

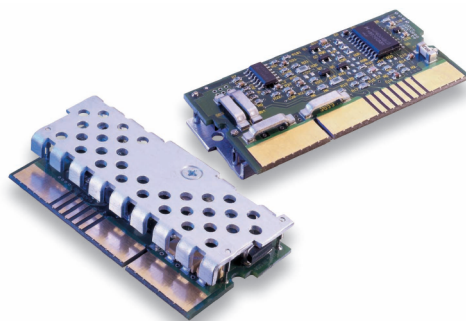
# NXA66 Series

Single output (Non-Isolated)

- Transient response from 0 A to rated full load (up to 30 A/ $\mu$ s), recovery within 250  $\mu$ s
- Democratic current sharing, no need for master/slave configuration
- Programmable output voltage
- Remote enable pin
- Power good signal
- True double ended differential remote sense
- Available RoHS compliant



The NXA66 non-isolated dc-dc converter is targeted at computing applications that require point of load power conversion. The NXA66 is designed to meet the precise voltage and fast transient requirements of today's high performance applications such as workstations, file servers, desktop computers, telecommunications equipment, adapter cards, DSP and data processing. Employing synchronous rectification and democratic current sharing, the NXA66 can be used in a stand-alone configuration, or paralleled as a building block to achieve higher output currents or redundancy. The current sharing specifications are met during static conditions, and transient conditions. The advanced democratic current sharing technique employed by the NXA66 removes the need for cumbersome master/slave combinations. The NXA66 uses gold plated edge tab fingers for a convenient, low impedance interconnect scheme. This also allows system designers to easily accommodate future expansion in their systems.



2 YEAR WARRANTY

All specifications are typical at nominal input, full load at 25 °C unless otherwise stated

## SPECIFICATIONS

### OUTPUT SPECIFICATIONS

|                          |                                      |              |
|--------------------------|--------------------------------------|--------------|
| Voltage adjustability    | Vout programmable to 2V5 or 3V3      |              |
| Total error band         | 3V3 output<br>2V5 output             | 4.5%<br>4.5% |
| Ripple and noise         | (20 MHz bandwidth) 150 mV pk-pk max. |              |
| Transient response       | 50% to 75% and back                  | 150 mV       |
| peak dev. settling time  | to 1.0%, no external cap.            | 400 $\mu$ s  |
| Short circuit protection | Continuous automatic recovery        |              |
| Isc = 25 A rms           |                                      |              |

### INPUT SPECIFICATIONS

|                           |                       |                           |
|---------------------------|-----------------------|---------------------------|
| Input voltage range       | 12 Vin nominal        | 10.8-13.2 Vdc             |
| Input current             | No load<br>Remote OFF | 100 mA typ.<br>10 mA max. |
| UVLO turn ON voltage      | 10.4 V max.           |                           |
| UVLO turn OFF voltage     | 8.2 V min.            |                           |
| Start-up time             | Nominal line          | 15 ms                     |
| Active high remote ON/OFF |                       |                           |
| Logic compatibility       | Open circuit voltage  | Ref. to -input            |
| ON                        |                       | 10.8 Vdc min.             |
| OFF                       |                       | 0.8 Vdc max.              |

### GENERAL SPECIFICATIONS

|                         |                                                        |                 |
|-------------------------|--------------------------------------------------------|-----------------|
| Efficiency              | 3V3 output<br>2V5 output                               | 86%<br>82%      |
| Switching frequency     | Fixed                                                  | 300 kHz         |
| Approvals and standards | EN60950<br>Bi-national UL1950<br>CSA C22.2 No. 234/950 |                 |
| Weight                  | 42.6 g (1.5 oz)                                        |                 |
| MTBF                    | Bellcore 332                                           | 3,500,000 hours |

### ENVIRONMENTAL SPECIFICATIONS

|                           |                                         |                                      |
|---------------------------|-----------------------------------------|--------------------------------------|
| Maximum temperature shock | Operating                               | 5 °C/10 min.                         |
| Temperature shock         | Operating<br>Non-operating              | 10 °C/hour<br>20 °C/hour             |
| Humidity                  | Operating<br>Storage                    | 85% RH<br>95% RH                     |
| Altitude                  | Operating<br>Storage                    | 10,000 feet max.<br>50,000 feet max. |
| Shock                     | Operational and non-operational         | 50 G 11ms<br>half sine wave          |
| Vibration (See Note 3)    | Operational and non-operational         | 0.02 G <sup>2</sup> /Hz max.         |
| Electrostatic discharge   | Operating (See Note 4)<br>non-operating | ESD 15 kV<br>ESD 25 kV               |

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For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)

| INPUT VOLTAGE | NOMINAL OUTPUT VOLTAGE | NOMINAL OUTPUT CURRENT | MINIMUM EFFICIENCY | MODEL NUMBER (5,6) |
|---------------|------------------------|------------------------|--------------------|--------------------|
| 12 Vdc        | 3.3/2.5 Vdc            | 20 A                   | 86/82%             | NXA66-12P3V3CY     |

