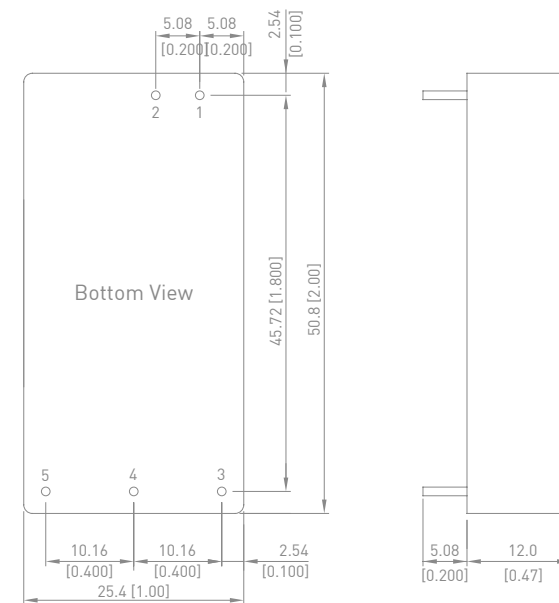
MKE20-HI Series | 20W



- Industrial Standard 2"x1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- EMI Emission EN55032 Class A Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MKE20-12S05HI | 12 (9 - 18) | 5 | 4,000 | 85% |
| MKE20-12S051HI | | 5.1 | 4,000 | 85% |
| MKE20-12S12HI | | 12 | 1,670 | 88% |
| MKE20-12S15HI | | 15 | 1,333 | 88% |
| MKE20-12S24HI | | 24 | 840 | 89% |
| MKE20-12D12HI | | ±12 | ±840 | 89% |
| MKE20-12D15HI | ±15 | ±670 | 89% | |
| MKE20-24S05HI | 24 (18 - 36) | 5 | 4,000 | 87% |
| MKE20-24S051HI | | 5.1 | 4,000 | 87% |
| MKE20-24S12HI | | 12 | 1,670 | 88% |
| MKE20-24S15HI | | 15 | 1,333 | 89% |
| MKE20-24S24HI | | 24 | 840 | 90% |
| MKE20-24D12HI | | ±12 | ±840 | 90% |
| MKE20-24D15HI | ±15 | ±670 | 90% | |
| MKE20-48S05HI | 48 (36 - 75) | 5 | 4,000 | 87% |
| MKE20-48S051HI | | 5.1 | 4,000 | 87% |
| MKE20-48S12HI | | 12 | 1,670 | 88% |
| MKE20-48S15HI | | 15 | 1,333 | 90% |
| MKE20-48S24HI | | 24 | 840 | 89% |
| MKE20-48D12HI | | ±12 | ±840 | 89% |
| MKE20-48D15HI | ±15 | ±670 | 90% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |

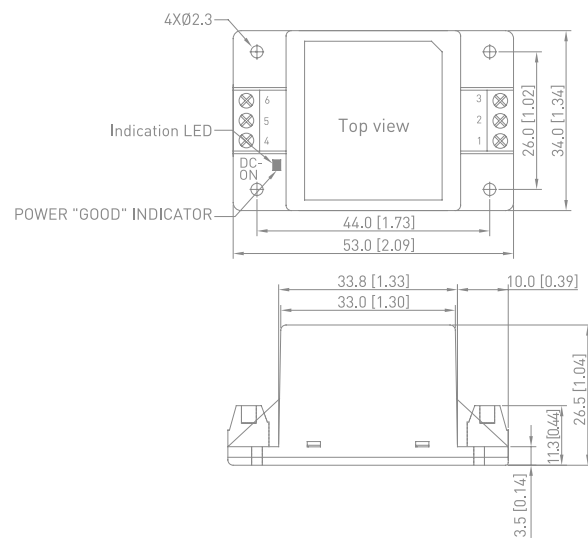
MJA06C Series | 6W



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- 80-160VDC Wide Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 84%
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +92.5°C
- No Min. Load Requirement
- Very Low No Load Power Consumption
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- EMI Emission EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MJA06-110S05C | 110 (80 - 160) | 5 | 1,200 | 79% |
| MJA06-110S051C | | 5.1 | 1,200 | 79% |
| MJA06-110S12C | | 12 | 500 | 83% |
| MJA06-110S15C | | 15 | 400 | 83% |
| MJA06-110S24C | | 24 | 250 | 84% |
| MJA06-110S48C | | 48 | 125 | 82% |
| MJA06-110D12C | | ±12 | ±250 | 84% |
| MJA06-110D15C | | ±15 | ±200 | 84% |
| MJA06-110D24C | | ±24 | ±125 | 83% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 3 | +Vin | +Vin |
| 4 | -Vout | -Vout |
| 5 | NC | Common |
| 6 | +Vout | +Vout |

NC= No Connection

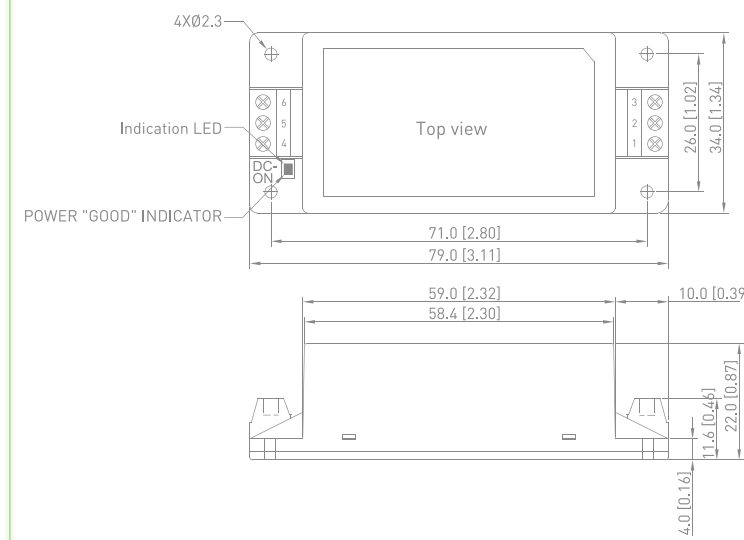
MKA10C Series | 10W



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- 80-160VDC Wide Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 85%
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +87°C
- No Min. Load Requirement
- Very Low No Load Power Consumption
- Under-voltage, Overload and Short Circuit Protection
- Remote On/Off Control
- EMI Emission EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MKA10-110S05C | 110 (80 - 160) | 5 | 2,000 | 83% |
| MKA10-110S051C | | 5.1 | 2,000 | 83% |
| MKA10-110S12C | | 12 | 833 | 85% |
| MKA10-110S15C | | 15 | 666 | 85% |
| MKA10-110S24C | | 24 | 416 | 85% |
| MKA10-110S48C | | 48 | 208 | 83% |
| MKA10-110D12C | | ±12 | ±416 | 85% |
| MKA10-110D15C | | ±15 | ±333 | 85% |
| MKA10-110D24C | | ±24 | ±208 | 84% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 3 | +Vin | +Vin |
| 4 | -Vout | -Vout |
| 5 | NC | Common |
| 6 | +Vout | +Vout |

