

Power Industries

T-57-11

DC/DC Converters 0.3-6W

- Regulated or non-regulated types in thickfilm hybrid or SMD technology
- Input: 5VDC to 48VDC
Output: 5VDC to 15VDC
 $\pm 12\text{VDC}$ to $\pm 18\text{VDC}$
- Input filter (not type 1PIN)
- Isolation 500VDC (type 33PR 2500 VDC)
- Temperature range -25°C to $+75^{\circ}\text{C}$ (max case temperature $+90^{\circ}\text{C}$)
- Short circuit protection (type 1PIN only 10s)



Power Industries is the product name of a range of DC/DC converters in thickfilm hybrid or SMD technology meeting the growing demand for PCB voltage conversion or circuit isolation in high quality telecom and industrial circuits.

The converters are available with regulated (type PIR) or non-regulated (type PIN) outputs. Special types for LAN are also available.

High switching frequency and an efficient thermal management bring high power densities. All types (except 1PIN) are designed with high attenuation input filters. There is a continuous short circuit protection with a fold back characteristic for all types except type 1PIN for which the protection is limited to 10s.

The converters are encapsulated with an epoxy filled plastic box. The encapsulation is self-extinguishing meeting UL requirements. The epoxy encapsulation brings mechanical strength and environmental protection to meet a 56 days humidity test at $+40^{\circ}\text{C}$, 95% R.H

The reliability, calculated according to MIL-HDBK 217 at 30°C and full load, is more than 150,000h or 200,000h depending on type.

Product program

Non-regulated converters			Regulated converters		
Output power W	Type designation	Case or termination	Output power W	Type designation	Case or termination
0.3-0.7	1PIN	A (DIL 16)	0.5-2	2PIR	B1 (DIL 24)
1-2	2PIN	B1 (DIL 24)	2.5	3PIR	B2 (DIL 24)
3-4	4PIN	B1 (DIL 24)	2-3	4PIR	B1 (DIL 24)
5-6	7PIN	C	3-4	7PIR	C
			5-6	8PIR	D
			2.25 ¹⁾	33PR	E

¹⁾ LAN-type with input-output isolation 2500VDC

Absolute maximum ratings

Characteristics	Type or termination						
	Non-regulated converters			Regulated converters			
	DIL 16	DIL 24	7PIN	DIL 24	7PIR	8PIR	33PR
Case temperature	90°C			90°C			
Power dissipation regardless of case temperature	1.0W	2.0W	3.5W	2.0W	3.0W	5.0W	2.5W
Storage temperature	-40 to $+125^{\circ}\text{C}$			-40° to $+125^{\circ}\text{C}$			

For complete information, please ask for the specific data sheet for the Power Industries range.

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Input data

Characteristics	Type	Non-regulated types			Regulated types					Units
		5V	12V	24V	Type	5V	12V	24V	48V	
Input voltage	All	±10	±10	±10	8PIR	-7+10	±10	±10	±10	%
					33PR	-	10.2-15	-	-	V
					Other	-5+10	±10	±10	±10	%

Output data (typical values at nom. input voltage and T_{amb} = +25°C)

Characteristics	Units	Type	Non-regulated types Input voltage			Type	Regulated types Input voltage			
			5V	12V	24V		5V	12V	24V	48V
Regulation Line	%	All	Percent change of V _{out} and V _{in} equal			7PIR	1.0	1.0	1.0	-
						8PIR	0.1	0.1	0.1	0.1
						2PPR	-	2.0	2.0	2.0
						Other	1.0	0.5	0.5	0.5
Load (50 to 100%)	%	All	+20 to 0			7PIR	0.6	0.6	0.6	-
						8PIR	0.1	0.1	0.1	0.1
						Other	1.0	0.5	0.5	0.5
Output ripple	mV _{p-p}	1PIN	40	40	40	2PIR	50	50	50	-
		2PIN	80	80	80	3PIR	30	30	30	30
		4PIN	100	100	100	4PIR	50	50	50	-
		7PIN	100	100	100	7PIR	100	100	100	-
						8PIR	50	50	50	50
						33PR	-	60	-	-

Dimensions

Dimensions L x W x H mm (inches)	Case
25 x 12.9 x 10.3 (1.0 x 0.5 x 0.4) DIL 16 compatible	A
32.3 x 20.3 x 9.8 (1.3 x 0.8 x 0.39)	B1
32.3 x 20.3 x 10.5 (1.3 x 0.8 x 0.41)	B2
51 x 26 x 10.3 (2.0 x 1.0 x 0.4)	C
51 x 51 x 10.3 (2.0 x 2.0 x 0.4)	D
31.3 x 31.3 x 10.3 (1.23 x 1.23 x 0.4)	E

Ordering information

When ordering please state the complete article No. according to the below example:

