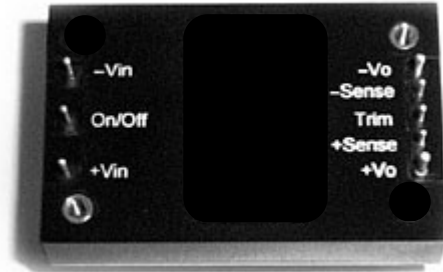


- 3:1 Input range for railway system
- Efficiency to 89%
- Quarter-brick Package
- OTP/ OCP/ OVP
- Remote ON/OFF
- Continuous short circuit protection
- Meets EN50155 with external circuits
- Meets UL 60950-1 (Basic Isolation)
- Low input current at no load



Model Number	Input Voltage	Output Voltage	Output Current max	Input No Load	Current Full Load	% Eff.	Capac. Load max.
TPQ60T-110S05	43 – 160 V	5 VDC	12 A	9 mA	613 mA	89	6800 μ F
TPQ60T-110S12	43 – 160 V	12 VDC	5 A	9 mA	613 mA	89	3300 μ F
TPQ60T-110S15	43 – 160 V	15 VDC	4 A	9 mA	613 mA	89	3300 μ F
TPQ60T-110S24	43 – 160 V	24 VDC	2.5 A	6 mA	613 mA	89	1200 μ F
TPQ60T-110S28	43 – 160 V	28 VDC	2.14 A	6 mA	613 mA	89	1200 μ F
TPQ60T-110S48	43 – 160 V	48 VDC	1.52 A	6 mA	613 mA	89	470 μ F

NOTE: All Specifications are Typical at Nominal Line 110VDC, Full load, and 25°C Unless Otherwise Noted / © TP2014

INPUT SPECIFICATIONS

INPUT VOLTAGE RANGE110V 43V – 160VDC
 INPUT SURGE VOLTGE (100ms max) 180VDC max
 INPUT UNDER-VOLTAGE LOCKOUT..... power down 38V
 power up..... 42V

POSITIVE LOGIC REMOTE ON/OFF CONTROL

Logic Compatibility CMOS or Open Collector TTL, ref. to –Vin
 Module ON >+3.5 to 75VDC or Open Circuit
 Module OFF..... <1.2 Vdc

INPUT FILTER..... PI Type

OUTPUT SPECIFICATIONS

Voltage Accuracy.....		±1.5% max
Ripple and Noise, 20MHz BW	Vo = 5V	max. 100mVpp.
	Vo = 12V/ 15V	max. 150mVpp.
	Vo = 24V/ 28V	max. 240mVpp.
	Vo = 48V	max. 480mVpp.
Temperature Coefficient		±0.03%/C max
Line Regulation		±0.2%.
Load Regulation		±0.2%.
External Trim Adj. Range		±10%
Short Circuit Protection		continuous
Over Voltage Protection % Vo nom.....		115 – 140%
Current Limit		110% - 180% Nominal Output
Start up time		45ms typ.

GENERAL SPECIFICATIONS

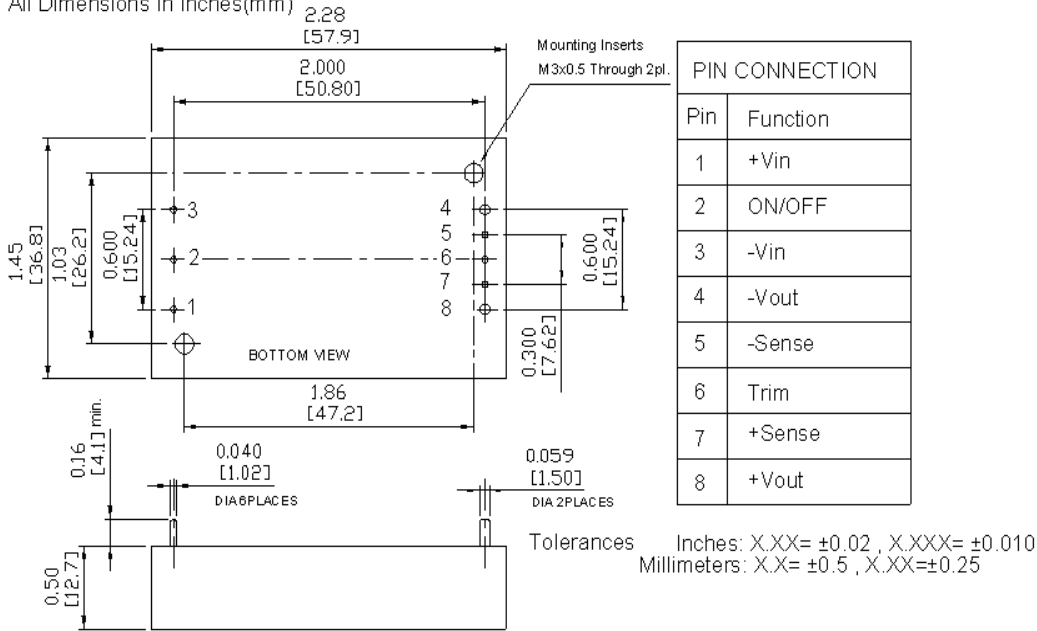
ISOLATION VOLTAGE.....	Input/ Output; Input/Case	2250VDC min
	Output/Case	1500VDC min
ISOLATION RESISTANCE		10 MOhm
ISOLATION CAPACITANCE		1000pF typ.
SWITCHING FREQUENCY.....		tbd.
OPERATING TEMPERATURE RANGE.....		-40°C TO +105°C
THERMAL SHUT DOWN; CASE TEMPERATURE		110°C typ.
STORAGE TEMPERATURE RANGE.....		-55°C TO +105°C
EMC	meets EN50155 (EN50121-3-2) with external filter	
SHOCK/VIBRATION	meets EN50155 (EN61373)	
CASE MATERIAL	Aluminium base plate with plastic case	
DIMENSIONS	1,45×2,28×0.50 INCHES (36.8 × 57.9 × 12.7mm)	

NOTE:

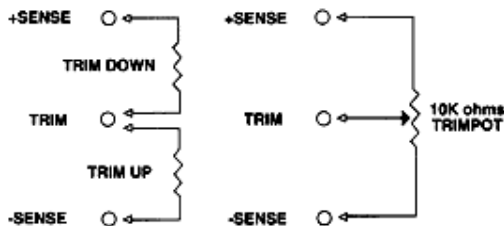
1. LINE REGULATION: Measured From High Line To Low Line
2. LOAD REGULATION: Measured From Full Load To Zero Load
3. Output ripple and noise measured with 10µF tantalum and 1µF ceramic capacitor across output
4. Suffix "N" to the model number with negative logic remote ON/OFF
5. Suffix "C" to the model number with clear mounting insert (3.2mm diameter)
6. An external input capacitor 68µF for all models are recommended to reduce input ripple voltage
7. An external output capacitor min 68µF for all models are recommended between +Vout and -Vout

MECHANICAL SPECIFICATIONS

All Dimensions In Inches(mm)



External Output TRIM REMOTE ON/OFF CONTROL



Logic Compatibility CMOS or Open collector TTL ref. to -Vin
 Modul ON >+3.5 to 75VDC or Open Circuit
 Module OFF <1.8 Vdc