NC= No Connection

MOA20C Series | 20W

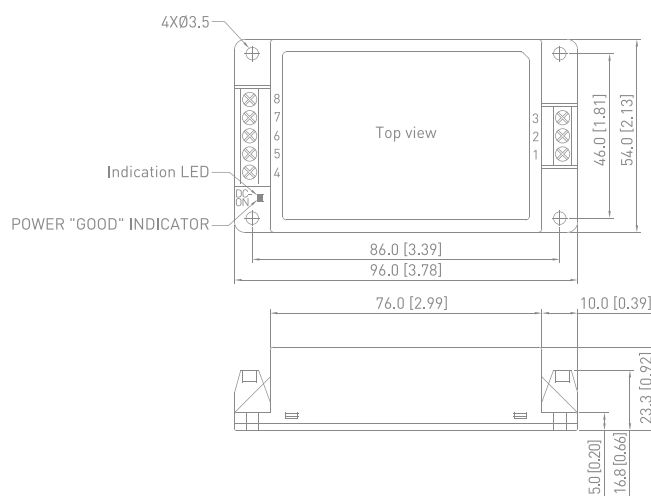


| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MOA20-110S05C | 110 (80 - 160) | 5 | 4,000 | 87% |
| MOA20-110S051C | | 5.1 | 4,000 | 87% |
| MOA20-110S12C | | 12 | 1,670 | 88% |
| MOA20-110S15C | | 15 | 1,340 | 88% |
| MOA20-110S24C | | 24 | 830 | 88% |
| MOA20-110S48C | | 48 | 420 | 86% |
| MOA20-110D12C | | ±12 | ±830 | 87% |
| MOA20-110D15C | | ±15 | ±670 | 87% |
| MOA20-110D24C | | ±24 | ±420 | 87% |



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- 80-160VDC Wide Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 88%
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +94.5°C
- No Min. Load Requirement
- Very Low No Load Power Consumption
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off Control
- EMI Emission EN 55032 Class A Approved
- EMC Immunity EN 61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 3 | +Vin | +Vin |
| 4 | -Vout | -Vout |
| 5 | NC | Common |
| 6 | +Vout | +Vout |

NC= No Connection

MQA40C Series | 40W

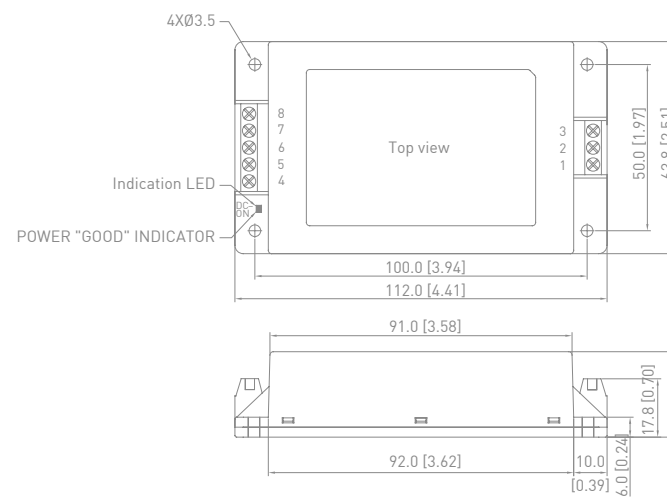


| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MQA40-110S05C | 110 (80 - 160) | 5 | 8,000 | 87% |
| MQA40-110S051C | | 5.1 | 8,000 | 87% |
| MQA40-110S12C | | 12 | 3,330 | 89% |
| MQA40-110S15C | | 15 | 2,670 | 89% |
| MQA40-110S24C | | 24 | 1,670 | 89% |
| MQA40-110S48C | | 48 | 840 | 87% |
| MQA40-110D12C | | ±12 | ±1670 | 89% |
| MQA40-110D15C | | ±15 | ±1330 | 89% |
| MQA40-110D24C | | ±24 | ±830 | 87% |



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- 80-160VDC Wide Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 89%
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Very Low No Load Power Consumption
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off Control
- EMI Emission EN 55032 Class A Approved
- EMC Immunity EN61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 3 | +Vin | +Vin |
| 4 | +Vout | +Vout |
| 5 | NC | NC |
| 6 | -Vout | Common |
| 7 | NC | NC |
| 8 | NC | -Vout |

NC= No Connection

MRA60C Series | 60W

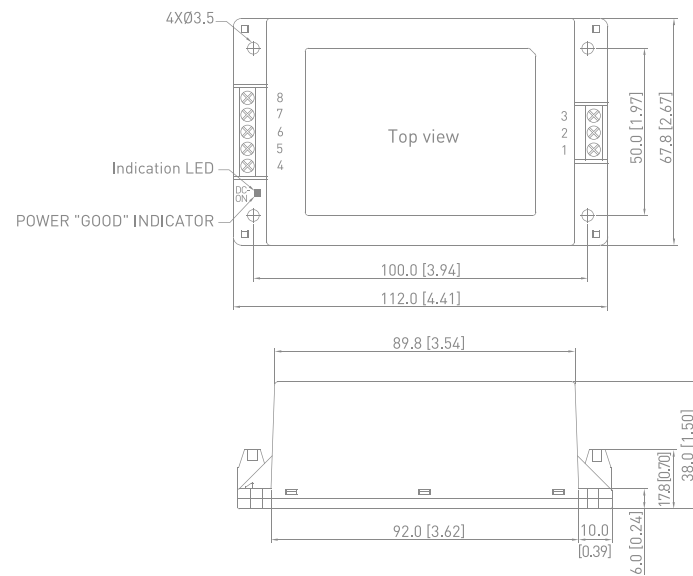


| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|----------------|---------------------|----------------------|---------------------|------------|
| MRA60-110S05C | 110 (80 - 160) | 5 | 12,000 | 88% |
| MRA60-110S051C | | 5.1 | 12,000 | 88% |
| MRA60-110S12C | | 12 | 5,000 | 89% |
| MRA60-110S15C | | 15 | 4,000 | 89% |
| MRA60-110S24C | | 24 | 2,500 | 88% |
| MRA60-110S48C | | 48 | 1,250 | 88% |
| MRA60-110D12C | | ±12 | ±2500 | 88% |
| MRA60-110D15C | | ±15 | ±2000 | 88% |
| MRA60-110D24C | ±24 | ±1250 | 88% | |



- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- 80-160VDC Wide Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 89%
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Operating Ambient Temp. Range -40°C to +90.5°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- Remote On/Off Control
- EMI Emission EN 55032 Class A Approved
- EMC Immunity EN61000-4-2,3,4,5,6,8 Approved
- UL/cUL/IEC/EN 62368-1 Safety Approval & CE Marking

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|---------------|---------------|
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin | -Vin |
| 3 | +Vin | +Vin |
| 4 | NC | +Vout |
| 5 | +Vout | NC |
| 6 | NC | Common |
| 7 | -Vout | NC |
| 8 | NC | -Vout |

NC= No Connection

MEDICAL SAFETY POWER SOLUTIONS

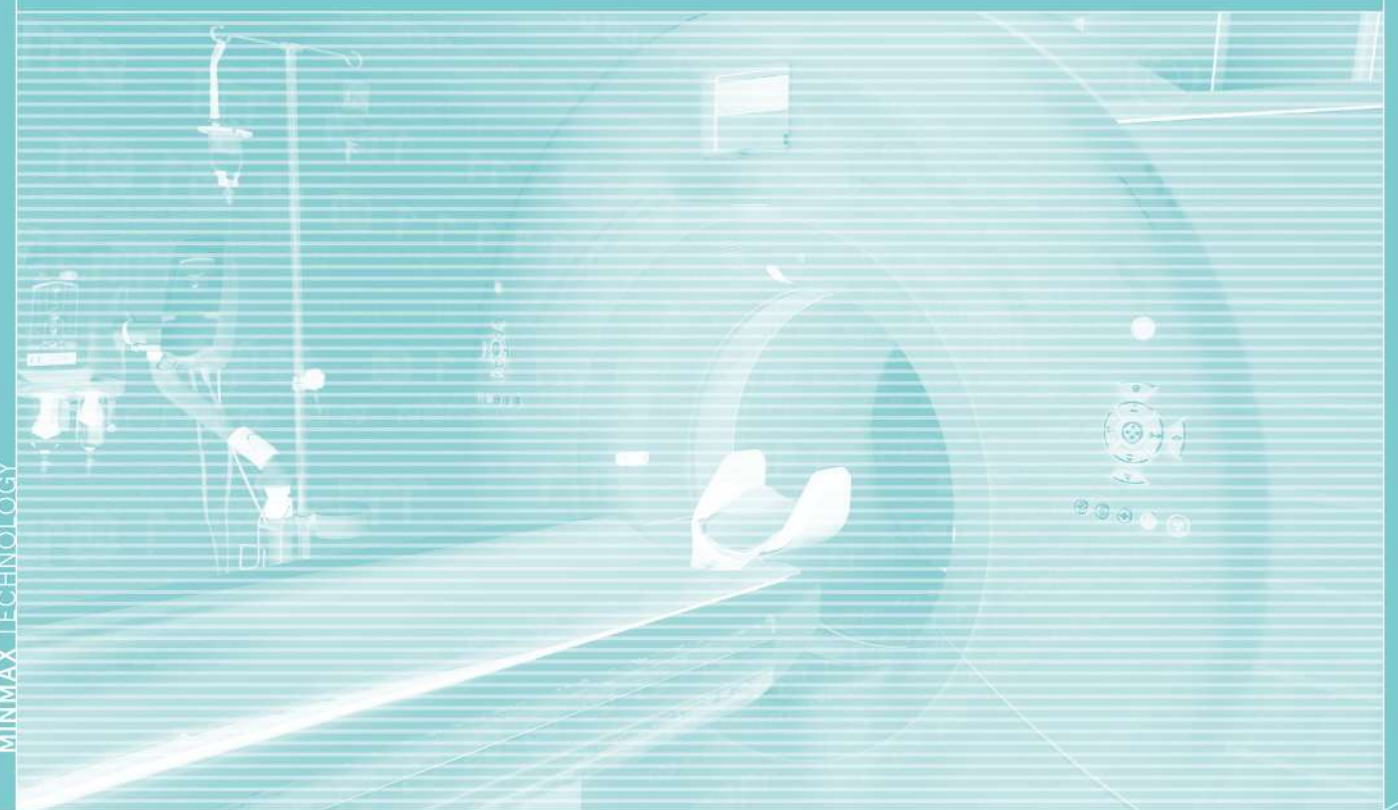
POWER FOR
A BETTER FUTURE



IEC 60601-1 APPROVED



2 X MOPP



MINMAX TECHNOLOGY

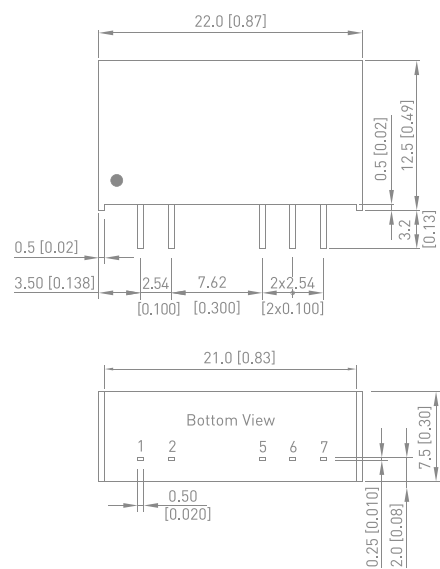
MAU400 Series | 1W



- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Operating Ambient Temp. Range -25°C to +85°C
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 1xMOPP & 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MAU401 | 5 (4.5 - 5.5) | 5 | 200 | 66% |
| MAU402 | | 12 | 80 | 66% |
| MAU403 | | 15 | 65 | 66% |
| MAU404 | | ±5 | ±100 | 66% |
| MAU405 | | ±12 | ±40 | 72% |
| MAU406 | | ±15 | ±35 | 73% |
| MAU411 | 12 (10.8 - 13.2) | 5 | 200 | 66% |
| MAU412 | | 12 | 80 | 66% |
| MAU413 | | 15 | 65 | 66% |
| MAU414 | | ±5 | ±100 | 66% |
| MAU415 | | ±12 | ±40 | 74% |
| MAU416 | | ±15 | ±35 | 75% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

