



**10 Watt, 18:1 INPUT  
DC/DC Converters  
Series DV10B18-72-4,2KV**



**Features**

- 10 Watt Isolated Output, Regulated
- 18 : 1 Wide Input Range
- Isolation I/O 4200Vdc
- Fixed Switching Frequency
- Remote ON/OFF
- DIP24 Metal Package
- Meets IEC62368-1
- Meets EN50155 ( with external filter )
- Efficiency to 87%
- Continuous Short Circuit Protection
- Protection OCP / OVP / UVLO
- Operating Case Temperature -40 to +100°C
- Low No Load Power Consumption
- Shock & Vibration EN50155 ( EN61373 )
- Meets UL62368-1 ( Reinforce Insulation )
- Meets Fire & Smoke EN45545-2

MODEL NUMBER	INPUT VOLTAGE [ VDC ]	OUTPUT VOLTAGE [ VDC ]	OUTPUT CURRENT [ mA ] MAX.	INPUT CURRENT NO LOAD [ mA ]	INPUT CURRENT FULL LOAD [ mA ]	EFF. [ % ] (Note (1))	EFF. [ % ] (Note (2))	CAP. LOAD Max. [ μF ]	CASE
DV10B18-72S05-4,2KV	8,5-160	5	2000	6	163	83	82	2000	B
DV10B18-72S12-4,2KV		12	835	8	161	87	86	835	
DV10B18-72S15-4,2KV		15	666	8	161	86	85	666	
DV10B18-72D05-4,2KV		±5	±1000	8	169	82	80	1000	
DV10B18-72D12-4,2KV		±12	±416	8	163	85	84	416	
DV10B18-72D15-4,2KV		±15	±333	8	163	85	84	333	

NOTE:

1. Nominal Input Voltage 72 VDC.
2. Measured at 110V<sub>in</sub>
3. To meet EN50155 and RIA12 refer to application note.

## INPUT SPECIFICATIONS:

Input Voltage Range.....	72V	8,5-160Vdc
Input Surge Voltage.....	100ms max.	200Vdc max.
Input Under Voltage Lockout .....	80% Load, Turn-On Voltage	9V typ.
	80% Load, Turn-Off Voltage	7,5V typ.
	100% Load, Lockout Hysteresis Voltage	1,5V typ.
Maximum Input Current.....	Vin=12V at Full Load, Vin 8,5V at 80% Load	1,2A max.
Inrush Current .....		0,1 A <sup>2</sup> s max.
Input Reflected Ripple Current ..	P-P thru 12uH inductor, 5Hz to 20MHz	30mA typ.
Input Filter .....		LC Type
Positive Logic Remote On/Off, Refer to -Vin pin.		
Logic Low (Module Off) .....	Von/off at Ion/off=1.0mA	0 to 1.2V
Logic High (Module On).....	Von/off at Ion/off=0.0uA, Pin open=On	Open Circuit or 3,5V to 160V
On/Off Current (for both remote on/off logic).....	Ion/off at Von/off=0V	1mA max.
Leakage Current (both remote on/off logic).....	Logic High, Von/off=15V	30uA max.
Off Converter Input Current .....	Shutdown input idle current	5mA max.

## OUTPUT SPECIFICATION:

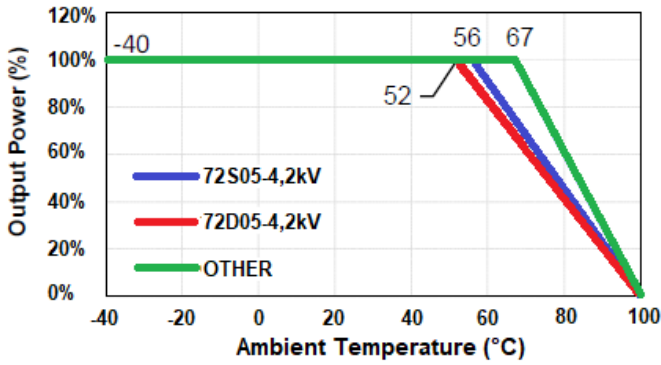
Voltage Accuracy .....	Vin=72V, Full Load, Tc=25°C	±1,0%max.
Line Regulation .....	Vin High Line to Low Line, Full Load	±0,2% max.
Load Regulation .....	Full Load to No Load, Single	±0,5% max.
	Full Load to No Load, Dual	±1,0% max.
Cross Regulation.....	Load Cross Variation 25%/100%, Dual	±5,0%max.
Temperature Coefficient.....	Tc=-40°C to 85°C	±0,02%/°C max.
Ripple and Noise (5Hz to 20 MHz BW).....	(Note 4)	40mV RMS / 100mV pk-pk max.
Current Current Protection.....	Hiccup Mode, Auto Recovery	110%-180%
Short Circuit Protection.....		Continuous, Auto Recovery
Over Voltage Protection .....		Zener Clamp
Output Voltage Current Transient: 75% to 100% Step Load Change ( within 1% Vout nominal )		
Error Band .....		±5% max.
Recover Time.....		250µ sec. max.
Output Voltage Rise Time.....	10%Vo_set to 90%Vo_set	10ms typ.