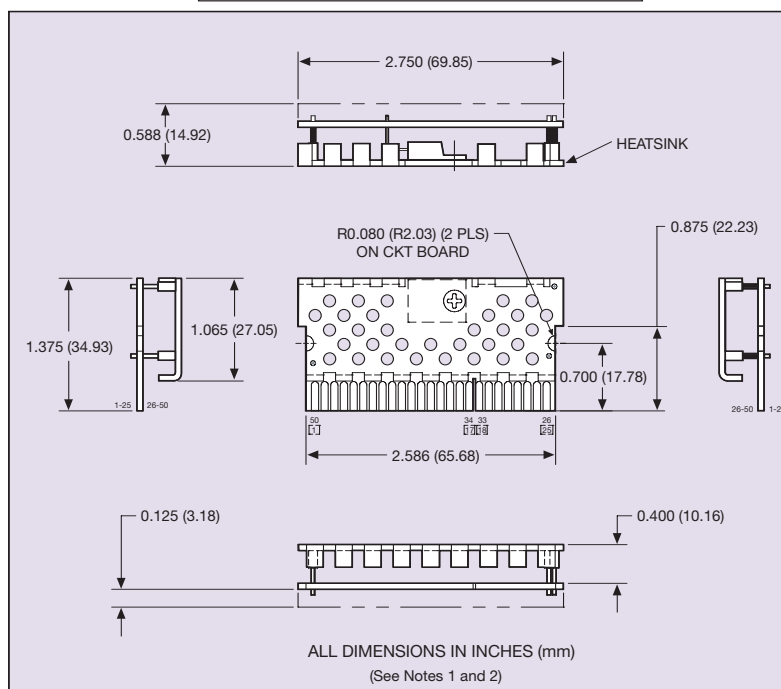
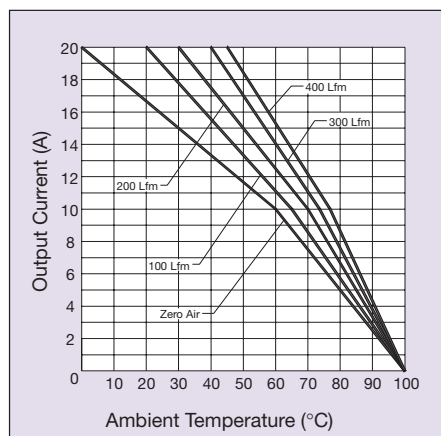
### Notes

- In this view, row B of the edge connector is visible. The leftmost pin is pin 50, and the rightmost pin is pin 26. Row A of the connector is on the opposite side of the unit. Pin 1 is behind pin 50, pin 25 is behind pin 26.
- Recommended mating connector is AMP 145432 or equivalent. Pin 44 is absent and is used for electrical key. AMP keying plug PN 65025-2 may be placed in the mating connector between pins 33 and 34, and between pins 17 and 18. This keying plug serves as a mechanical key.
- From 5 Hz to 20 Hz, maintaining 0.02 G<sup>2</sup>/Hz from 20 Hz to 500 Hz, all axes.

### Notes Cond.

- Initialization level; ESD event shall cause no out-of-regulation conditions.
- The 'Y' suffix indicates that these parts are TSE RoHS 5/6 (non Pb-free) compliant.
- NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at <http://www.artesyn.com/powergroup/products.htm> to find a suitable alternative.

| PIN CONNECTIONS |          |              |         |
|-----------------|----------|--------------|---------|
| PIN NO.         | ROW A    | ROW B        | PIN NO. |
| 1               | 12 Vin   | RTN          | 50      |
| 2               | 12 Vin   | RTN          | 49      |
| 3               | 12 Vin   | RTN          | 48      |
| 4               | 12 Vin   | RTN          | 47      |
| 5               | 12 Vin   | RTN          | 46      |
| 6               | Reserved | RTN          | 45      |
| 7               | VSP      |              |         |
| 8               | PWRGD    | Reserved     | 43      |
| 9               | OUTEN    | Ishare       | 42      |
| 10              | Reserved | Reserved     | 41      |
| 11              | Vo-sense | Vo-sense rtn | 40      |
| 12              | Vout     | Return       | 39      |
| 13              | Vout     | Return       | 38      |
| 14              | Vout     | RTN          | 37      |
| 15              | Vout     | RTN          | 36      |
| 16              | Vout     | RTN          | 35      |
| 17              | Vout     | RTN          | 34      |
| 18              | Vout     | RTN          | 33      |
| 19              | Vout     | RTN          | 32      |
| 20              | Vout     | RTN          | 31      |
| 21              | Vout     | RTN          | 30      |
| 22              | Vout     | RTN          | 29      |
| 23              | Vout     | RTN          | 28      |
| 24              | Vout     | RTN          | 27      |
| 25              | Vout     | RTN          | 26      |



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