



**DESCRIPTION: 15W 2.5KV isolated 100-1000VDC super wide input voltage DC/DC converters**

The rated output power of TP15DU converters is 15W, it is 100-1000VDC super wide input voltage range, High Efficiency, High reliability DC/DC switch power supply, can be widely used in photovoltaic power generation and high frequency inverter and other occasions, provide a stable working voltage for the load equipments, And its built-in multiple protection function can improve the module power supply & Load safety performance under abnormal circumstances.

**FEATURES**

Operating temperature : -40° C to 85° C	High Efficiency, Low Ripple and noise	Output overload&short circuit protection
100-1000VDC super wide input voltage range Both for AC and DC input voltage	Industrial,military-Level product design	Designed for photovoltaic power generation, wind power and other ancillary equipment

**SELECTION GUIDE**

Part Number	Input Voltage		Output		Efficiency (Typ) %	Others		
	Voltage (VDC)		Current (A)	Current (A)		isolated (VAC)	Ripple and noise (Typ)	Maximum capacitive load
	Rated	Rang						
TP15DU600S05	600	100-1000	5	3	76	2500	100mv	1000
TP15DU600S12	600	100-1000	12.1	1.25	78	2500	100mv	470
TP15DU600S15	600	100-1000	15	1	79	2500	100mv	470
TP15DU600S24	600	100-1000	24	0.625	80	2500	100mv	100
TP15DU600D12	600	100-1000	±12	±0.625	79	2500	100mv	100
TP15DU600D15	600	100-1000	±15	±0.5	79	2500	100mv	100

**INPUT CHARACTERISTICS**

The filter type	Common mode+LC II typefilter
Start time	≤10ms
Remote control method	None

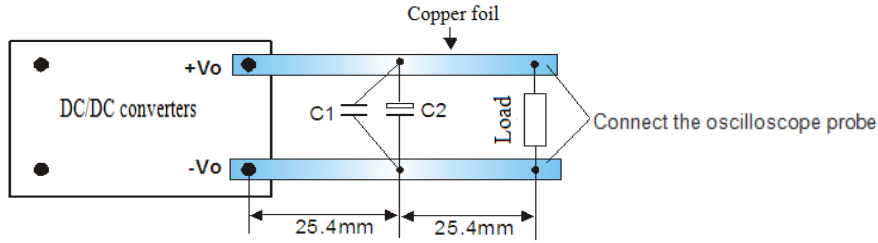
**OUTPUT CHARACTERISTICS**

Voltage setting accuracy	Main (Vo1) ±2.0%( nominal) rated load, nominal input voltage @25℃
Voltage setting accuracy	Auxiliary (Vo2) ±5.0%( nominal) rated balance load, nominal input voltage @25℃
Linear voltage regulation	±1.0%( nominal) rated load, nominal input voltage @25 (℃
Load regulation	Main (Vo1) ±1.0%( nominal) nominal input voltage, 10%~100% nominal rated load
Load regulation	Auxiliary (Vo2) ±3.0%( nominal) nominal input voltage, 10%~100%Nominal balance load
Over-current protection	≥110%, Continuous short circuit, self-recovery
Over-voltage protection mode	None
Dynamic Response	25% of the nominal load step ΔVo1/Δt 200us

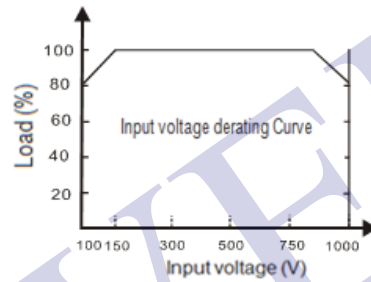
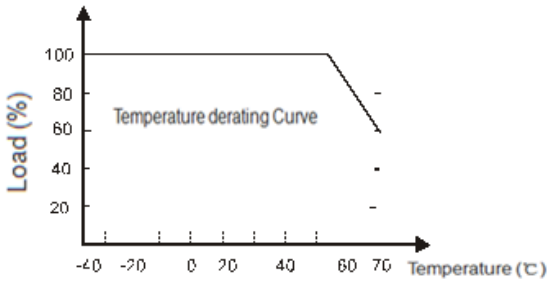
**GENERAL CHARACTERISTICS**

Switch frequency	100kHz ( typ )	
Temperature characterics	Operating environment temperature	-40 ~ +85 ℃ (according to the output load derating curve)
	Storage temperature	-40 ~ +85, 10 ~ 95% RH
	Temperature coefficient	0.03%/ (0~ 50℃)
	Operating case temperature	85℃ max
Relative humidity	85% .RH max	
Vibration coefficient	10~500Hz,2G10min./1cycle, 60min.each along X,Y,Z axes	
Isolation	Isolated voltage	≥2500Vac
	Isolated resistance	500MΩ at 500Vdc
MTBF	1000K hrs min.	MIL-HDBK-217F(25)
Colling method	Natural cooling	
Case materials	plastic	
Net weight	70g	
Notes	All specifications typical at TA=25℃, humidity<75%, nominal input voltage 600Vdc and rated output current unless otherwise specified	