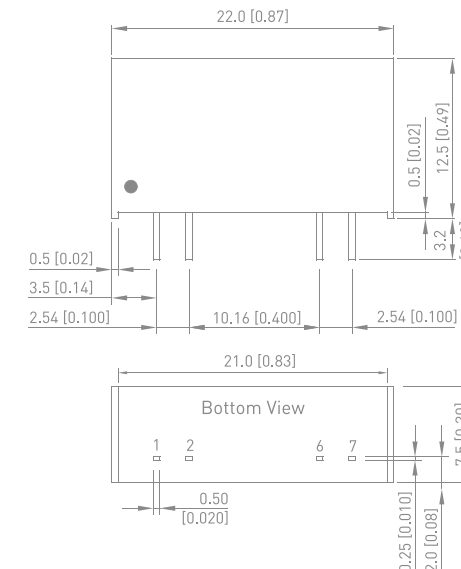
MAU01M Series | 1W



- Industrial Standard SIP-7 Package
- Unregulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -40°C to 95°C
- Short Circuit Protection
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved with CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MAU01-05S05M | 5 (4.5 - 5.5) | 5 | 200 | 79% |
| MAU01-05S12M | | 12 | 84 | 80% |
| MAU01-05S15M | | 15 | 68 | 81% |
| MAU01-12S05M | 12 (10.8 - 13.2) | 5 | 200 | 79% |
| MAU01-12S12M | | 12 | 84 | 81% |
| MAU01-12S15M | | 15 | 68 | 79% |
| MAU01-24S05M | 24 (21.6 - 26.4) | 5 | 200 | 76% |
| MAU01-24S12M | | 12 | 84 | 79% |
| MAU01-24S15M | | 15 | 68 | 79% |

Mechanical Dimensions



Pin Connections

| Pin | Dual |
|-----|-------|
| 1 | +Vin |
| 2 | -Vin |
| 6 | -Vout |
| 7 | +Vout |

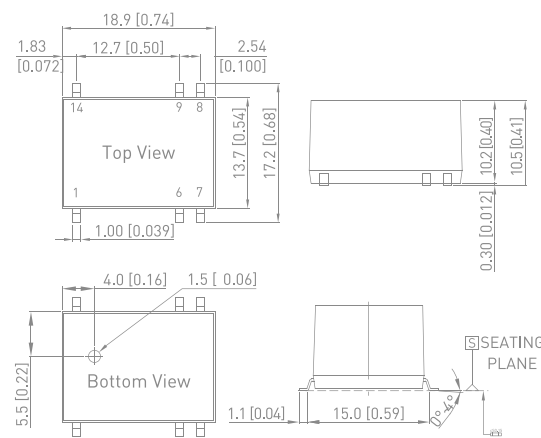
MSCU01M Series | 1W



- Industrial Standard SMD Package
- Unregulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 250Vrms Working Voltage
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -40°C to 95°C
- Cleaning-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available Short Circuit Protection
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANS/AAMI ES60601-1 Approved with CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MSCU01-05S05M | 5 (4.5 - 5.5) | 5 | 200 | 76% |
| MSCU01-05S12M | | 12 | 84 | 80% |
| MSCU01-05S15M | | 15 | 68 | 83% |
| MSCU01-05D12M | | ±12 | ±42 | 80% |
| MSCU01-05D15M | | ±15 | ±33 | 84% |
| MSCU01-12S05M | 12 (10.8 - 13.2) | 5 | 200 | 76% |
| MSCU01-12S12M | | 12 | 84 | 79% |
| MSCU01-12S15M | | 15 | 68 | 80% |
| MSCU01-12D12M | | ±12 | ±42 | 79% |
| MSCU01-12D15M | | ±15 | ±33 | 80% |
| MSCU01-24S05M | 24 (21.6 - 26.4) | 5 | 200 | 76% |
| MSCU01-24S12M | | 12 | 84 | 80% |
| MSCU01-24S15M | | 15 | 68 | 80% |
| MSCU01-24D12M | | ±12 | ±42 | 80% |
| MSCU01-24D15M | | ±15 | ±33 | 80% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 6 | NC | Common |
| 7 | NC | -Vout |
| 8 | +Vout | +Vout |
| 9 | -Vout | Common |
| 14 | +Vin | +Vin |

NC: No Connection

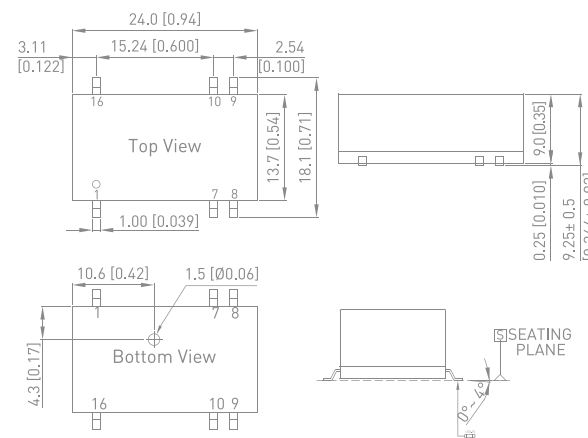
MSHU100 Series | 2W



- Industrial Standard SMD Package
- Unregulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -25°C to +80°C
- Cleaning-washable Process Available(option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 1xMOPP & 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANS/AAMI ES60601-1 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MSHU102 | 5 (4.5 - 5.5) | 5 | 400 | 66% |
| MSHU104 | | 12 | 165 | 66% |
| MSHU105 | | 15 | 133 | 66% |
| MSHU108 | | ±12 | ±83 | 72% |
| MSHU109 | | ±15 | ±66 | 73% |
| MSHU112 | 12 (10.8 - 13.2) | 5 | 400 | 66% |
| MSHU114 | | 12 | 165 | 66% |
| MSHU115 | | 15 | 133 | 66% |
| MSHU118 | | ±12 | ±83 | 74% |
| MSHU119 | | ±15 | ±66 | 75% |
| MSHU122 | 24 (21.6 - 26.4) | 5 | 400 | 66% |
| MSHU124 | | 12 | 165 | 66% |
| MSHU125 | | 15 | 133 | 66% |
| MSHU128 | | ±12 | ±83 | 74% |
| MSHU129 | | ±15 | ±66 | 75% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

