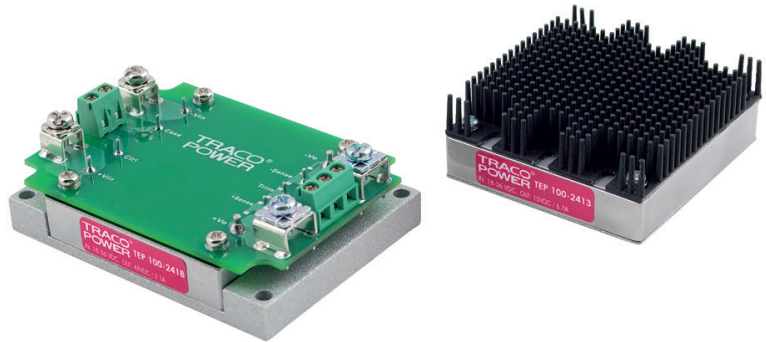


Features

- ◆ Rugged, compact metal case
- ◆ Screw terminal adaptor available for easy connection
- ◆ EN 50155 approval for railway applications
- ◆ Optional DIN-rail mounting kit
- ◆ Ultra wide 4:1 input voltage range
- ◆ Full load operation up to +60°C with convection cooling
- ◆ Undervoltage lockout
- ◆ Reverse input voltage protection
- ◆ Input protection filter
- ◆ 3-year product warranty



(Models pictured with chassis mount adaptor / optional heatsink)

The TEP-75WI Series is a family of isolated high performance DC/DC converter modules with ultra-wide 4:1 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 an 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 75-2411WI	9 – 36 VDC (24 VDC nominal)	5.0 VDC	15.0 A	88 %
TEP 75-2412WI		12 VDC	6.3 A	88 %
TEP 75-2413WI		15 VDC	5.0 A	88 %
TEP 75-2415WI		24 VDC	3.2 A	87 %
TEP 75-2416WI		28 VDC	2.7 A	87 %
TEP 75-2418WI		48 VDC	1.6 A	87 %
TEP 75-4811WI	18 – 75 VDC (48 VDC nominal)	5.0 VDC	15 A	90 %
TEP 75-4812WI		12 VDC	6.3 A	90 %
TEP 75-4813WI		15 VDC	5.0 A	89 %
TEP 75-4815WI		24 VDC	3.2 A	88 %
TEP 75-4816WI		28 VDC	2.7 A	88 %
TEP 75-4818WI		48 VDC	1.6 A	87 %
TEP 75-7211WI	43 – 160 VDC (110 VDC nominal)	5.0 VDC	15 A	91 %
TEP 75-7212WI		12 VDC	6.3 A	91 %
TEP 75-7213WI		15 VDC	5.0 A	91 %
TEP 75-7215WI		24 VDC	3.2 A	90 %
TEP 75-7216WI		28 VDC	2.7 A	90 %
TEP 75-7218WI		48 VDC	1.6 A	90 %
on demand	Models with 3.3 VDC / ~ 20 A			
	Negative (passive = Off) Remote On/Off function (standard is passive = On)			

Options

suffix -CM	Chassis mount models with screw terminal block, see page 5
suffix -CMF	Chassis mount models with screw terminal block and input filter to meet EN 55032 class A, see page 5
TEP-HS1	Heat-sink for standard version (incl. mounting screws and thermal pad), see page 4
TEP-MK1	Din-rail mounting kit for chassis mount models (incl. mounting screws), see page 6
TCK-xxx	Common mode chokes for filter proposals to meet EN55032 class A/B, see application note

Input Specifications

Input current at no load	24 Vin; 5 – 15 VDC models:	185 mA typ.
	24 Vin; 24 – 48 VDC models:	85 mA typ.
	48 Vin; 5 & 12 VDC models:	85 mA typ.
	48 Vin; 15 – 48 VDC models:	50 mA typ.
	110 Vin; 5 – 48 VDC models:	10 mA typ.
Input current at full load	24 Vin models:	3600 mA typ. (see Note 1)
	48 Vin models:	1800 mA typ.
	110 Vin models:	1350 mA typ.
Start-up voltage / under voltage lockout	24 Vin models:	9 VDC / 7.5 VDC (or lower)
	48 Vin models:	18 VDC / 16 VDC (or lower)
	110 Vin models:	43 VDC / 36 VDC (or lower)
Surge voltage (100 msec. max.)	24 Vin models:	50 V max.
	48 Vin models:	100 V max.
	110 Vin models:	185 V max.
Conducted noise	– with option –CMF – for PCB mount version	EN 55032 class A, FCC part 15, level A See application note for to meet EN 55032 class A or B
EMC immunity	– ESD (electrostatic discharge)	EN 50121-3-2 EN 61000-4-2, air ± 8 kV, contact ± 6 kV, perf. criteria A
	– Radiated immunity	EN 61000-4-3, 20 V/m, perf. criteria A
	– Fast transient / surge (with external input capacitor)	EN 61000-4-4, ± 2 kV, perf. criteria A EN 61000-4-5, ± 2 kV perf. criteria A, EN55024/EN51055
	24 & 48 Vin models:	Nippon chemi-con KY 220 μ F/100V, ESR 48 mOhm
	110 Vin models:	Ruby-con BXF series, 150 μ F/200V
	CMF option models:	capacitor included
	– Conducted immunity – PF Magnetic Field	EN 61000-4-6, 10 Vrms, perf. criteria A EN 61000-4-8, 100 A/m, perf. criteria A
Reverse voltage protection		parallel diode (external input fuse required)

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.	0.1 % max.
	– Load variation (0 – 100 %) 5 – 15 VDC models:	0.1 % max.
	24 – 48 VDC models:	0.1 % max.
Temperature coefficient		± 0.02 %/K
Minimum load		not required

Note 1:

For 24 VDC input voltage models an input capacitor 4.7 μ F/50V X7R MLCC or 68 μ F/100V, 110mOhm Nippon chemi-con KY series is recommended for a reliable supply of the pulse current. Capacitor is already include with chassis mount option –CM and –CMF