



Product: 1KW DC/DC Converter TDC-IY Series



Model List

Nominal Input	Nominal Output	Model	Configuration	Cooling Method
72V	14.0V	TDC-IY-72-12	CANxxxx/N	Passive Cooling
96V/108	14.0V	TDC-IY-108-12	CANxxxx/N	Passive Cooling
144V	14.0V	TDC-IY-144-12	CANxxxx/N	Passive Cooling
216V	14.0V	TDC-IY-216-12	CANxxxx/N	Passive Cooling
320V	14.0V	TDC-IY-320-12	CANxxxx/N	Passive Cooling

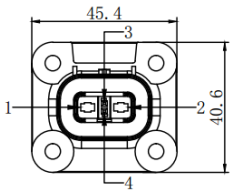
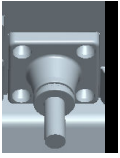
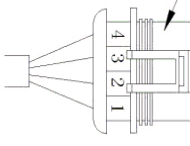
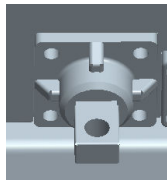
Technical Specification

Model		TDC-IY-72-12	TDC-IY-108-12	TDC-IY-144-12	TDC-IY-216-12	TDC-IY-320-12
Input	Nominal Voltage	DC72V	DC108V/ DC96V	DC144V	DC216V	DC320V
	Nominal Current	15A	10A/11A	7.5A	5A	3.5A
	Max Current	≤25A	≤18A	≤12A	≤8A	≤6A
	Input Voltage Range	44-97V	74-162V	103-227V	135-290V	206-454V
	Input Low Voltage Protection Value	42V±2V	70V±2V	96V±4V	165V±5V	215V±5V
	Input Over Voltage Protection Value	100±3V	162±4V	215±5V	305±5V	455±5V
	Start-up Time	≈0.5S @ VIN=72V	≈0.5S @ VIN=108V	≈0.5S @ VIN=144V	≈0.5S @ VIN=216V	≈0.5S @ VIN=320V

Output	Nominal Output Voltage	14.0V±1%
	Output Voltage Range	8.0-15V
	Nominal Output Current	72A
	Peak Current	88±2A
	Nominal Power	1000W
	Peak Power	1200W
	Efficiency	≥94%
	Output Voltage Transient Time	≤50ms
	Voltage Regulation Factor	1%
	Loading Regulation Factor	1%
	Voltage Stability Accuracy	≤1%
	Current Stability Accuracy	≤2%
	Output Leakage Current	≤1mA
	Output Ripple	≤276mV @ 12V
Signal	12V Enable Voltage	6-30V
	12V Enable Current	≤1mA
Protection	Over Current	Max current*110%
	Output Over Voltage	16-17V @ 12V
	Output Low Voltage	5-6V @ 12V
	Over Temperature	Decrease power when interior temperature arrive at 85 centigrade, shut off when temperature arrive at 90 centigrade, auto self-recovery when temperature decrease
	Input Low Voltage	Yes, self-recovery
	Input Over Voltage	Yes, self-recovery
	Short Circuit	Yes, self-recovery

Safety and Others	Voltage Withstand	Input to Ground : 2000VAC $\leq$ 10mA 1min
	Grounding Resistance	Resistance less than 100m Ω between grounding and radiator, test current is 25A AC
	Insulation Resistance	Input to housing $\geq$ 20M Ω , test voltage is 1000VDC
	EMI	Meet GB/T 18487.3-2001 clause 11.3.1
	EMD	Meet GB/T 18487.3-2001 clause 11.3.2
	Harmonic Current	Meet GB 17625.1-2003 clause 6.7.1.1
	Start-up Inrush Current	$\leq$ 3A
	Current Rise Time	$\leq$ 5S , overshoot $\leq$ 5%
	Shut-up Response Time	100%到 10% $\leq$ 50mS , 100%到 0% $\leq$ 200mS
	IP Grade	IP67
	Vibration Resistance	10 - 25Hz, swing 1.2mm , 25 - 500Hz 30m/s ² , each direction 8 hours
	Noisy	$\leq$ 60dB(class A)
	MTBF	150000H
	Operation Environment	Relative temperature: 5%-95% no condensation
	Operating Temperature	-40 ~ 65°C
	Storage Temperature	- 55°C ~ + 85°C

Interface Definition

Terminal	Definition	Model Male Connector	Model Female Connector	Supplier	Remark
Input	1-DC+ 2-2-DC- 3、4-HVIL	DJSL-Z2J(16A)	DJSL-T2K(16A)	Jonhon	
Signal	1-CANH 2-CANL 3-CANGND、 4-EN	/	/	/	  DJ7041-1.5-21 4 ENABLE 3 CAN_GND 2 CANL 1 CANH
DC Output Positive	M8 Screw Hole	/	/		
DC Output Negative	M8 Screw Hole	/	/		