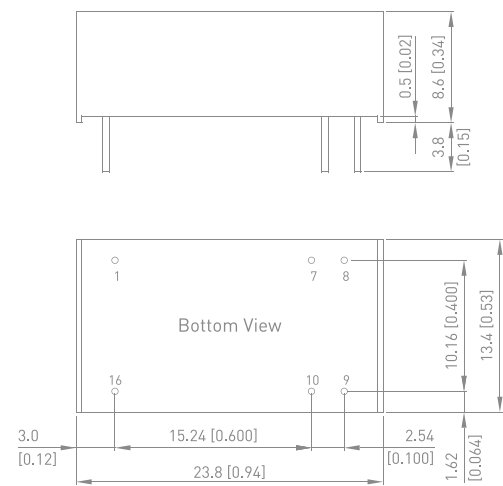
MDHU100 Series | 2W



- Industry Standard DIP-16 Package
- Unregulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated or 300Vrms Working Voltage
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -25°C to +80°C
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MDHU102 | 5 (4.5 - 5.5) | 5 | 400 | 66% |
| MDHU104 | | 12 | 165 | 66% |
| MDHU105 | | 15 | 133 | 66% |
| MDHU108 | | ±12 | ±83 | 72% |
| MDHU109 | | ±15 | ±66 | 73% |
| MDHU112 | 12 (10.8 - 13.2) | 5 | 400 | 66% |
| MDHU114 | | 12 | 165 | 66% |
| MDHU115 | | 15 | 133 | 66% |
| MDHU118 | | ±12 | ±83 | 74% |
| MDHU119 | | ±15 | ±66 | 75% |
| MDHU122 | 24 (21.6 - 26.4) | 5 | 400 | 66% |
| MDHU124 | | 12 | 165 | 66% |
| MDHU125 | | 15 | 133 | 66% |
| MDHU128 | | ±12 | ±83 | 74% |
| MDHU129 | | ±15 | ±66 | 75% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC: No Connection

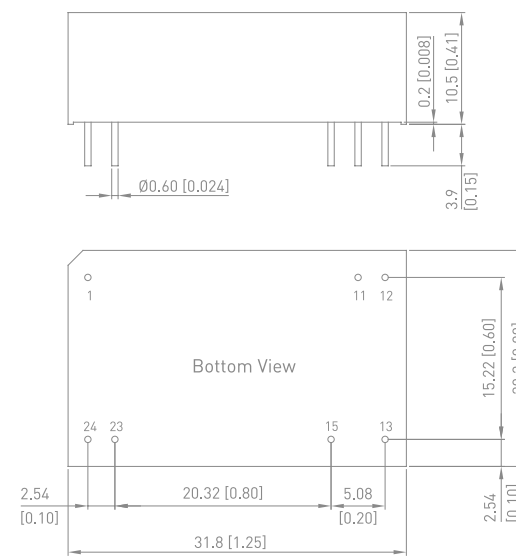
MIHW2000 Series | 3W



- Industrial Standard DIP-24 Package
- Ultra-Wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -40°C to +85°C
- Under-Voltage, Overload and Short Circuit Protection
- Conducted EMI EN 55011/22 Class A Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIHW2022 | 24 (9 - 40) | 5 | 600 | 78% |
| MIHW2023 | | 12 | 250 | 83% |
| MIHW2026 | | ±12 | ±125 | 83% |
| MIHW2027 | | ±15 | ±100 | 83% |
| MIHW2032 | | 5 | 600 | 78% |
| MIHW2033 | 48 (18 - 80) | 12 | 250 | 83% |
| MIHW2036 | | ±12 | ±125 | 83% |
| MIHW2037 | | ±15 | ±100 | 83% |
| MIHW2042 | | 5 | 600 | 78% |
| MIHW2043 | | 12 | 250 | 83% |
| MIHW2046 | 110 (36 - 160) | ±12 | ±125 | 83% |
| MIHW2047 | | ±15 | ±100 | 83% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

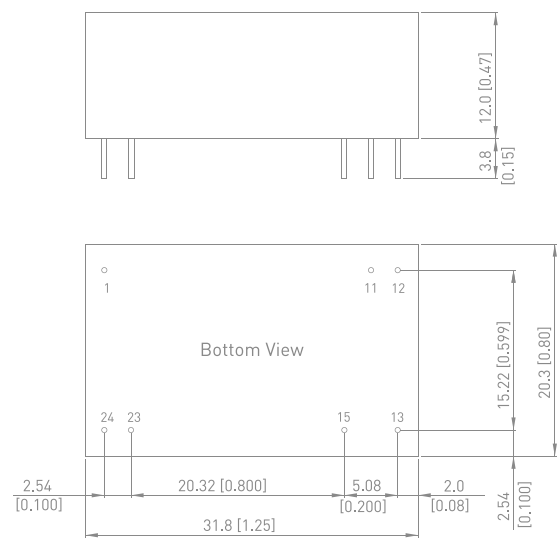
MIW03M Series | 3.5W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 5000VAC with Reinforced Insulation, rated for 250Vrms Working Voltage
- Creepage & Clearance Distance meet 8mm
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -40°C to 96°C
- No Min. Load Requirement
- Under-Voltage, Overload/Voltage and Short Circuit Protection
- Conducted EMI EN 55011 Class A Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved with CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MIW03-05S05M | 5 (4.5 - 9) | 5 | 700 | 83% |
| MIW03-05S058M | | 5.8 | 600 | 83% |
| MIW03-05S12M | | 12 | 290 | 84% |
| MIW03-05S15M | | 15 | 235 | 84% |
| MIW03-05D12M | | ±12 | ±145 | 84% |
| MIW03-05D15M | ±15 | ±115 | 84% | |
| MIW03-12S05M | 12 (9 - 18) | 5 | 700 | 83% |
| MIW03-12S12M | | 12 | 290 | 87% |
| MIW03-12S15M | | 15 | 235 | 87% |
| MIW03-12D12M | | ±12 | ±145 | 87% |
| MIW03-12D15M | | ±15 | ±115 | 87% |
| MIW03-24S05M | 24 (18 - 36) | 5 | 700 | 83% |
| MIW03-24S12M | | 12 | 290 | 86% |
| MIW03-24S15M | | 15 | 235 | 87% |
| MIW03-24D12M | | ±12 | ±145 | 87% |
| MIW03-24D15M | | ±15 | ±115 | 86% |
| MIW03-48S05M | 48 (36 - 75) | 5 | 700 | 83% |
| MIW03-48S12M | | 12 | 290 | 86% |
| MIW03-48S15M | | 15 | 235 | 85% |
| MIW03-48D12M | | ±12 | ±145 | 84% |
| MIW03-48D15M | | ±15 | ±115 | 84% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

