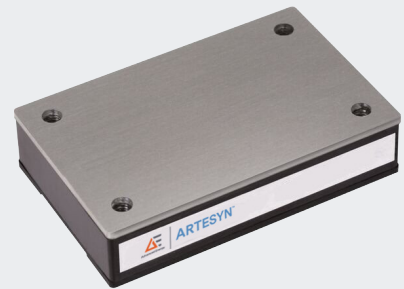


ARTESYN

ERM150 ¼ BRICK SERIES

150 Watt ¼ brick DC/DC converter



Advanced Energy's Artesyn ERM150 series is a new generation of high performance, isolated dc-dc converter modules. The product offers 150W in a small, fully encapsulated package. The input voltage ranges comply with European railway standard EN50155. Reinforced insulation and high EMC immunity qualifies these converters also for many demanding applications in railway and other transportation systems.

Advanced circuit topology provides a very high efficiency up to 90% which allows ambient temperatures range up to +85°C with derating.

SPECIAL FEATURES

- 150 W continuous power
- High efficiency 90%
- 36 to 160 VDC wide-range input
- Base-plate optimised for contact cooling or heatsink mounting
- No minimum load requirement
- Low ripple and noise
- Fixed switching frequency
- High reliability
- RoHS 3.0 compliant
- UL94 V-0 materials
- DOSA quarter-brick footprint compliant
- Heatsink version available
- Operating temperature -40 to +85 °C (subject to derating)
- EN 61373; Vibration and thermal shock

SAFETY

- TUV EN 62368
EN 50155
- UL UL 62368-1
- TUV CB IEC 62368-1
IEC 60571
- CE and UKCA Mark

WARRANTY

- 3 Years (Consult factory for extended terms)

AT A GLANCE

Total Power

150 W

Input Voltage

36 to 160 VDC

of Outputs

Single



ELECTRICAL SPECIFICATIONS

| Input | |
|---|---|
| Input voltage | 36 to 160 VDC |
| Input surge | 170 V / 100 mSec |
| UVLO Turn-on Turn-off | 36 VDC nom 35 VDC nom |
| Input Maximum Current ERM30A100(N)-(HS) ERM12B100(N)-(HS) ERM10C100(N)-(HS) ERM6H100(N)-(HS) ERM02U100(N)-(HS) | 1.364 A 1.515 A 1.532 A 1.550 A 1.542 A |
| Efficiency ERM30A100(N)-(HS) ERM12B100(N)-(HS) ERM10C100(N)-(HS) ERM6H100(N)-(HS) ERM02U100(N)-(HS) | 90.0% 90.0% 89.0% 88.0% 88.5% |
| Input to output insulation Input to output isolation | Reinforced insulation 2000 VDC |
| Output | |
| Output voltage set point accuracy | ±1% max |
| Output voltage regulation | ±0.2% max |
| Output voltage adjust range Other models 54 V model | ±10% of O/P voltage -15% to 5% of O/P voltage |
| Output current maximum | 27 A (for 5 V output version) |
| Noise & ripple | 5 V version; 100 mV nom 12 V, 15 V version; 150 mV nom 24 V version; 200 mV nom 54 V version; 300 mV nom |
| Over temperature protection | +110°C base-plate |
| Over voltage protection ERM30A100(N)-(HS) ERM12B100(N)-(HS) ERM10C100(N)-(HS) ERM6H100(N)-(HS) ERM02U100(N)-(HS) Method / OVP operation | 6.2 VDC nom 15 VDC nom 18 VDC nom 30 VDC nom 66 VDC nom Latching mode |
| Over current protection method / OCP operation | 130% nominal O/P current Auto-recovery hiccup mode |
| Control | |
| Enable | Positive or negative option |
| Switching Frequency Other models 54 V model | 214 kHz 173 kHz |

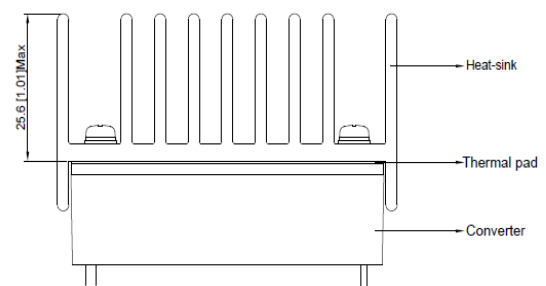
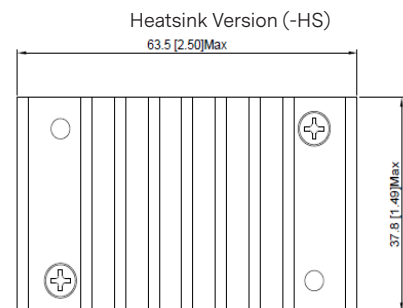
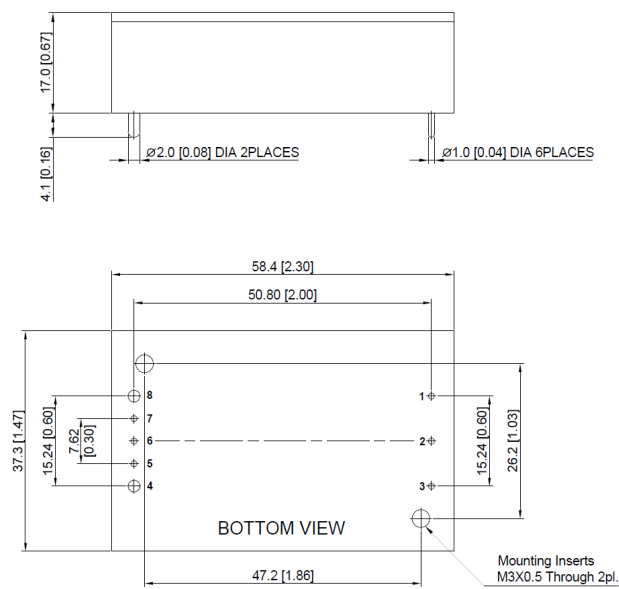
ORDERING INFORMATION

| Input Voltage | Output Voltage Set-point | Output Current | Efficiency | Model Number |
|---------------|--------------------------|----------------|------------|-------------------|
| 36 to160 VDC | 5 | 27 | 90.0% | ERM30A100(N)-(HS) |
| 36 to160 VDC | 12 | 12.5 | 90.0% | ERM12B100(N)-(HS) |
| 36 to160 VDC | 15 | 10 | 89.0% | ERM10C100(N)-(HS) |
| 36 to160 VDC | 24 | 6.25 | 88.0% | ERM6H100(N)-(HS) |
| 36 to160 VDC | 54 | 2.78 | 88.5% | ERM02U100(N)-(HS) |

Negative enable (N)

Heatsink (-HS)

MECHANICAL DRAWINGS



Note1: The case material is plastic resin, there is no electrical connection.

Note2: The Top Side Base Material is an aluminum plate, which has electrical connections.

PIN OUT INFORMATION

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



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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[ERM02U100-HS](#) [ERM06H100](#) [ERM02U100](#) [ERM02U100N](#) [ERM12B100](#) [ERM30A100N](#) [ERM10C100-HS](#)
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[ERM12B100-HS](#) [ERM10C100N-HS](#) [ERM02U100N-HS](#) [ERM30A100N-HS](#) [ERM6H100N-HS](#) [ERM12B100N-HS](#)