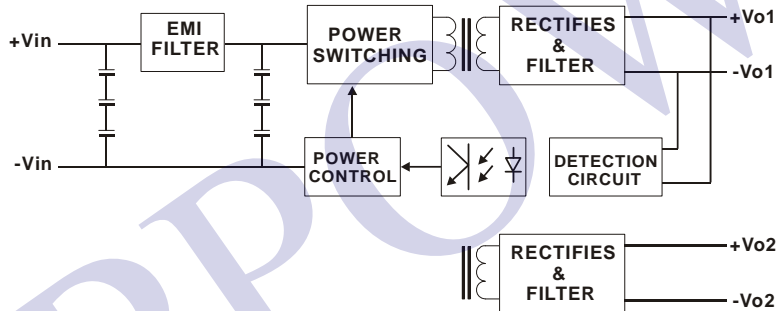
**RIPPLE&NOISE TESTING METHODS**



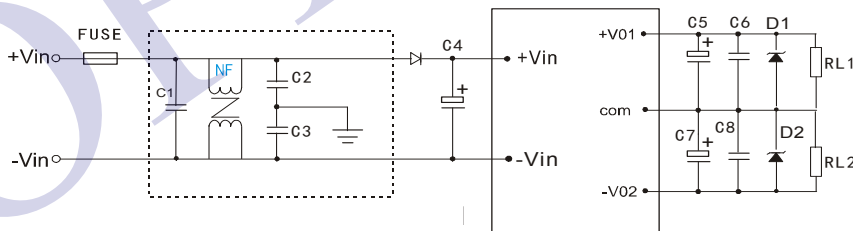
**PRODUCT CHARACTERISTICS CURVE**



**PRODUCT SCHEMATICS**



**TYPICAL APPLICATION DIAGRAM**



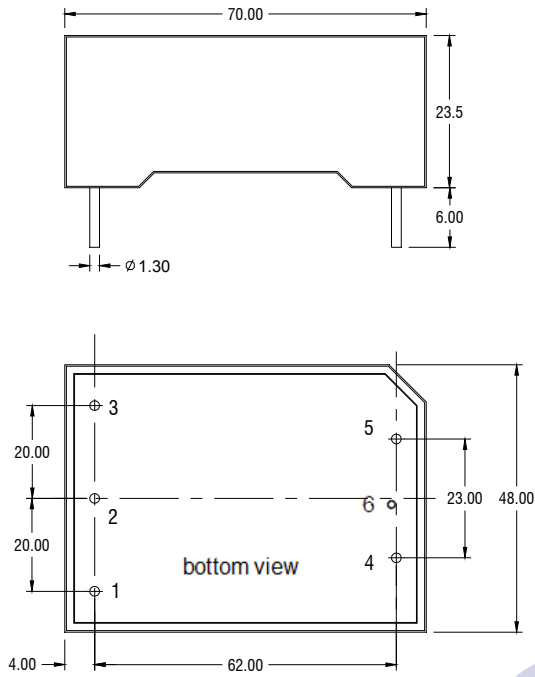
Notes:

- Output filter capacitor C5, C7 for the electrolytic capacitor(recommended to use high frequency and low resistance electrolytic capacitor) Please refer to the technical specifications provided by each manufacturer for the capacity and current flowing. Capacitor voltage derating more than 80%. C6, C8 is to remove high-frequency noise. D1, D2 for the TVS tube to protect the circuit after the stage (when the module is abnormal) is recommended
- In the general application, Its not mandatory to use the common-mode inductance within the dashed box;  
You can use this common-mode inductance meet the higher EMC requirements. Can also be used for three-phase four-wire power input
- For technical support, please contact our engineers

**TYPICAL VALUES OF EXTERNAL CIRCUIT COMPONENTS**

Some input component					Some output component						
PN	FUSE	C1	C2,C3	C4	C5	C6	C7	C8	D1	D2	
TP15DU600D12/15	10Ω/3W	0.1uF/1 200V	0.047uF/12 00V	1uF/12 00v	47uF/35 V	0.1uF/50V	100uF/16V	0.1uF/50V	P6KE20A	P6KE20A	
TP15DU600S05	Insurance resistance				470				/	P6KE6.8A	/
TP15DU600S12					220				/	P6KE20A	/

**MECHANICAL DIMENSIONS**



PIN	Single	Dual
1	NC	NC
2	-Vin	-Vin
3	+Vin	+Vin
4	-V0	-V02
5	+V0	+V01
6	No pin	Com

Units:mm

Tolerance:±0.2mm

**MODEL SELECTION**

