

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

(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 Regulate Output

## GENERAL SPECIFICATIONS

- Efficiency ..... Per Table
- Switching Frequency ..... 100KHz Min.
- Isolation Voltage: ..... 500 Vdc Min.
- Operating Temperature ..... -25 to +71°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

## INPUT SPECIFICATIONS

- Voltage ..... 5, 12, 24, 48 Vdc
- Voltage Range ...4.5-6, 9-18, 18-36, 36-72Vdc
- Input Filter ..... Pi Type

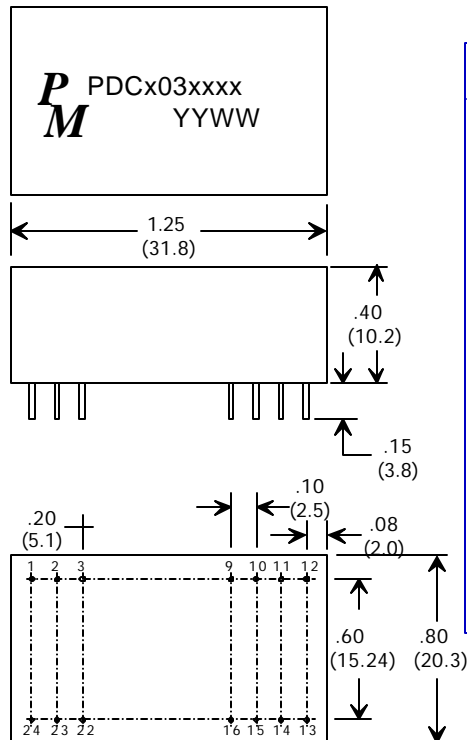
## OUTPUT SPECIFICATIONS

- 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)



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
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	INPUT VOLTAGE		OUTPUT VOLTAGE (Vdc)	OUTPUT CURRENT (mAdc)	INPUT CURRENT		TYPICAL EFFICIENCY
	NOMINAL	RANGE			NO LOAD mA	FULL LOAD mA	
PDCS03001	5	4.5-6.0	3.3	600	15	650	61 %
PDCS03002	5	4.5-6.0	5	600	15	850	70 %
PDCS03003	5	4.5-6.0	12	250	15	800	75 %
PDCS03004	5	4.5-6.0	15	200	15	800	75 %
PDCD03002	5	4.5-6.0	±5	±300	25	850	70 %
PDCD03003	5	4.5-6.0	±12	±125	25	800	75 %
PDCD03004	5	4.5-6.0	±15	±100	25	800	75 %
PDCS03005	12	9-18	3.3	600	7.5	254	65 %
PDCS03006	12	9-18	5	600	7.5	340	73 %
PDCS03007	12	9-18	12	250	7.5	320	78 %
PDCS03008	12	9-18	15	200	7.5	320	78 %
PDCD03006	12	9-18	±5	±300	12	340	73 %
PDCD03007	12	9-18	±12	±125	12	320	78 %
PDCD03008	12	9-18	±15	±100	12	320	78 %
PDCS03009	24	18-36	3.3	600	5	125	66 %
PDCS03010	24	18-36	5	600	5	168	74 %
PDCS03011	24	18-36	12	250	5	156	80 %
PDCS03012	24	18-36	15	200	5	156	80 %
PDCD03010	24	18-36	±5	±300	7.5	168	74 %
PDCD03011	24	18-36	±12	±125	7.5	156	80 %
PDCD03012	24	18-36	±15	±100	7.5	156	80 %
PDCS03013	48	36-72	3.3	600	3	61	68 %
PDCS03014	48	36-72	5	600	2	82	76 %
PDCS03015	48	36-72	12	250	2	78	80 %
PDCS03016	48	36-72	15	200	2	78	80 %
PDCD03014	48	36-72	±5	±300	3	82	76 %
PDCD03015	48	36-72	±12	±125	3	80	78 %
PDCD03016	48	36-72	±15	±100	3	80	78 %

**NOTE:**

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

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

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

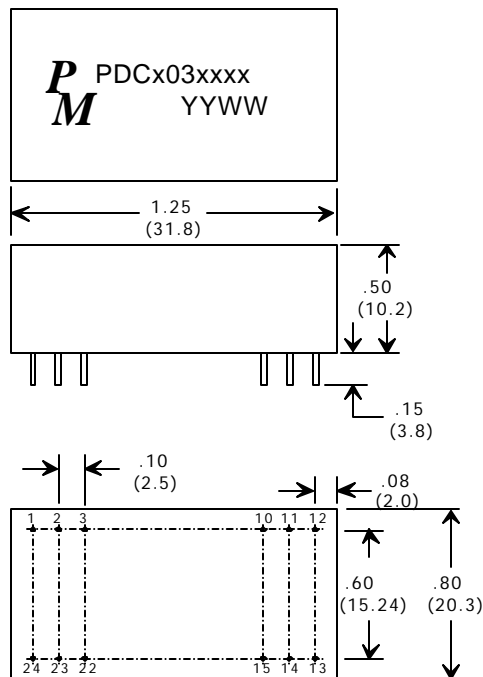
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**ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -25°C TO +75°C**

PART NUMBER	INPUT VOLTAGE		OUTPUT VOLTAGE (Vdc)	OUTPUT CURRENT (mAdc)	INPUT CURRENT		TYPICAL EFFICIENCY
	NOMINAL	RANGE			NO LOAD mA	FULL LOAD mA	
PDCS03017	5	4.5-6.0	3.3	600	15	600	70 %
PDCS03018	5	4.5-6.0	5	600	15	850	70 %
PDCS03019	5	4.5-6.0	12	250	15	800	75 %
PDCS03020	5	4.5-6.0	15	200	15	800	75 %
PDCD03018	5	4.5-6.0	±5	±300	25	850	70 %
PDCD03019	5	4.5-6.0	±12	±125	25	800	75 %
PDCD03020	5	4.5-6.0	±15	±100	25	800	75 %

**NOTE:**

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



PDC03017-03020

500VDC		
PIN #	SINGLE OUTPUT	DUAL OUTPUTS
1	+ INPUT	+INPUT
2	NC	+INPUT
3	NC	NC
10	NC	NC
11	- OUTPUT	COMMON
12	- OUTPUT	COMMON
13	NC	- OUTPUT
14	+ OUTPUT	NC
15	+ OUTPUT	+ OUTPUT
22	NC	NC
23	- INPUT	- INPUT
24	- INPUT	- INPUT

NC\* - NO CONNECTION WITH PIN