

Features



- High Power Density:
30W in a 50x40x10mm Package
- Industry Standard Footprint
- Very high Efficiency
- Models with low Output
Voltages: 1.8, 2.5, 3.3VDC
- Output Voltage adjustable
- Remote on / off
- Operating Ambient Temperature Range
– 40°C to +70°C
- EMI-Filter to meet EN 55022A
- Six-side shielded Metal Case
- 2 Year Product Warranty



The TEN 30 Series is a new high efficiency, isolated 30W converter in a shielded metalcase with excellent specification. The 12 models in this series feature 2:1 input range with 18-36 or 36-75VDC. Very high efficiency allows safe operating ambient temperatures from –40°C to +70°C. Overload and overvoltage protection, under voltage shutdown as well as remote on / off are standard features of this converter. Built-in EMI-filter to comply with EN 55022A minimizes the need for external filter circuits. Typical applications for the TEN30 series converter are communication and networking systems, industrial electronics and distributed power systems.

Models

Ordercode	Input voltage range	Output voltage	Output current max.	Efficiency typ.
TEN 30-2408 TEN 30-2409 TEN 30-2410 TEN 30-2411 TEN 30-2412	18 – 36 VDC	1.8VDC 2.5VDC 3.3VDC 5 VDC 12 VDC	6'000 mA 6'000 mA 6'000 mA 6'000 mA 2'500 mA	82 % 84 % 86 % 88 % 89 %
TEN 30-4808 TEN 30-4809 TEN 30-4810 TEN 30-4811 TEN 30-4812	36 – 75 VDC	1.8VDC 2.5 VDC 3.3VDC 5 VDC 12 VDC	6'000 mA 6'000 mA 6'000 mA 6'000 mA 2'500 mA	83 % 85 % 87 % 89 % 90 %

Input Specifications

Input current (no load)	24 Vin models: 48 Vin models:	50 mA typ. 40 mA typ.
Input current (full load)	24 Vin; 1.8 Vout models: 24 Vin; 2.5 Vout models: 24 Vin; 3.3 Vout models: 24 Vin; other output models: 48 Vin; 1.8 Vout models: 48 Vin; 2.5 Vout models: 48 Vin; 3.3 Vout models: 48 Vin; other output models:	740 mA typ. 980 mA typ. 1300 mA typ. 1900 mA typ. 370 mA typ. 490 mA typ. 640 mA typ. 940 mA typ.
Start-up voltage / under voltage shut down	24 Vin models: 48 Vin models:	17.8 VDC / 15.8 VDC 36 VDC / 33 VDC
Surge voltage (100 msec. max.)	24 Vin models: 48 Vin models:	50 V max. 100 V max.
Conducted noise (Input)		EN 55022 level A, FCC part 15, level A

Output Specifications

Voltage set accuracy		± 1 %
Output voltage adjustment		± 10 %
Regulation	– Input variation Vin min. to Vin max. – Load variation 10 – 100 %	± 0.2 % max. ± 0.5 % max.
Ripple and noise (20 MHz Bandwidth)	12 Vout models: all other models:	75 mVpk-pk max. 50 mVpk-pk max.
Temperature coefficient		± 0.02 % / °C
Output current limitation		110% – 140% Iout max., foldback
Short circuit protection		Hiccup mode, indefinite (automatic recovery)
Capacitive load	1.8 Vout models / 2.5 Vout models: 3.3 Vout models / 5 Vout models: 12 Vout models :	65'000 µF max. / 33'000 µF max. 19'500 µF max. / 10'200 µF max. 3'300 µF max.

General Specifications

Temperature ranges	– Operating – Case temperature – Storage	– 40 °C ... + 71 °C + 100 °C max. – 55 °C ... + 125 °C
Derating		2.6 %/°C above 60°C
Humidity (non condensing)		95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217 E)		> 290'000 h @ + 25 °C
Isolation voltage	Input / Output	1'500 VDC
Isolation capacity	Input / Output	500 pF typ
Isolation resistance	Input / Output	> 1'000 Mohm

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

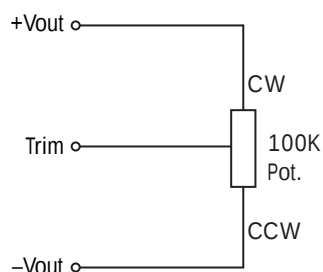
General Specifications

Remote on/off	ON: OFF: OFF idle current:	3.5 ... 12 VDC or open circuit. 0 ... 1.2 VDC or short circuit pin 4 and pin 2 2.5 mA max.
Switching frequency (fixed)		300 kHz typ. (Pulse width modulation PWM)
Safety standards		UL 1950, EN 60950, IEC 60950 Compliance up to 60 VDC input voltage(SELV limit)
Safety approvals		UL /cUL File E188913

Physical Specifications

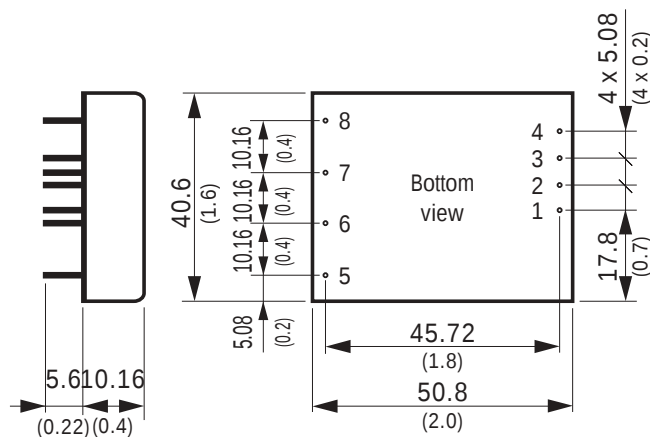
Case material	Copper nickel plated
Baseplate	Plastic
Potting material	Epoxy (flammability to UL 94V-0)
Weight	48 g (1.69 oz)
Soldering temperature	max. 260 °C / 10 sec.

Output Voltage Adjustment



All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Outline Dimensions mm (inches)



Pin diameter $\varnothing 1.0 \pm 0.05$ (0.039 ± 0.002)

Pin-Out	
Pin	
1	+Vin (Vcc)
2	-Vin (GND)
3	No pin
4	Remote on/off
5	No pin
6	+Vout
7	-Vout
8	Trim

Specifications can be changed without notice