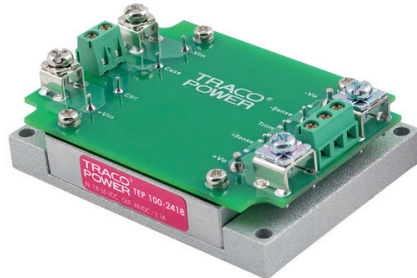


Features

- ◆ Rugged, compact metal case
- ◆ Easy chassis mount
- ◆ Screw terminal adaptor available for easy connection
- ◆ Wide 2:1 input voltage range
- ◆ Full load operation up to 60°C with convection cooling
- ◆ Soft start
- ◆ Under voltage lock-out circuit
- ◆ Reverse input voltage protection
- ◆ Input protection filter
- ◆ 3-year product warranty



(Models pictured with chassis mount adaptor and optional heatsink)

The TEP-100 Series is a family of isolated high performance dc-dc converter modules with ultra-wide 2:1 input voltage ranges which come in a rugged, sealed metal case.

These converters are suitable for a wide range of applications, but the product is designed particularly also for industrial applications where often no PCB mounting is possible but the module has to be mounted on a chassis. Four threaded M3 inserts in the module makes chassis mount or attachment of a heatsink for

optimal thermal management very simple.

For easy connection there is also a unique adaptor available with screw terminals. A very high efficiency allows an operating temperature up to +60°C with natural convection cooling without power derating. Further features include output voltage trimming, Remote On/Off and under voltage lockout. The very wide input voltage range and reverse input voltage protection make these converters also an interesting solution for battery operated systems.

Models

Order code*	Input voltage	Output voltage	Output current max.	Efficiency typ.
TEP 100-1210	9 – 18 VDC (12 VDC nominal)	3.3 VDC	25.0 A	90 %
TEP 100-1211		5.0 VDC	20.0 A	91 %
TEP 100-1212		12 VDC	8.4 A	91 %
TEP 100-1213		15 VDC	6.7 A	91 %
TEP 100-1215		24 VDC	4.2 A	90 %
TEP 100-1216		28 VDC	3.6 A	90 %
TEP 100-1218		48 VDC	2.1 A	90 %
TEP 100-2410	18 – 36 VDC (24 VDC nominal)	3.3 VDC	25.0 A	91 %
TEP 100-2411		5.0 VDC	20.0 A	93 %
TEP 100-2412		12 VDC	8.4 A	93 %
TEP 100-2413		15 VDC	6.7 A	93 %
TEP 100-2415		24 VDC	4.2 A	92 %
TEP 100-2416		28 VDC	3.6 A	92 %
TEP 100-2418		48 VDC	2.1 A	92 %
TEP 100-4810	36 – 75 VDC (48 VDC nominal)	3.3 VDC	25.0 A	91 %
TEP 100-4811		5.0 VDC	20.0 A	93 %
TEP 100-4812		12 VDC	8.4 A	93 %
TEP 100-4813		15 VDC	6.7 A	93 %
TEP 100-4815		24 VDC	4.2 A	92 %
TEP 100-4816		28 VDC	3.6 A	92 %
TEP 100-4818		48 VDC	2.1 A	92 %

* – add suffix **-CM**, **-CMF** for models with chassis mount adaptor, see last page.

– add suffix **-N** for negative remote control, see page 3 -> Remote On/Off

Input Specifications

Input current at no load	12 Vin; 3.3 – 15 VDC models:	160 mA typ.
	12 Vin; 24 – 48 VDC models:	100 mA typ.
	24 Vin; 3.3 – 15 VDC models:	185 mA typ.
	24 Vin; 24 – 48 VDC models:	85 mA typ.
	48 Vin; 3.3 – 15 VDC models:	90 mA typ.
	48 Vin; 24 – 48 VDC models:	40 mA typ.
Input current at full load	12 Vin models:	9.4 A typ.
	24 Vin models:	4.6 A typ.
	48 Vin models:	2.3 A typ.
Start-up voltage	12 Vin models:	8.5 VDC (or lower)
	24 Vin models:	17.5 VDC (or lower)
	48 Vin models:	35.5 VDC (or lower)
Under voltage shut down (lock-out circuit)	12 Vin models:	7.5 VDC typ.
	24 Vin models:	16 VDC typ.
	48 Vin models:	34 VDC typ.
Surge voltage (100 msec. max.)	12 Vin models:	36 V max.
	24 Vin models:	50 V max.
	48 Vin models:	100 V max.
Conducted noise		EN 55022 level A, FCC part 15, level A (chassis mount option –CFM required)
EMC immunity	– ESD (electrostatic discharge)	EN 50121-3-2
		EN 61000-4-2, air ±8 kV, contact ±6 kV, perf. criteria A
		EN 61000-4-3, 10 V/m, perf. criteria A
		EN 61000-4-4, ±2 kV, perf. criteria A
	– Radiated immunity	EN 61000-4-5, ±2 kV perf. criteria A
Nippon chemi-con KY 200 µF, 100 V, ESR 48 Ohm or with chassis mount option –CFM		
– Fast transient / surge (with external input capacitor)	EN 61000-4-6, 10 Vrms, perf. criteria A	
– Conducted immunity		
Reverse voltage protection		parallel diode

Output Specifications

Voltage set accuracy		±1 %	
Output voltage adjustment		+10 % / –20 % by external resistor see application note:	
Regulation	– Input variation Vin min. to Vin max.	0.2 % max.	
	– Load variation (0 – 100 %)	3.3 – 15 VDC models:	0.3 % max.
		24 – 48 VDC models:	0.3 % max.
Temperature coefficient		±0.02 %/K	
Minimum load		not required	
Remote sense		10 % max. of Vout nom. (including trim up value)	
Ripple and noise (20 MHz Bandwidth)	3.3 & 5 VDC models:	75 mVpk-pk max.	
	12 & 15 VDC models:	100 mVpk-pk max.	
	24 & 28 VDC models:	200 mVpk-pk max.	
	48 VDC models:	300 mVpk-pk max.	