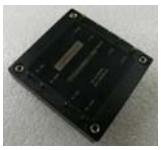
TP50DH-TP75DH Series



DESCRIPTION: **50-75W 1.5KVDC Isolated Wide Input Voltage DC/DC Converters**

The rated output power of TP50-75DH converters is 50-75W,the outline dimensions is "57.9*61*12.7mm, 2:1 input voltage range ,the voltage range is 9.5V-18V, 9V-36V 18V-36V,18V-72V.The accuracy of the converter can reach ±1%,it can be widely used in telecommunications, railway transportation, instrument and etc.

FEATURES

50W,75W output power	2:1,4:1 input voltage range	Input under voltage protection
standard package	Fixed switching frequency	Super capability with capacitive load
Long term short-circuit protection	Operating temperature: -40℃to 85℃	RoHs compliance

SELECTION GUIDE

Part Number	Input Voltage		Output		Capacity Ability (uF)	Efficiency Typ. (%)
	voltage (VDC)		Voltage (VDC)	Current (A)		
	Rated	Range values				
TP50DH12S03	12(2:1)	9.5-18	3.3	10	10000	86
TP50DH12S05	12(2:1)	9.5-18	5	10	10000	86
TP50DH12S12	12(2:1)	9.5-18	12	4.2	1000	86
TP50DH12S24	12(2:1)	9.5-18	24	2	470	86
TP50DH24S05	24(2:1)	18-36	5	10	10000	86
TP50DH24S12	24(2:1)	18-36	12	4.2	1000	86
TP50DH24S15	24(2:1)	18-36	15	3.3	1000	86
TP50DH24S24	24(2:1)	18-36	24	2	470	86
TP50DH24S05W	24(4:1)	9.5-36	5	10	10000	86
TP50DH24S12W	24(4:1)	9.5-36	12	4.2	1000	86
TP50DH24S15W	24(4:1)	9.5-36	15	3.3	1000	86
TP50DH24S24W	24(4:1)	9.5-36	24	2	470	86
TP50DH48S05W	48(4:1)	18-72	5	10	10000	86
TP50DH48S12W	48(4:1)	18-72	12	4.2	1000	86
TP50DH48S15W	48(4:1)	18-72	15	3.3	1000	86
TP50DH48S24W	48(4:1)	18-72	24	2	470	86
TP75DH12S05	12(2:1)	9.5-18	5	15	10000	85
TP75DH12S12	12(2:1)	9.5-18	12	6.2	2200	85
TP75DH24S05W	24(4:1)	9.5-36	5	15	10000	87
TP75DH24S12W	24(4:1)	9.5-36	12	6.2	2200	85
TP75DH24S15W	24(4:1)	9.5-36	15	5	2200	86
TP75DH24S24W	24(4:1)	9.5-36	24	3.1	1000	88
TP75DH48S05W	48(4:1)	18-72	5	15	10000	87
TP75DH48S12W	48(4:1)	18-72	12	6.2	2200	85
TP75DH48S15W	48(4:1)	18-72	15	5	2200	86
TP75DH48S24W	48(4:1)	18-72	24	3.1	1000	88

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

GENERAL CHARACTERISTICS

parameter	Test conditions	Min	Typ	Max	Units
Isolation voltage	Input to output		500	1500	VDC
Insulation resistance	Input to output	100M			Ohm
Seismic	10~55Hz		5		G
MTBF	MIL-HDBK-217F2		$2x10^6$		hrs
Over-current protection mode	All input range	Burp, Automatic recovery			

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INPUT CHARACTERISTICS

parameter	Test conditions	Min	Typ	Max	Units
Voltage(2：1)	The12V input module	9.5	12	18	VDC
Voltage(2：1)	The24V input module	18	24	36	VDC
Voltage(4：1)	The24V input module	9.5	24	36	VDC
Voltage(4：1)	The48V input module	18	48	72	VDC
Remote control CTL	Remote CTL NC(Voltage >5.5VDC)	Turn on			

OUTPUT CHARACTERISTICS

parameter	Test conditions	Min	Typ	Max	Units
Voltage accuracy	Io=0.1…1.0 x Ionom Vi=Vi rated			±1	%
Line regulation	Vimin≤Vi≤Vimax			±0.2	%
Load regulation	Io=0.1…1.0 x Ionom ,Vimin≤ Vi≤Vimax			±0.5	%
Auxiliary voltage accuracy	Main Load and auxiliary load differ 25%,the auxiliary circuit of the load with at least 25%, the main circuit with full load			±3	%
Ripple and noise	20MHz bandwidth	50		300	mV
Transient recovery time	25% load changes			±5	%
Transient overshoot time	25% load changes			400	us
Switch frequency	Vimin≤Vi≤Vimax		300		KHz

