



### DESCRIPTION:

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

The rated output power of TP20DC/TP30DC converters is 20W,30W,the outline dimensions is "50.8\*25.4\*11.2", 2:1 ,4:1 input voltage range,the voltage range is 9.5V-18V,18V-36V,36V-72V, 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)	9.5-18	3.3	6	90
TP20DC12S05	12(2:1)	9.5-18	5.05	4	90
TP20DC24S03	24(2:1)	18-36	3.3	6	90
TP20DC24S05	24(2:1)	18-36	5.05	4	90
TP20DC24S12	24(2:1)	18-36	12	1.7	90
TP20DC24S15	24(2:1)	18-36	15	1.3	90
TP20DC48S03	48(2:1)	36-75	3.3	6	90
TP20DC48S05	48(2:1)	36-75	5.05	4	90
TP20DC48S12	48(2:1)	36-75	12	1.7	90
TP20DC48S24	48(2:1)	36-75	24	0.83	90
TP20DC48S15	48(2:1)	36-75	15	1.3	90
TP20DC24S12W	24(4:1)	9-36	12	1.7	90
TP20DC48S18W	48(4:1)	18-75	18	1.1	90
TP30DC24S05	24(2:1)	18-36	5.05	6	90
TP30DC24S12	24(2:1)	18-36	12	2.5	90
TP30DC48S03	48(2:1)	36-75	3.3	6	90
TP30DC48S05	48(2:1)	36-75	5.05	6	90
TP30DC48S12	48(2:1)	36-75	12	2.5	90
TP30DC24S12W	24(4:1)	9-36	12	2.5	90

The Part No. with suffix "B",please refer to B Package MECHANICAL DIMENSIONS,For example : TP20DC24S05B

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		9.5	12	18	VDC
Input voltage		18	24	36	VDC
Input voltage		36	48	75	VDC
Remote control	CNT pin is floating or connect to TTL high level		Opened		VDC
Remote control	CNTconnect to -Vin		Closed		

### OUTPUT CHARACTERISTICS

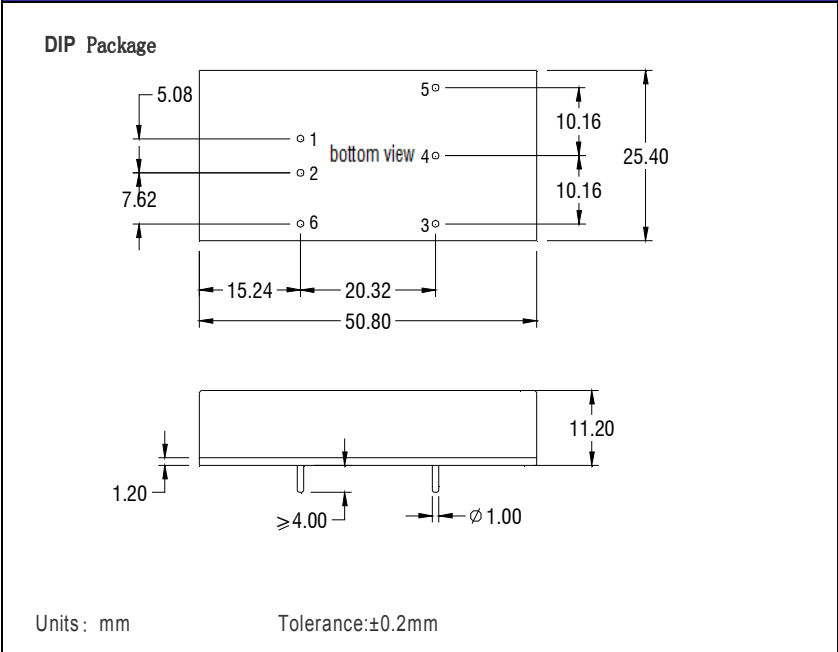
parameter	conditions	Min	Typ	Max	Units
Output voltage accuracy	V01			$\pm 1$	%
Output voltage accuracy	V02、V03			$\pm 3$	%
Voltage regulation	V02、V03 Track V01			$\pm 10$ (V01)	%
Line regulation	V01			$\pm 0.2$	%
Line regulation	V02、V03			$\pm 1.5$	%
Load regulation	V01			$\pm 0.5$	%
Load regulation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

**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 <sup>6</sup>		
case temperature		-40		+95	℃
Storage temperature		-55		+125	℃
Relative humidity		10		90	%
short circuit protection		Long-term short circuit protection, Automatic recovery			

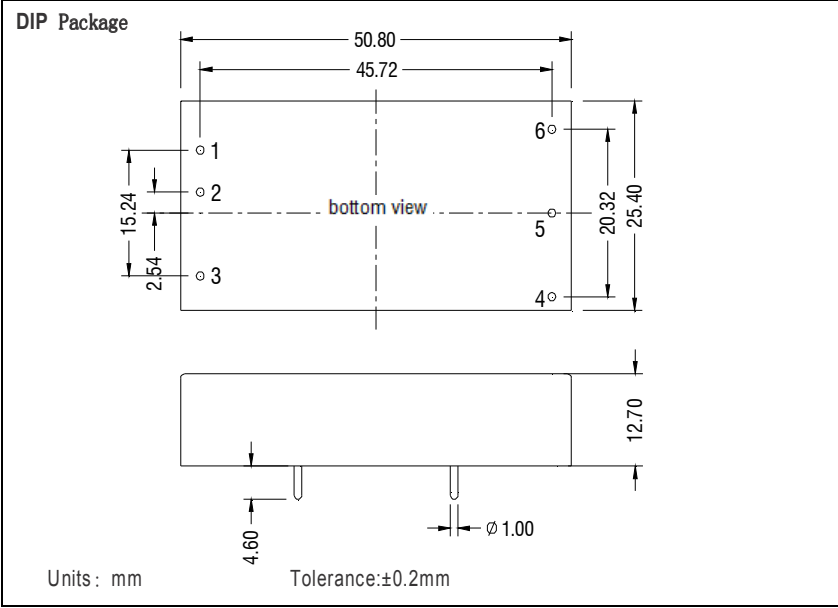
- Module in every environment temperature rating, case temperature under shall not

**MECHANICAL DIMENSIONS      PIN CONNECTION**



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

**B Package MECHANICAL DIMENSIONS      B Package PIN CONNECTION**



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

**MODEL SELECTION**