

This manual contains important information regarding the proper installation and operation of the TARKA Series inside the host equipment.

GENERAL SAFETY INSTRUCTIONS

These products are designed to be PCB mounted and for use within other equipment or enclosures. For safe installation and operation, carefully follow the instructions below:

1. These products must be professionally installed in accordance with the prevailing electrical wiring regulations and safety standards.
2. The output power taken from the unit must not exceed the ratings stated in this Installation Guide.
3. Ensure that adequate ventilation is provided to allow air to circulate.
4. This product does not provide insulation between input and output and therefore the DC source to this product must be reinforced or double insulated to the AC mains. This means that :
 - a. If the input meets the requirements for ELV then the output is ELV.
 - b. If the input meets the requirements for SELV then the output is SELV.
 - c. If the input meets the requirements for TNV then the output is TNV.

FUSING

Model	Fuse
PL10S-05	External ceramic fuse, 250V min, HBC T20A maximum
PL10S-12	External ceramic fuse, 250V min, HBC T12.5A maximum
PL15S-05	External ceramic fuse, 250V min, HBC T30A maximum

The breaking capacity and voltage rating of this fuse may be subject to the end use application.

SAFETY AGENCY APPROVALS

Tarka series DC - DC converters comprise of the following models:

PLab-cc-dvd-e-f

- Where
- PL = Point of Load
 - a = Maximum output current, where a = 10 or 15
 - b = S for single output, D for dual output, T for triple output
 - cc = Indicates the input voltage range e.g. 05 = 3 - 5.5 volts, (for PL10S) and 3.3 - 5.5 (for PL15S), 12 = 5 -13 volts, where c = 0 - 9
 - dvd = Output voltage, where d = 0 - 9, e.g. 1v2, 2v5, 3v0, 3v3 or dvd is replaced by C for customer selectable output within the ranges specified below.
 - e = T for through hole (9 pins), TR for through hole with positive and negative remote sense pins (11 pins), TP for through hole with positive remote sense pin only (10 pins)
 - f = J for tape & reel, K for box tray, L for tube

RATINGS & LIMITATIONS

INPUT

Model #	Input Voltage range (V)	Max Input current (A)
PL10S-05	3 - 5.5	8.6
PL10S-12	5 - 13	7.5
PL15S-05	3.3 - 5.5	12.9

OUTPUT

Model #	Voltage range (V)*	Output voltage range (V)	Max Output current (A)
PL10S-05	3 - 5.5	0.9 - 2	10
PL10S-05	3.3 - 5.5	0.9 - 2.5	10
PL10S-05	4.5 - 5.5	0.9 - 3.3	10
PL10S-12	5 - 13	0.9 - 3.3	10
PL10S-12	7 - 13	0.9 - 5	10
PL15S-05	3.3 - 5.5	0.9 - 2.5	15
PL15S-05	4.5-5.5	0.9 - 3.3	15

Model name given is followed by various characters.

The above voltage and current ratings are the maximum permitted values.

Orientations	All
Max ambient	85°C†

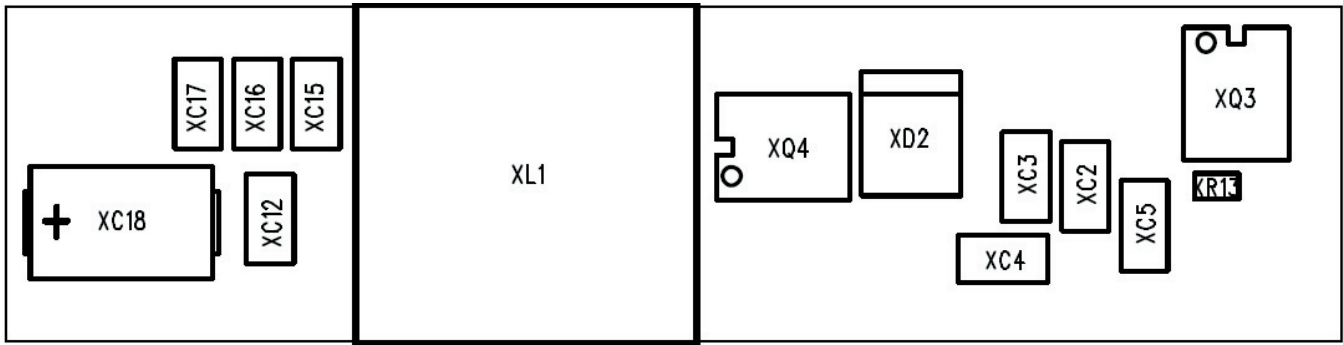
- † 1. Model PL10S-05 is de-rated linearly between 70°C and 85°C at 0.134A per 1°C in still air.
- 2. Various components require temperature monitoring in end use application to ensure safety compliance, see components to be monitored in table to follow.

