



# 3.0 WATT 2:1 WIDE INPUT RANGE DC/DC POWER MODULES

With Remote On/Off Option (Rectangle Package)

## FEATURES

- ① 3.0 Watt Isolated Output
- ② 2:1 Wide Input Range
- ③ High Conversion Efficiency
- ④ Continuous Short Circuit Protection
- ⑤ 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

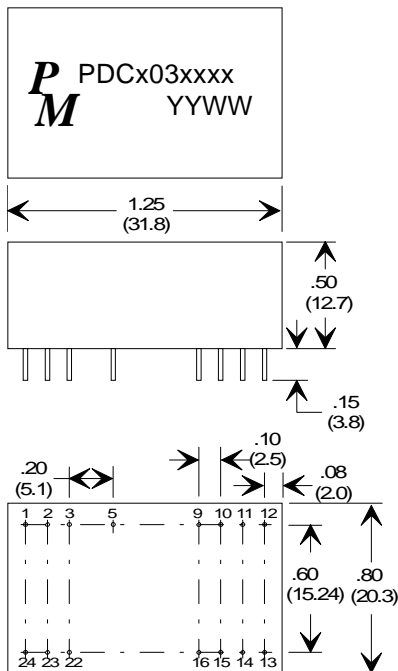
## OUTPUT SPECIFICATIONS

- Voltage ..... Per Table
- Initial Voltage Accuracy ..... ±2% Max
- Voltage Stability ..... ±0.05% max
- Ripple & Noise ..... 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

## PIN ASSIGNMENTS

### PHYSICAL DIMENSIONS DIMENSIONS IN inches (mm)



| 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      | 100 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      | COMON        | 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           |



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

| PART NUMBER<br>(NOTE #1) | Previous Premier Magnetic Part # (NOTE #2) | INPUT VOLTAGE |       | OUTPUT VOLTAGE (Vdc) | OUTPUT CURRENT (mAdc) | INPUT CURRENT |              | TYPICAL EFFICIENCY |
|--------------------------|--|---------------|-------|----------------------|-----------------------|---------------|--------------|--------------------|
|                          |  | NOMINAL       | RANGE |                      |                       | NO LOAD mA    | FULL LOAD mA |                    |
| PDCS03021                | B5AS1203NX                                 | 12            | 9-18  | 3.3                  | 600                   | 7.5           | 226          | 73 %               |
| PDCS03022                | B5AS1205NX                                 | 12            | 9-18  | 5                    | 600                   | 7.5           | 340          | 73 %               |
| PDCS03023                | B5AS1212NX                                 | 12            | 9-18  | 12                   | 250                   | 7.5           | 320          | 78 %               |
| PDCS03024                | B5AS1215NX                                 | 12            | 9-18  | 15                   | 200                   | 7.5           | 330          | 76 %               |
| PDCD03022                | B5AD1205NX                                 | 12            | 9-18  | ±5                   | ±300                  | 12            | 340          | 73 %               |
| PDCD03023                | B5AD1212NX                                 | 12            | 9-18  | ±12                  | ±125                  | 12            | 330          | 76 %               |
| PDCD03024                | B5AD1215NX                                 | 12            | 9-18  | ±15                  | ±100                  | 12            | 330          | 75 %               |
| PDCS03025                | B5AS2403NX                                 | 24            | 18-36 | 3.3                  | 600                   | 5             | 113          | 73 %               |
| PDCS03026                | B5AS2405NX                                 | 24            | 18-36 | 5                    | 600                   | 5             | 168          | 74 %               |
| PDCS03027                | B5AS2412NX                                 | 24            | 18-36 | 12                   | 250                   | 5             | 156          | 80 %               |
| PDCS03028                | B5AS2415NX                                 | 24            | 18-36 | 15                   | 200                   | 5             | 156          | 80 %               |
| PDCD03026                | B5AD2405NX                                 | 24            | 18-36 | ±5                   | ±300                  | 7.5           | 168          | 74 %               |
| PDCD03027                | B5AD2412NX                                 | 24            | 18-36 | ±12                  | ±125                  | 7.5           | 156          | 80 %               |
| PDCD03028                | B5AD2415NX                                 | 24            | 18-36 | ±15                  | ±100                  | 7.5           | 160          | 80 %               |
| PDCS03029                | B5AS4803NX                                 | 48            | 36-72 | 3.3                  | 600                   | 3             | 55           | 76 %               |
| PDCS03030                | B5AS4805NX                                 | 48            | 36-72 | 5                    | 600                   | 2             | 82           | 76 %               |
| PDCS03031                | B5AS4812NX                                 | 48            | 36-72 | 12                   | 250                   | 2             | 82           | 77 %               |
| PDCS03032                | B5AS4815NX                                 | 48            | 36-72 | 15                   | 200                   | 2             | 82           | 77 %               |
| PDCD03030                | B5AD4805NX                                 | 48            | 36-72 | ±5                   | ±300                  | 3             | 82           | 76 %               |
| PDCD03031                | B5AD4812NX                                 | 48            | 36-72 | ±12                  | ±125                  | 3             | 82           | 76 %               |
| PDCD03032                | B5AD4815NX                                 | 48            | 36-72 | ±15                  | ±100                  | 3             | 82           | 76 %               |

**NOTE #1:**

**PDCx030xx** : BLANK FOR STANDARD PART WITH ISOLATION = 500VDC

**PDCx030xxK** : ADD "K" FOR PART WITH ISOLATION = 1500VDC

**PDCx030xxQ** : ADD "Q" FOR PART WITH ISOLATION = 3000VDC

**PDCx030xxR** : ADD "R" FOR PART WITH ISOLATION = 3000VDC AND REMOTE ON/OFF

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

**B5AXXXXXNX** : FOR STANDARD PART WITH ISOLATION = 500VDC

**B5AXXXXXNM** : FOR PART WITH ISOLATION = 1500VDC

**B5AXXXXXNT** : FOR PART WITH ISOLATION = 3000VDC

**B5AXXXXXYT** : FOR PART WITH ISOLATION = 3000VDC AND REMOTE ON/OFF