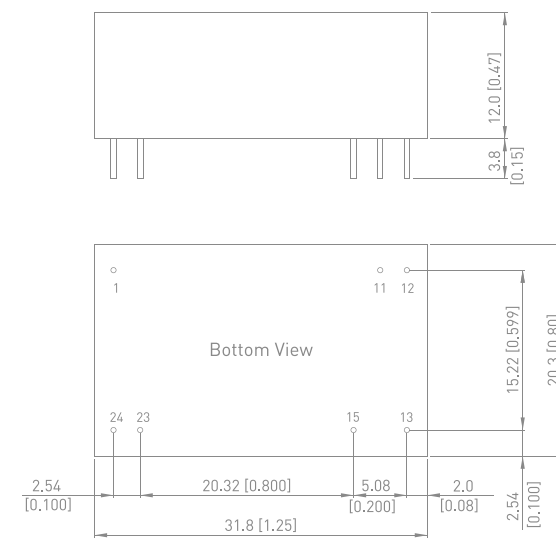
MIW06M Series | 6W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 5000VAC with Reinforced Insulation, rated for 250Vrms Working Voltage
- Creepage & Clearance Distance meet 8mm
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -40°C to 95°C
- No Min. Load Requirement
- Under-Voltage, Overload/Voltage and Short Circuit Protection
- Conducted EMI EN 55011 Class A Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved with CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|---------------------|----------------------|---------------------|------------|
| MIW06-12S05M | 12 (9 - 18) | 5 | 1200 | 84% |
| MIW06-12S12M | | 12 | 500 | 87% |
| MIW06-12S15M | | 15 | 400 | 86% |
| MIW06-12D12M | | ±12 | ±250 | 87% |
| MIW06-12D15M | | ±15 | ±200 | 87% |
| MIW06-24S05M | 24 (18 - 36) | 5 | 1200 | 84% |
| MIW06-24S12M | | 12 | 500 | 87% |
| MIW06-24S15M | | 15 | 400 | 87% |
| MIW06-24D12M | | ±12 | ±250 | 86% |
| MIW06-24D15M | | ±15 | ±200 | 87% |
| MIW06-48S05M | 48 (36 - 75) | 5 | 1200 | 84% |
| MIW06-48S12M | | 12 | 500 | 87% |
| MIW06-48S15M | | 15 | 400 | 89% |
| MIW06-48D12M | | ±12 | ±250 | 87% |
| MIW06-48D15M | | ±15 | ±200 | 88% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

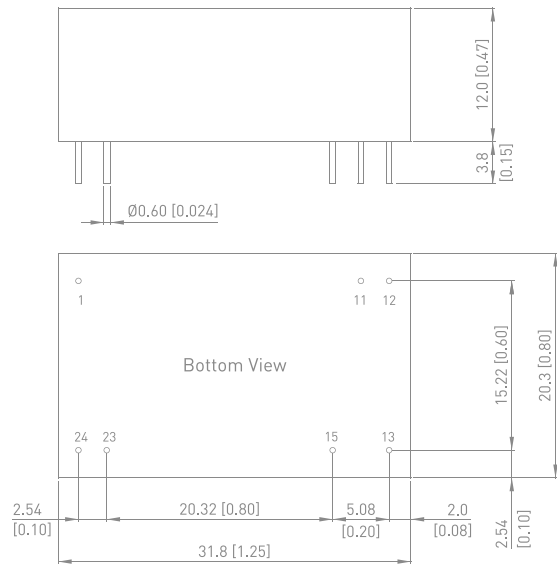
MIW10M Series | 10W



- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 5000VAC with Reinforced Insulation, rated for 250Vrms Working Voltage
- Creepage & Clearance Distance meet 8mm
- Low I/O Leakage Current < 2µA
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Under-Voltage, Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55011 Class A Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved with CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MIW10-12S033M | 12 (9 - 18) | 3.3 | 2700 | 81% |
| MIW10-12S05M | | 5 | 2000 | 84% |
| MIW10-12S051M | | 5.1 | 2000 | 84% |
| MIW10-12S12M | | 12 | 833 | 87% |
| MIW10-12S15M | | 15 | 666 | 88% |
| MIW10-12S24M | | 24 | 416 | 88% |
| MIW10-12D12M | 24 (18 - 36) | ±12 | ±416 | 88% |
| MIW10-12D15M | | ±15 | ±333 | 87% |
| MIW10-24S033M | | 3.3 | 2700 | 81% |
| MIW10-24S05M | | 5 | 2000 | 85% |
| MIW10-24S051M | | 5.1 | 2000 | 85% |
| MIW10-24S12M | | 12 | 833 | 88% |
| MIW10-24S15M | 15 | 666 | 88% | |
| MIW10-24S24M | 24 | 416 | 88% | |
| MIW10-24D12M | 48 (36 - 75) | ±12 | ±416 | 88% |
| MIW10-24D15M | | ±15 | ±333 | 87% |
| MIW10-48S033M | | 3.3 | 2700 | 81% |
| MIW10-48S05M | | 5 | 2000 | 85% |
| MIW10-48S051M | | 5.1 | 2000 | 85% |
| MIW10-48S12M | | 12 | 833 | 88% |
| MIW10-48S15M | 15 | 666 | 88% | |
| MIW10-48S24M | 24 | 416 | 87% | |
| MIW10-48D12M | 48 (36 - 75) | ±12 | ±416 | 87% |
| MIW10-48D15M | | ±15 | ±333 | 87% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 11 | No Pin | Common |
| 12 | -Vout | No Pin |
| 13 | +Vout | -Vout |
| 15 | No Pin | +Vout |
| 23 | -Vin | -Vin |
| 24 | -Vin | -Vin |