The components listed in the following table must not exceed the temperatures given (including when the end use equipment is operated at its maximum permitted ambient), consequently the maximum temperature rise permitted is given by the temperature given in the table minus the Tmra (maximum ambient) of the end use environment (maximum permitted Tmra is 85°C). All other ratings for the PSU remain unchanged. To determine the component temperatures tests must be conducted in accordance with the requirements of UL60950-1, CSA 22.2 No. 60950-1, EN60950-1 and IEC60950-1 Clause 4.5. Consideration should also be given to the requirements of other safety standards. Note: Max. temperatures given are as required by the 60950-1 standards, or to provide satisfactory reliability, whichever is the lower.

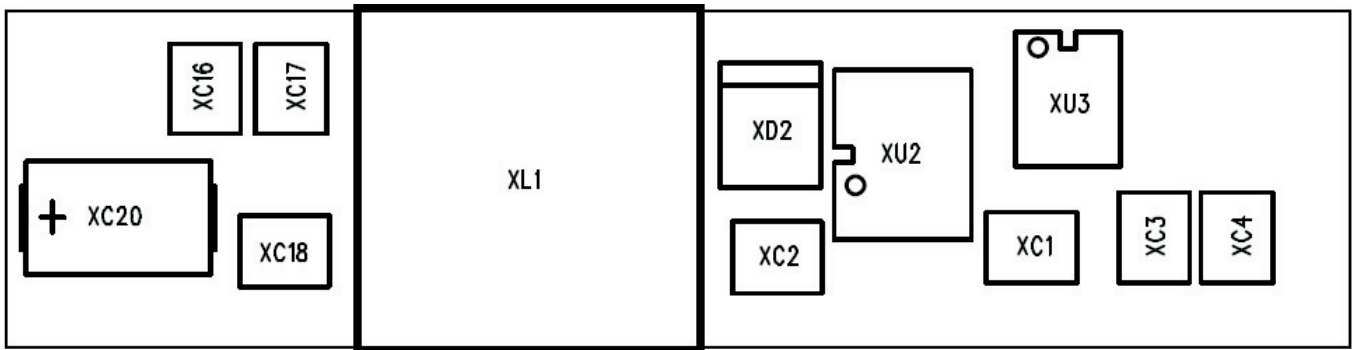
Test requirements include: PSU to be fitted in its end-use equipment and operated under the most adverse conditions permitted in the end-use equipment handbook/specification and which will result in the highest temperatures in the PSU. To determine the most adverse conditions consideration should be given to the maximum operating ambient, PSU loading and input voltage, ventilation, equipment orientation, the position of doors & covers, etc. Temperatures should be monitored using type K fine wire thermocouples (secured with cyanoacrylate adhesive, or similar) placed on the hottest part of the component and the equipment should be run until all temperatures have stabilised.

COMPONENTS TO BE MONITORED:

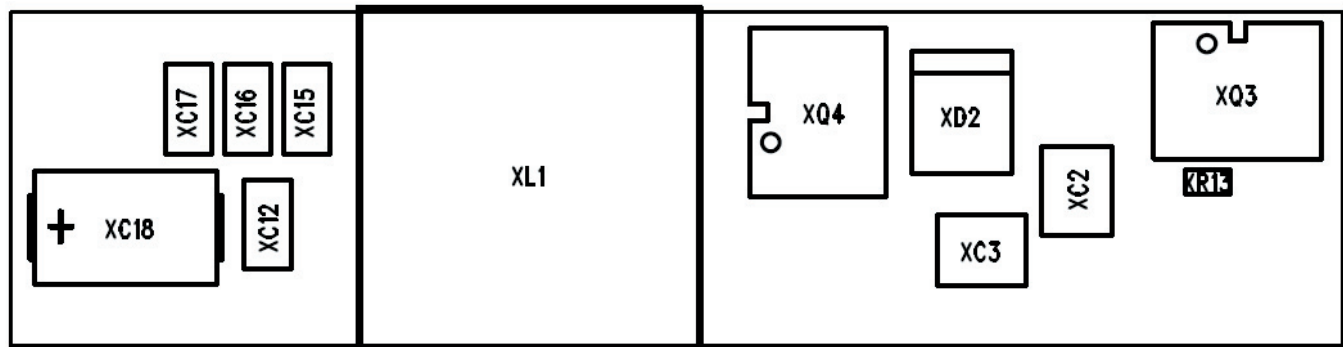
Model #	Circuit Ref	Description	Max Temperature (°C)
PL10S-05	XL1	Output inductor windings	115
PL10S-05	XQ3	FET	120
PL10S-05	XQ4	FET	120
PL10S-12	XL1	Output inductor windings	120
PL10S-12	XU2	FET	120
PL10S-12	XU3	FET	120
PL15S-05	XQ3	FET	115
PL15S-05	XQ4	FET	115
# Model name given is followed by various characters.			



PL10S-05 Components to be monitored:
XL1, XQ3 and XQ4



PL10S-12 Components to be monitored:
XL1, XU2 and XU3



PL15S-05 Components to be monitored:
XQ3 and XQ4

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TDK-Lambda Limited
Kingsley Avenue, Ilfracombe, Devon, EX34 8ES

Telephone - Sales and Service (01271) 856666
Head Office and Works (01271) 856600
Facsimile (01271) 864894
WEBSITE: www.uk.tdk-lambda.com