


DESCRIPTION: 20-30W 1.5KVDC isolated Wide Input Voltage DC/DC Converters

The rated output power of TP20DC/TP30DC converters is 20W,30W, 2:1, 4:1 input voltage range,the voltage range is 9V-18V,18V-36V,36V-75V, 9V-36V、18V-75V.The accuracy of the converter can reach $\pm 1\%$,it can be widely used in telecommunications,railway transportation, Auto industrial,instrument and etc.

FEATURES

20-30W output power	Long-term short circuit protection, Automatic recovery	High power density, high conversion efficiency
Miniaturized package	With remote control and output adjustment function	RoHS compliant

MODEL SELECTION

Part Number	Input		Output		Efficiency(Typ) %
	Voltage (VDC)		Voltage (VDC)	Current (A)	
	Rated	Range values			
TP20DC12S03	12(2:1)	9-18	3.3	4	86
TP20DC12S05	12(2:1)	9-18	5	4	88
TP20DC24S03	24(2:1)	18-36	3.3	4	86
TP20DC24S05	24(2:1)	18-36	5	4	88
TP20DC24S12	24(2:1)	18-36	12	1.7	88
TP20DC24S15	24(2:1)	18-36	15	1.3	89
TP20DC24S24	24(2:1)	18-36	24	0.83	88
TP20DC48S03	48(2:1)	36-75	3.3	4	86
TP20DC48S05	48(2:1)	36-75	5	4	88
TP20DC48S12	48(2:1)	36-75	12	1.7	88
TP20DC48S15	48(2:1)	36-75	15	1.3	88
TP20DC48S24	48(2:1)	36-75	24	0.83	88
TP20DC24S03W	24(4:1)	9-36	3.3	4	86
TP20DC24S05W	24(4:1)	9-36	5	4	88
TP20DC24S12W	24(4:1)	9-36	12	1.7	88
TP20DC24S15W	24(4:1)	9-36	15	1.3	88
TP20DC24S24W	24(4:1)	9-36	24	0.83	88
TP20DC48S03W	48(4:1)	18-75	3.3	4	86
TP20DC48S05W	48(4:1)	18-75	5	4	88
TP20DC48S12W	48(4:1)	18-75	12	1.7	88
TP20DC48S15W	48(4:1)	18-75	15	1.3	89
TP30DC24S05	24(2:1)	18-36	5	6	88
TP30DC24S12	24(2:1)	18-36	12	2.5	90
TP30DC48S05	48(2:1)	36-75	5	6	88
TP30DC48S12	48(2:1)	36-75	12	2.5	90
TP30DC24S05W	24(4:1)	9-36	5	6	88
TP30DC24S12W	24(4:1)	9-36	12	2.5	90
TP30DC48S05W	48(4:1)	18-75	5	6	88
TP30DC48S12W	48(4:1)	18-75	12	2.5	90

The part no. With suffix "B",please refer to b package mechanical dimensions,for example: TP20DC24S05B

input voltage 9-18VDC ,start-up voltage 9.5-18VDC , input voltage 9-36VDC ,start-up voltage 9.5-36VDC.

All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

INPUT CHARACTERISTICS

parameter	conditions	Min	Typ	Max	Units
Input Voltage	12V Input module(9V-18V)	9.5	12	18	VDC
Input Voltage	24V Input module(18V-36V)	18	24	36	VDC
Input Voltage	48V Input module(36V-72V)	36	48	72	VDC
Input Voltage	24V Input module(9V-36V)	9.5	24	36	VDC
Input Voltage	48V Input module(18V-72V)	18	48	72	VDC
Remote control	CNT pin is floating or connect to TTL high level	Opened			
Remote control	CNTconnect to -Vin	Closed			

OUTPUT CHARACTERISTICS

parameter	conditions	Min	Typ	Max	Units
Output voltage accuracy	V01			±1	%
Output voltage accuracy	V02、V03			±3	%
Voltage regulation	V02、V03 Track V01			±10 (V01)	%
Line regulation	V01			±0.2	%
Line regulation	V02、V03			±1.5	%
Load regulation	V01			±0.5	%
Load regulation	V02、V03			±4.0	%
Dynamic Response	50~75% Load		4%Vo Overshoot		%
Dynamic Response	50~25% Load		400μS Recovery Time		%
Ripple and noise	V0≤5VDC			50	mvp-p
Ripple and noise	other			100	mvp-p
Ripple and noise	V0≥48VDC			200	mvp-p
Temperature drift coefficient			±0.02		%/℃

TEMPERATURE CHARACTERISTICS

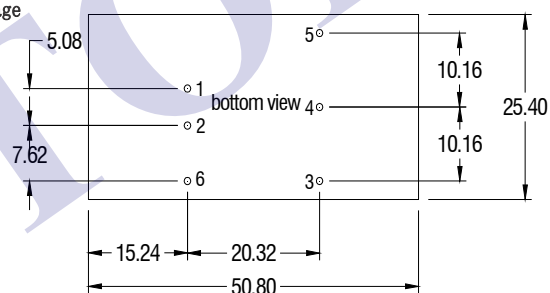
parameter	conditions	Min	Typ	Max	Units
Isolated voltage	Input-Output			1500	VDC
Isolated voltage	Input-case			1500	VDC
Isolated voltage	Output-case			500	VDC
Switch frequency			330		KHZ
Mean time between failures	Mil HDBK 217F Tc=25℃		2×10 ⁶		
case temperature		-40		+95	℃
Storage temperature		-55		+125	℃
Relative humidity		10		90	%
short circuit protection	Long-term short circuit protection, Automatic recovery				

- Module in every environment temperature rating, case temperature under shall not

MECHANICAL DIMENSIONS

PIN CONNECTION

DIP Package



PIN	Single
1	+Vin
2	-Vin
3	-V0
4	TRIM
5	+V0
6	CNT

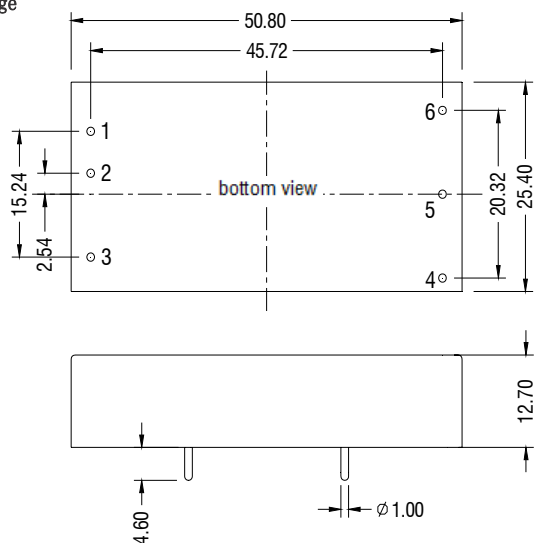
Units: mm

Pin diameter tolerances: ±0.1mm

General Tolerance: ±0.5mm

B Package MECHANICAL DIMENSIONS

DIP Package



Units: mm

Pin diameter tolerances: $\pm 0.1\text{mm}$

General Tolerance: $\pm 0.5\text{mm}$

B Package PIN CONNECTION

PIN	Single
1	+Vin
2	-Vin
3	CNT
4	TRIM
5	GND
6	+V0

MODEL SELECTION