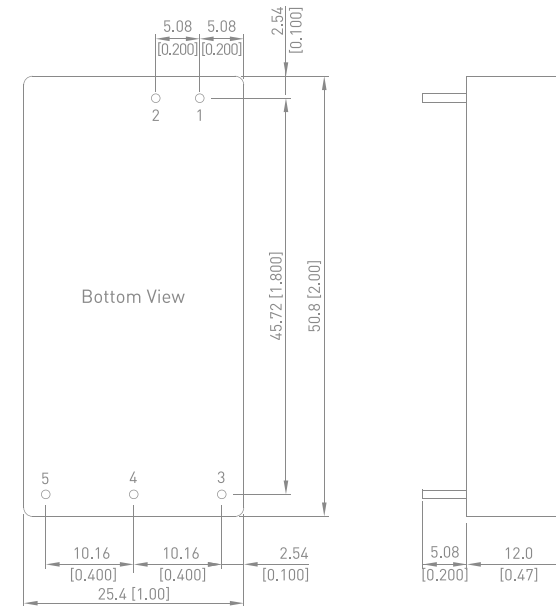
MKW15M Series | 15W



- Industrial Standard 2" X 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4200VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low I/O Leakage Current < 5µA
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55011 Class A Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved with CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MKW15-12S05M | 12 (9 - 18) | 5 | 3000 | 86% |
| MKW15-12S051M | | 5.1 | 3000 | 86% |
| MKW15-12S12M | | 12 | 1250 | 89% |
| MKW15-12S15M | | 15 | 1000 | 88% |
| MKW15-12S24M | | 24 | 625 | 88% |
| MKW15-12D12M | | ±12 | ±625 | 88% |
| MKW15-12D15M | 24 (18 - 36) | ±15 | ±500 | 89% |
| MKW15-24S05M | | 5 | 3000 | 88% |
| MKW15-24S051M | | 5.1 | 3000 | 88% |
| MKW15-24S12M | | 12 | 1250 | 89% |
| MKW15-24S15M | | 15 | 1000 | 89% |
| MKW15-24S24M | | 24 | 625 | 90% |
| MKW15-24D12M | 48 (36 - 75) | ±12 | ±625 | 90% |
| MKW15-24D15M | | ±15 | ±500 | 89% |
| MKW15-48S05M | | 5 | 3000 | 88% |
| MKW15-48S051M | | 5.1 | 3000 | 88% |
| MKW15-48S12M | | 12 | 1250 | 88% |
| MKW15-48S15M | | 15 | 1000 | 90% |
| MKW15-48S24M | 24 | 625 | 89% | |
| MKW15-48D12M | 48 (36 - 75) | ±12 | ±625 | 89% |
| MKW15-48D15M | | ±15 | ±500 | 88% |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |

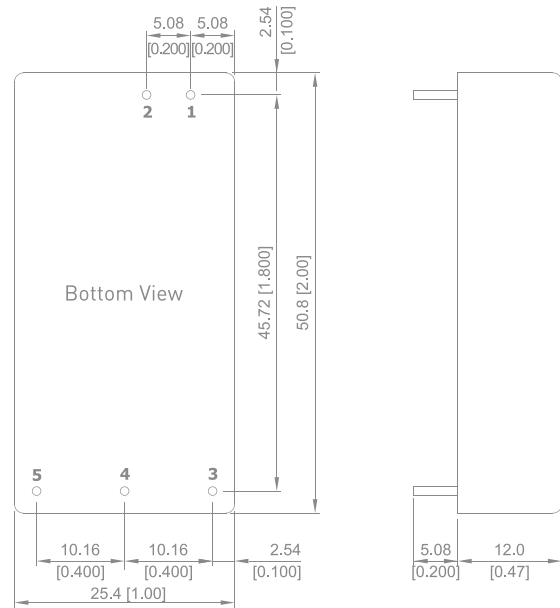
MKW20M Series | 20W



- Industrial Standard 2" X 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4200VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low I/O Leakage Current < 5µA
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Under-voltage, Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55011 Class A Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 and EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved with CE Marking

| Model Number | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|---------------|---------------------|----------------------|---------------------|------------|
| MKW20-12S05M | 12 (9 - 18) | 5 | 4000 | 86% |
| MKW20-12S051M | | 5.1 | 4000 | 86% |
| MKW20-12S12M | | 12 | 1670 | 89% |
| MKW20-12S15M | | 15 | 1333 | 88% |
| MKW20-12S24M | | 24 | 840 | 89% |
| MKW20-12D12M | | ±12 | ±840 | 89% |
| MKW20-12D15M | ±15 | ±670 | 89% | |
| MKW20-24S05M | 24 (18 - 36) | 5 | 4000 | 88% |
| MKW20-24S051M | | 5.1 | 4000 | 88% |
| MKW20-24S12M | | 12 | 1670 | 89% |
| MKW20-24S15M | | 15 | 1333 | 89% |
| MKW20-24S24M | | 24 | 840 | 90% |
| MKW20-24D12M | | ±12 | ±840 | 90% |
| MKW20-24D15M | ±15 | ±670 | 90% | |
| MKW20-48S05M | 48 (36 - 75) | 5 | 4000 | 88% |
| MKW20-48S051M | | 5.1 | 4000 | 88% |
| MKW20-48S12M | | 12 | 1670 | 89% |
| MKW20-48S15M | | 15 | 1333 | 90% |
| MKW20-48S24M | | 24 | 840 | 89% |
| MKW20-48D12M | | ±12 | ±840 | 89% |
| MKW20-48D15M | ±15 | ±670 | 90% | |

Mechanical Dimensions



Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |

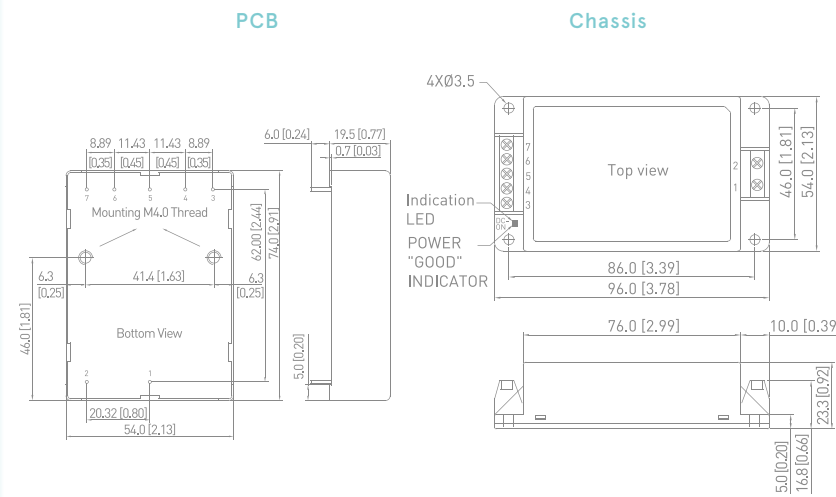
AJM-24 Series | 24W



- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 47-440Hz
- I/O Isolation 4000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +80°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55011/32 Class B Approved
- EMS Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 & EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved
- UL508 Safety Approval Specifically for Industrial Application
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| AJM-24S05 | 85-264VAC 120-370VDC | 5 | 3,000 | 77% |
| AJM-24S09 | | 9 | 2,666 | 82% |
| AJM-24S12 | | 12 | 2,000 | 83% |
| AJM-24S15 | | 15 | 1,600 | 82% |
| AJM-24S24 | | 24 | 1,000 | 85% |
| AJM-24D12 | | ±12 | ±1000 | 84% |
| AJM-24D15 | ±15 | ±800 | 84% | |

