



# 5-6 WATT 2:1 WIDE INPUT RANGE DC/DC POWER MODULES

## Remote ON/OFF Option (Rectangle Package)

### FEATURES

- 5.0 to 6.0 Watt Isolated Output
- 2:1 Wide Input Range
- High Conversion Efficiency
- Continuous Short Circuit Protection
- Remote ON/OFF Option \*

### GENERAL SPECIFICATIONS

- Efficiency ..... Per Table
- Switching Frequency ..... 100KHz Min.
- Isolation Voltage: ..... 500 Vdc Min.
- Operating Temperature ..... -25 to +75°C Derate Linearly to no load @ 100°C max.
- Case Material:  
500Vdc.....Non-Conductive Black Plastic  
1.5kVdc & 3kVdc.....Black coated copper with non-conductive base
- EMI/RFI..... Conductive EMI meet EN55022 Class B

### INPUT SPECIFICATIONS

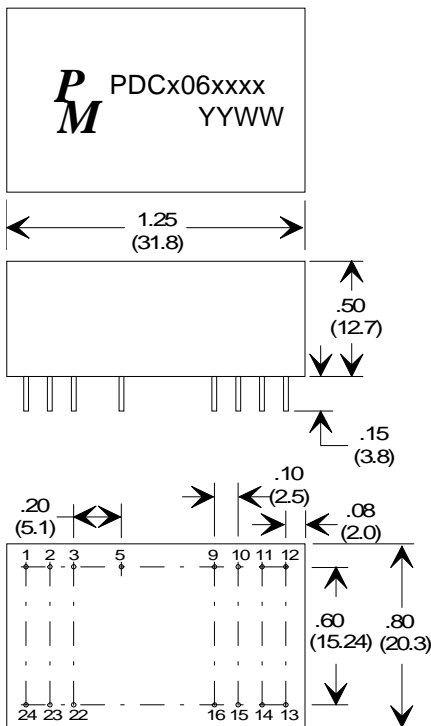
- Voltage .....12, 24, 48 Vdc
- Voltage Range .....9-18, 18-36 & 36-72Vdc
- Input Filter ..... Pi Type

### OUTPUT SPECIFICATIONS

- Voltage ..... Per Table
- Initial Voltage Accuracy ..... ±2% Max
- Voltage Stability ..... ±0.05% max
- Ripple&Noise ..3.3&5/12&15...100/150mV p-p
- Load Regulation (10 to 100% Load)  
Single Output Units: ±0.5%  
Dual Output Units: ±1.0%
- Line Regulation ..... ±0.5% typ.
- Temp Coefficient ..... ±0.05% /°C
- Short Circuit Protection ..... Continuous

### PACKAGE

#### PHYSICAL DIMENSIONS DIMENSIONS IN inches (mm)



Note: Pin size is 0.02" Inch (0.5mm) DIA or 0.02x0.014 Inch

### PIN ASSIGNMENTS

#### REMOTE ON/OFF CONTROL

|                       |                            |
|-----------------------|----------------------------|
| Logic                 | CMOS or Open Collector TTL |
| Ec-On                 | >+5.5VDC or Open Circuit   |
| Ec-Off                | <1.8VDC                    |
| Shutdown Idle Current | 10mA                       |
| Input Resistance      | 100K Ohm                   |
| Control Common        | Referenced to Input Minus  |

| 500VDC |               |              | 1500VDC & 3000VDC |               |              |
|--------|---------------|--------------|-------------------|---------------|--------------|
| PIN #  | SINGLE OUTPUT | DUAL OUTPUTS | PIN #             | SINGLE OUTPUT | DUAL OUTPUTS |
| 1      | + INPUT       | +INPUT       | 1                 | NP            | NP           |
| 2      | NC            | -OUTPUT      | 2                 | -INPUT        | -INPUT       |
| 3      | NC            | COMMON       | 3                 | -INPUT        | -INPUT       |
| 5      | NP            | NP           | 5                 | NP            | R(ON/OFF)    |
| 9      | NP            | NP           | 9                 | NC            | COMMON       |
| 10     | -OUTPUT       | COMMON       | 10                | NC            | NC           |
| 11     | +OUTPUT       | +OUTPUT      | 11                | NC            | -OUTPUT      |
| 12     | -INPUT        | -INPUT       | 12                | NP            | NP           |
| 13     | -INPUT        | -INPUT       | 13                | NP            | NP           |
| 14     | +OUTPUT       | +OUTPUT      | 14                | +OUTPUT       | +OUTPUT      |
| 15     | -OUTPUT       | COMMON       | 15                | NC            | NC           |
| 16     | NP            | NP           | 16                | -OUTPUT       | COMMON       |
| 22     | NC            | COMMON       | 22                | +INPUT        | +INPUT       |
| 23     | NC            | -OUTPUT      | 23                | +INPUT        | +INPUT       |
| 24     | +INPUT        | +INPUT       | 24                | NP            | NP           |