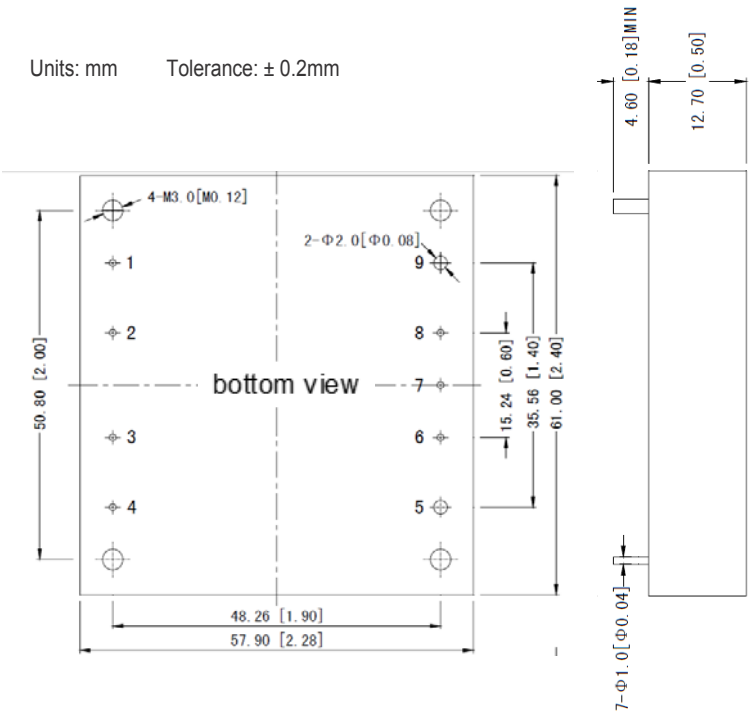
ENVIRONMENT CHARACTERISTICS

parameter	Test conditions	Min	Typ	Max	Units
Storage Humidity	Non condensing	5		+95	%
Operating Temperature	Power derating (above 71℃	-40		+85	℃
Storage Temperature		-55		+125	℃
Max. Case Temperature	Operating Temperature curve range	-40		100	℃
Lead Temperature	1.5mm from case for 10 seconds			300	℃
Cooling		Free air convection			

- Module in every environment temperature rating, case temperature under shall not exceed the maximum case temperature level.

MECHANICAL DIMENSIONS

Units: mm Tolerance: ± 0.2mm



PIN CONNECTIONS

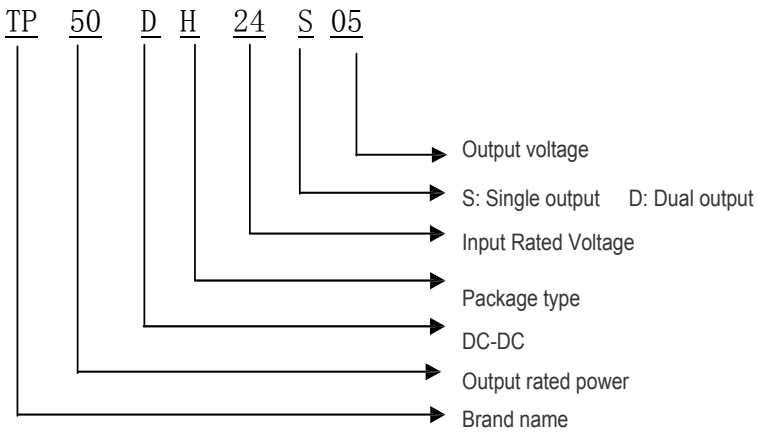
Pin	Single output
1	-Vin
2	CASE
3	CTL
4	+Vin
5	+Vo
6	+S
7	TRIM
8	-S
9	-Vo

Notes:

parts turn on when CTL pin voltage is over 5.5VDC or connect to Ground

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MODEL SELECTION



USING ATTENTIONS

- Module will cause irreversible damage when in the state of the input reverse polarity.
- Module will cause irreversible damage when in the long-term overload conditions.
- Module will cause irreversible damage when out of the maximum input voltage range.

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