Mechanical Dimensions



Pin Connections (PCB&Chassis)

| Pin | Single | Dual |
|-----|------------|------------|
| 1 | AC Netural | AC Netural |
| 2 | AC Line | AC Line |
| 3 | No Pin | No Pin |
| 4 | -Vout | -Vout |
| 5 | No Pin | Common |
| 6 | +Vout | +Vout |
| 7 | No Pin | No Pin |

APM-40 Series | 40W



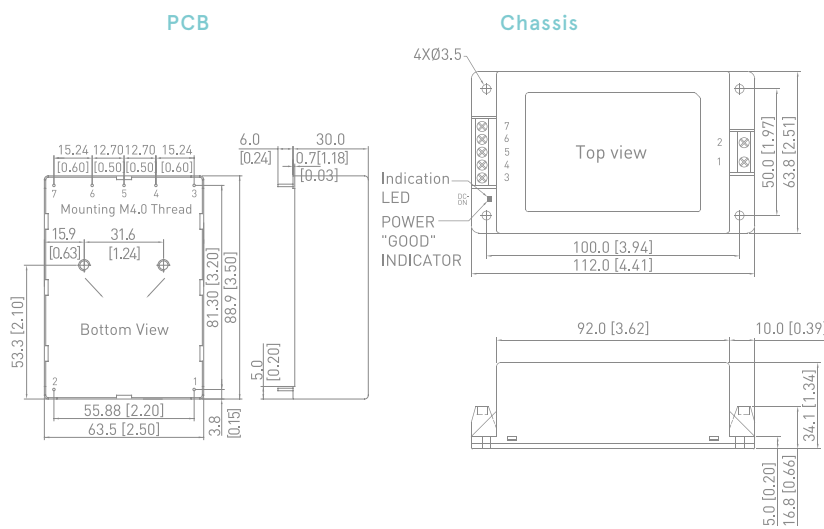
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| APM-40S05 | 85-264VAC 120-370VDC | 5 | 8,000 | 81% |
| APM-40S12 | | 12 | 3,330 | 84% |
| APM-40S15 | | 15 | 2,660 | 85% |
| APM-40S24 | | 24 | 1,660 | 84% |
| APM-40D12 | | ±12 | ±1660 | 84% |
| APM-40D15 | | ±15 | ±1330 | 85% |



- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 47-440Hz
- I/O Isolation 4000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +80°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55011/32 Class B Approved
- EMS Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 & EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved
- UL508 Safety Approval Specifically for Industrial Application
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

Mechanical Dimensions

Pin Connections (PCB&Chassis)



| Pin | PCB | Chassis |
|-----|------------|------------|
| 1 | AC Netural | AC Netural |
| 2 | AC Line | AC Line |
| 3 | +Vout | +Vout |
| 4 | No Pin | No Pin |
| 5 | -Vout | Common |
| 6 | No Pin | No Pin |
| 7 | NC | -Vout |

NC: No Connection

AYM-60 Series | 60W



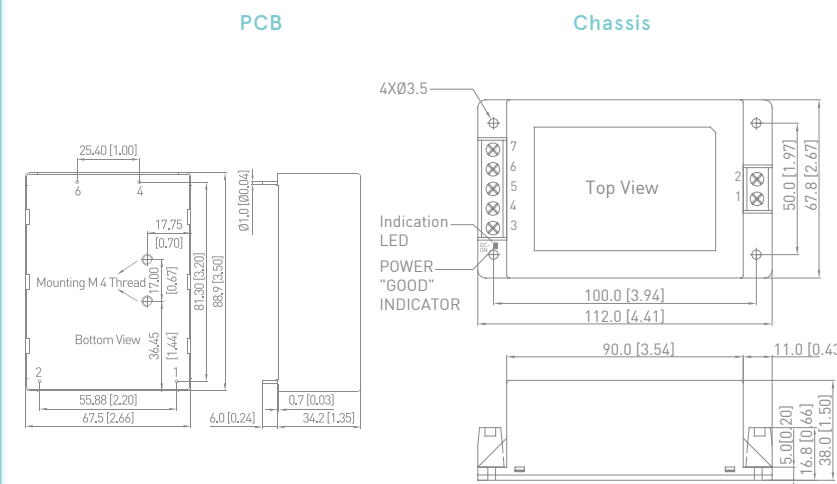
| Model Number | Input Voltage | Output Voltage (VDC) | Output Current (mA) | Efficiency |
|--------------|-------------------------|----------------------|---------------------|------------|
| AYM-60S051 | 85-264VAC 120-370VDC | 5.1 | 10,000 | 84% |
| AYM-60S12 | | 12 | 5,000 | 87% |
| AYM-60S15 | | 15 | 4,000 | 87% |
| AYM-60S24 | | 24 | 2,500 | 87% |
| AYM-60S48 | | 48 | 1,250 | 88% |



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- Universal Input 85-264VAC, 47-440Hz
- I/O Isolation 4000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +80°C
- Overload/Voltage and Short Circuit Protection
- EMI Emission EN 55011/32 Class B Approved
- EMS Immunity EN 61000-4-2,3,4,5,6,8,11 Approved
- Medical EMC Standard with 4th Edition of EMI EN 55011 & EMS EN 60601-1-2 Approved
- Medical Safety with 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 Approved
- UL508 Safety Approval Specifically for Industrial Application
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

Mechanical Dimensions

Pin Connections



| Pin | Single | Dual |
|-----|------------|------------|
| 1 | AC Netural | AC Netural |
| 2 | AC Line | AC Line |
| 3 | - | NC |
| 4 | +Vout | +Vout |
| 5 | - | NC |
| 6 | -Vout | -Vout |
| 7 | - | NC |

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