

- 2:1 Input Range
- Efficiency to 93%
- 2" x 2" Package
- continuous short circuit Protection
- External Output Trim



Model Number	Input Voltage	Output Voltage	Output Current	Input	Current	% Eff.
				No Load	Full Load	
TP40-12S2.5	9 – 18 V	2.5 VDC	10000 mA	200 mA	2367 mA	88
TP40-12S3.3	9 – 18 V	3.3 VDC	10000 mA	200 mA	3090 mA	89
TP40-12S05	9 – 18 V	5 VDC	8000 mA	200 mA	3745 mA	89
TP40-12S12	9 – 18 V	12 VDC	3333 mA	200 mA	3703 mA	90
TP40-12S15	9 – 18 V	15 VDC	2666 mA	200 mA	3702 mA	90
TP40-12D3305	9 – 18 V	3.3 V/ 5.0V	10A/ 7.5A	100 mA	3812 mA	89
TP40-12D12	9 – 18 V	±12V	1800 mA	100 mA	4045 mA	90
TP40-12D15	9 – 18 V	±15V	1400 mA	100 mA	3889 mA	87
TP40-12T3312	9 – 18 V	3.3V /±12V	6A/± 0.4A	200 mA	2784 mA	88
TP40-12T3315	9 – 18 V	3.3V /±15V	6A/± 0.3A	200 mA	2727 mA	88
TP40-12T0512	9 – 18 V	5.0V /±12V	6A/± 0.4A	200 mA	3750 mA	88
TP40-12T0515	9 – 18 V	5.0V /±15V	6A/± 0.3A	200 mA	3611 mA	90

TP40-24S2.5	18 – 36 V	2.5 VDC	10000 mA	100 mA	1184 mA	88
TP40-24S3.3	18 – 36 V	3.3 VDC	10000 mA	100 mA	1545 mA	89
TP40-24S05	18 – 36 V	5 VDC	8000 mA	110 mA	1831 mA	91
TP40-24S12	18 – 36 V	12 VDC	3333 mA	100 mA	1811 mA	92
TP40-24S15	18 – 36 V	15 VDC	2666 mA	100 mA	1810 mA	92
TP40-24D3305	18 – 36 V	3.3 V/ 5.0V	10A/ 7.5A	50 mA	1853 mA	91
TP40-24D12	18 – 36 V	±12V	1800 mA	100 mA	1978 mA	92
TP40-24D15	18 – 36 V	±15V	1400 mA	100 mA	1902 mA	89
TP40-24T3312	18 – 36 V	3.3V /±12V	6A/± 0.4A	100 mA	1361 mA	90
TP40-24T3315	18 – 36 V	3.3V /±15V	6A/± 0.3A	100 mA	1333 mA	90
TP40-24T0512	18 – 36 V	5.0V /±12V	6A/± 0.4A	100 mA	1833 mA	90
TP40-24T0515	18 – 36 V	5.0V /±15V	6A/± 0.3A	100 mA	1806 mA	90

Model Number	Input Voltage	Output Voltage	Output Current	Input No Load	Current Full Load	% Eff.
TP40-48S2.5	36 – 75 V	2.5 VDC	10000 mA	50 mA	585 mA	89
TP40-48S3.3	36 – 75 V	3.3 VDC	10000 mA	50 mA	764 mA	90
TP40-48S05	36 – 75 V	5 VDC	8000 mA	60 mA	926 mA	90
TP40-48S12	36 – 75 V	12 VDC	3333 mA	60 mA	916 mA	91
TP40-48S15	36 – 75 V	15 VDC	2666 mA	60 mA	906 mA	92
TP40-48D3305	36 – 75 V	3.3 V/ 5.0V	10A/ 7.5A	50 mA	927 mA	90
TP40-48D12	36 – 75 V	±12V	1800 mA	50 mA	1000 mA	91
TP40-48D15	36 – 75 V	±15V	1400 mA	50 mA	962 mA	89
TP40-48T3312	36 – 75 V	3.3V /±12V	6A/± 0.4A	50 mA	688 mA	89
TP40-48T3315	36 – 75 V	3.3V /±15V	6A/± 0.3A	50 mA	690 mA	87
TP40-48T0512	36 – 75 V	5.0V /±12V	6A/± 0.4A	50 mA	938 mA	88
TP40-48T0515	36 – 75 V	5.0V /±15V	6A/± 0.3A	50 mA	903 mA	90

All Specifications are Typical at Nominal Line, Full load, and 25°C Unless Otherwise Noted / © TECHNO-PROJEKT 2008

INPUT SPECIFICATIONS

INPUT UNDER-VOLTAGE LOCKOUT.....	12Vin power down 8V typ
	12Vin power up 8.8V typ
	24Vin power down 12V typ
	24Vin power up..... 13V typ
	48Vin power down 32V typ
	48Vin power up..... 34V typ
INPUT FILTER.....	PI Type
POSITIVE/NEGATIVE LOGIC REMOTE CONTROL	
	Logic Compatibility.....Open collector TTL refer to -Input
	Modul ON..... > 3.5V or Open Circuit
	Module OFF..... <1.8 VDC

GENERAL SPECIFICATIONS

ISOLATION VOLTAGE.....	1500VDC max.
ISOLATION RESISTANCE	1000 MOhm
SWITCHING FREQUENCY.....	350KHz typ.
OPERATING TEMPERATURE RANGE.....	-40°C TO +85°C
DERATING, ABOVE 60°C	LINEARY TO ZERO POWER AT 100 °C
COOLING.....	Natural Convection, 20ft./min.(0.1m/s)
CASE TEMPERATURE	100°Cmax.
STORAGE TEMPERATURE RANGE.....	-55°C TO +125°C
THERMAL SHUTDOWN, CASE TEMPERATURE:::	110°C Typ.
DIMENSIONS	2×2×0.4 INCHES (50.8 × 50.8 × 10.2mm)
CASE MATERIAL	Black Coated Copper with Non-Conductive Base