## GENERAL SPECIFICATIONS:

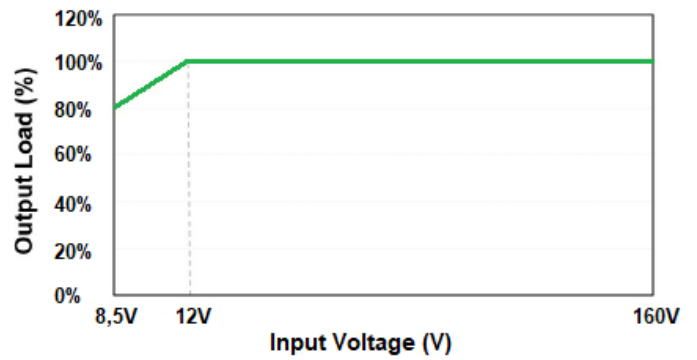
Efficiency.....		See Table
Isolation Voltage.....	1 minute; Input to Output	3000Vac / 4200VDC max.
Isolation Resistance .....	Input to Output	1000 MΩ min.
Isolation Capacitance .....	Input to Output (10KHz, 0.25V)	15pF typ.
Switching Frequency .....		255 KHz typ.
Operating Case Temperature .....	At the Center Part of Case Plate	-40°C to +100°C
Storage Temperature .....		-55°C to +125°C
MTBF .....	Io=100% of Io_max; MIL-HDBK - 217F_Notice 1, GB, 25°C	TBD Khours typ.
Shock/Vibration .....		MIL-STD-810F/EN61373 Compliant
Thermal Shock .....		MIL-STD-810F
Fire & Smoke .....		EN45545-2 Compliant
Humidity .....		95% RH max. Non condensing
Altitude .....		3000m Operating Altitude
EMI .....		Meets EN55032 Class A & EN50155 (with external filter)
Dimensions .....		31,8x20,3x12,7 (mm)
Potting Material .....		UL 94-V0
Case Material .....		Plastic ( UL 94-V0 )
Weight.....		TBD g typ.

NOTE: 4. Full load, 1.0uF ceramic capacitors  
All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted.

DV10B18-72-4,2KV Derating Curve (Vin=72V)



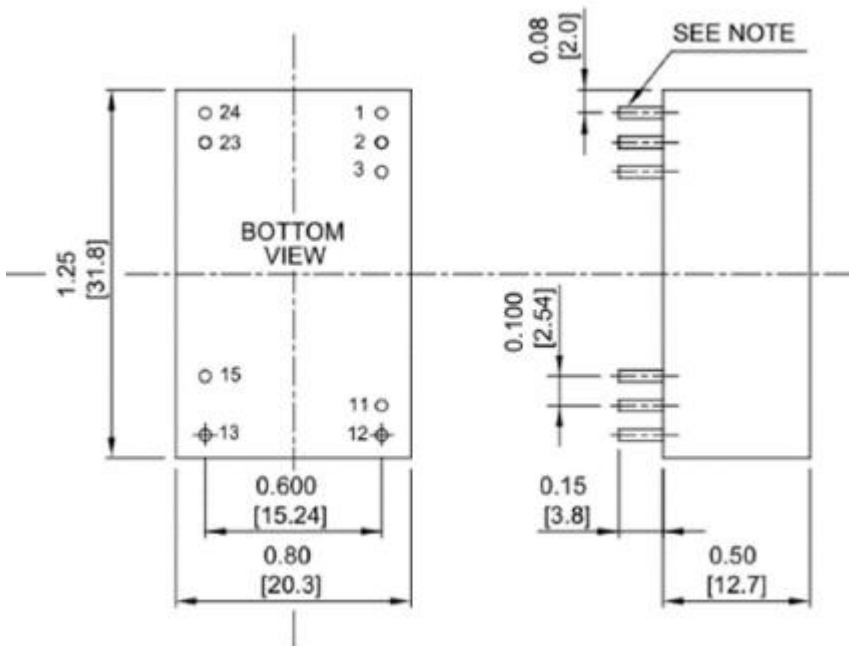
DV10B18-72-4,2KV Input Voltage Derating Curve



## Case Dimensions

## Series DV10B18-72-4,2KV

Pin Size is 0.02±0.002 Inch (0.5±0.05 mm)DIA  
 All Dimensions In Inches (mm)  
 Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010  
 Millimeters: X.X= ±0.5 , X.XX=±0.25



Pin	Connection Single	Connection Dual
1	+V Input	+V Input
2	+V Input	+V Input
3	Remote ON/OFF	Remote ON/OFF
11	NP	Common
12	-V Output	NP
13	+V Output	-V Output
15	NP	+V Input
23	-V Input	-V Input
24	-V Input	-V Input

\* NC-NO CONNECTION WITH PIN  
 \* NP-NO PIN