\*NP-NO PIN

\*NC-NO CONNECTION WITH PIN



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**ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -25°C TO +75°C**

| PART NUMBER<br>(Note #1) | Premier Magnetics<br>Old Part #<br>(Note #2) | INPUT VOLTAGE |       | OUTPUT VOLTAGE<br>(Vdc) | OUTPUT CURRENT<br>(mAdc) | INPUT CURRENT |                 | TYPICAL EFFICIENCY |
|--------------------------|--|---------------|-------|-------------------------|--------------------------|---------------|-----------------|--------------------|
|                          |  | NOMINAL       | RANGE |                         |                          | NO LOAD<br>mA | FULL LOAD<br>mA |                    |
| PDCS06031                | E2AS1203NX                                   | 12            | 9-18  | 3.3                     | 1000                     | 7.5           | 405             | 68 %               |
| PDCS06032                | E2AS1205NX                                   | 12            | 9-18  | 5                       | 1000                     | 7.5           | 545             | 76 %               |
| PDCS06033                | E2AS1212NX                                   | 12            | 9-18  | 12                      | 470                      | 7.5           | 585             | 80 %               |
| PDCS06034                | E2AS1215NX                                   | 12            | 9-18  | 15                      | 400                      | 7.5           | 625             | 80 %               |
| PDCD06032                | E2AD1205NX                                   | 12            | 9-18  | ±5                      | ±500                     | 12            | 545             | 76 %               |
| PDCD06033                | E2AD1212NX                                   | 12            | 9-18  | ±12                     | ±230                     | 12            | 575             | 80 %               |
| PDCD06034                | E2AD1215NX                                   | 12            | 9-18  | ±15                     | ±190                     | 12            | 590             | 80 %               |
| PDCS06041                | E2AS2403NX                                   | 24            | 18-36 | 3.3                     | 1000                     | 5             | 195             | 70 %               |
| PDCS06042                | E2AS2405NX                                   | 24            | 18-36 | 5                       | 1000                     | 5             | 265             | 78 %               |
| PDCS06043                | E2AS2412NX                                   | 24            | 18-36 | 12                      | 470                      | 5             | 285             | 82 %               |
| PDCS06044                | E2AS2415NX                                   | 24            | 18-36 | 15                      | 400                      | 5             | 305             | 82 %               |
| PDCD06042                | E2AD2405NX                                   | 24            | 18-36 | ±5                      | ±500                     | 7.5           | 265             | 78 %               |
| PDCD06043                | E2AD2412NX                                   | 24            | 18-36 | ±12                     | ±230                     | 7.5           | 285             | 81 %               |
| PDCD06044                | E2AD2415NX                                   | 24            | 18-36 | ±15                     | ±190                     | 7.5           | 295             | 81 %               |
| PDCS06051                | E2AS4803NX                                   | 48            | 36-72 | 3.3                     | 1000                     | 2             | 98              | 70 %               |
| PDCS06052                | E2AS4805NX                                   | 48            | 36-72 | 5                       | 1000                     | 2             | 133             | 78 %               |
| PDCS06053                | E2AS4812NX                                   | 48            | 36-72 | 12                      | 470                      | 2             | 145             | 81 %               |
| PDCS06054                | E2AS4815NX                                   | 48            | 36-72 | 15                      | 400                      | 2             | 154             | 81 %               |
| PDCD06052                | E2AD4805NX                                   | 48            | 36-72 | ±5                      | ±500                     | 3             | 265             | 78 %               |
| PDCD06053                | E2AD4812NX                                   | 48            | 36-72 | ±12                     | ±230                     | 3             | 142             | 81 %               |
| PDCD06054                | E2AD4815NX                                   | 48            | 36-72 | ±15                     | ±190                     | 3             | 147             | 81 %               |

**NOTE #1:**

**PDCx06xxx :** FOR STANDARD PART WITH ISOLATION = 500VDC

**PDCx06xxxK :** ADD "K" FOR PART WITH ISOLATION = 1500VDC

**PDCx06xxxQ :** ADD "Q" FOR PART WITH ISOLATION = 3000VDC

**PDCx06xxxR :** ADD "R" FOR PART WITH ISOLATION = 3000VDC AND REMOTE ON/OFF

**NOTE #2: (FOR PREMIER MAGNETICS OLD PART #)**

**E2AXXXXXNX :** FOR STANDARD PART WITH ISOLATION = 500VDC

**E2AXXXXXNM :** FOR PART WITH ISOLATION = 1500VDC

**E2AXXXXXNT :** FOR PART WITH ISOLATION = 3000VDC

**E2AXXXXXTR :** FOR PART WITH ISOLATION = 3000VDC AND REMOTE ON/OFF