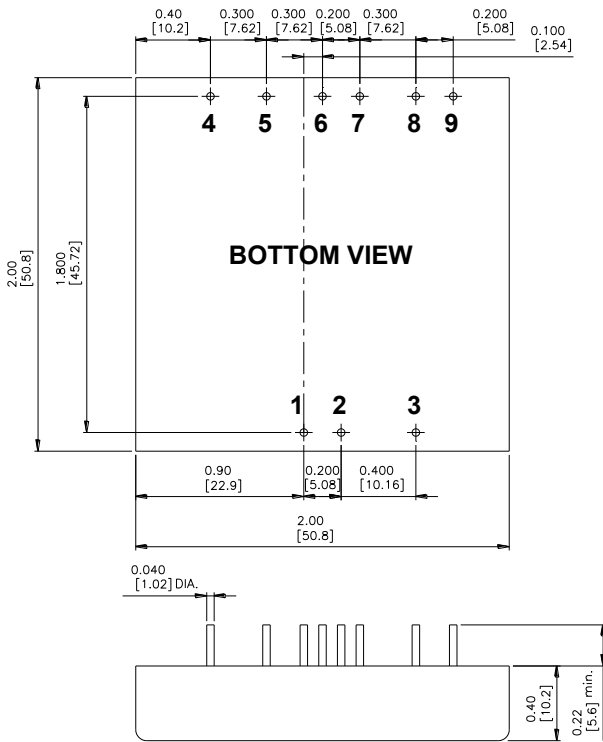
OUTPUT SPECIFICATIONS

Voltage Accuracy	Single/Dual	$\pm 1.5\%$ max.
	Dual positive	3.3V $\pm 1.5\%$ max. 5V $\pm 3\%$ max.
	Triple	Main $\pm 1.5\%$ max. Auxiliary $\pm 3.0\%$ max.
Voltage Balance(Dual)		$\pm 2.0\%$ max.
Transient Response: 75% - 100% Step Load Change (Main Output)	Error Band	$\pm 5\%$ Vout nominal, Recovery Time
		< 300us
Output Voltage Adjustment Range	Single/Dual	V _o $\pm 10\%$
	Dual Positive	$\pm 5\%$
Ripple & Noise, 20MHz BW (Measured with 0.1uF MLCC)	2.5V & 3.3V & 5V	50mVpp, max.
	12V & 15V	75mVpp, max.
	Dual $\pm 12V$	120mVpp, max.
	Dual $\pm 15V$	150mVpp, max.
	Dual positive +3.3V /+5V	100mVpp, max.
Temperature Coefficient		$\pm 0.02\%/^{\circ}\text{C}$
Line Regulation ¹	Single/Dual	$\pm 0.5\%$ max.
	Triple.....Main.....	$\pm 1.0\%$ max. Auxiliary
		$\pm 3.0\%$ max.
Load Regulation ²	Single	$\pm 0.5\%$ max.
	Dual	$\pm 1.0\%$ max.
	Dual positive ³ 3.3V $\pm 1.5\%$ max.	5V
		$\pm 4\%$ max.
	Triple	Main..... $\pm 1.0\%$ max. Auxiliary
		$\pm 4.0\%$ max.
Cross Regulation ⁴	+3.3V $\pm 1.0\%$ max.	+5V
		$\pm 4.0\%$ max.
Over voltage Protection (Zener Diode Clamp).....	2.5V	3.6Vdc typ.
	3.3V	3.9Vdc typ. 5V
		6.2Vdc typ.
	12V	15Vdc typ. 15V
		18Vdc typ.
Output Current Limit , % Nominal Output		110% ~140%
Output Short Circuit Protection		Continuous (hiccup mode)

NOTE:

1. Measured From High Line To Low Line (Dual positive at rated load)
2. Measured From Full Load To 10% Load
3. Measured From Max Load To Zero , other Output at Zero Load
4. Measured From Max Load 10%Zero , other Output at 10% Load
5. Maximum Case Temperature Under Any Operating Condition Should Not Be Exceeded 100°C
6. If +/- Sense is not being used, the +Sense should be connected to +Vout and likewise the -Sense should be Connected to -Vout.

MECHANICAL SPECIFICATIONS



PIN CONNECTION				
Pin	Single	Dual	Dual Positive	Triple
1	+Vin	+Vin	+Vin	+Vin
2	- Vin	- Vin	- Vin	- Vin
3	ON / OFF	ON / OFF	ON / OFF	ON / OFF
4	NC	No Pin	+3.3Vout	+Aux. Out
5	- Sense	+Vout	Com(3.3V RTN)	Common
6	+Sense	Common	Trim	- Aux. Out
7	+Vout	Common	NC	+Vout
8	- Vout	- Vout	+5Vout	- Vout (Common)
9	Trim	Trim	Com(5V RTN)	NC

*NC : NO CONNECTION WITH PIN
 All Dimensions In Inches[mm]
 Tolerances Inches:X.XX=±0.02,X.XXX=±0.010
 Millimeters:X.X=±0.5,X.XX=±0.25
 Pin Diameter : 1.0; Ø05mm

External Output TRIM DERATING CURVE

