



**20 Watt, 4:1 Wide Input  
DC/DC Converters  
Series DV204X**



**Features**

- 20 Watt Isolated Output Regulated
- 4:1 Wide Input Range
- Pi Input Filter
- Continuous Short Circuit Protection
- Safety Meets UL/EN/IEC62368-1
- Meets EN50155 with External Circuits
- Efficiency to 90%
- Fixed Switching Frequency
- 2"x1" Shield Metal Case
- Fire & Smoke meet EN45545-2
- Shock & Vibration Meets EN50155 (EN61373)

MODEL NUMBER	INPUT VOLTAGE [VDC]	Vout [VDC]	Iout MIN [mA]	Iout MAX [mA]	INPUT CURRENT NO LOAD [mA]	INPUT CURRENT FILL LOAD [mA]	EFF. [%]	CAP. LOAD MAX. [µF]	CASE
DV9-36-3,3S5500X	9 – 36	3,3	0	5500	55	869	87	5500	X
DV9-36-05S4000X		5		4000	55	926	90	4000	
DV9-36-12S1670X		12		1670	55	928	90	1800	
DV9-36-15S1330X		15		1330	55	924	90	1500	
DV9-36-05D2000X		±5		±2000	70	937	89	2000	
DV9-36-12D835X		±12		±835	35	947	88	1000	
DV9-36-15D666X		±15		±666	35	947	88	800	
DV18-75-3,3S5500X		18 – 75		3,3	0	5500	25	430	
DV18-75-05S4000X	5		4000	25		463	90	4000	
DV18-75-12S1670X	12		1670	25		464	90	1800	
DV18-75-15S1330X	15		1330	25		462	90	1500	
DV18-75-05D2000X	±5		±2000	35		468	89	2000	
DV18-75-12D835X	±12		±835	25		474	88	1000	
DV18-75-15D666X	±15		±666	25		474	88	800	

NOTE:

1. Nominal Input Voltage 24 or 48VDC

## INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9 – 36V
	48V.....	18 – 75V
Input Surge Voltage (100ms max.).....	24V.....	50Vdc max.
	48V.....	100Vdc max.
Under Voltage lockout.....	24Vin power up.....	8,8V typ.
	24Vin power down.....	8,0V typ.
	48Vin power up.....	17V typ.
	48Vin power down.....	16V typ.
Input Filter.....		Pi Type
Positive Logic Remote On/Off Control: ( Negative Logic Remote On/Off see note 1 )		
Logic Compatibility CMOS or Open Collector TTL,ref.to - Vin		
Module ON.....	>5.5Vdc to 75Vdc or Open Circuit	
Module OFF.....	0 to <1.2 Vdc	

## OUTPUT SPECIFICATIONS:

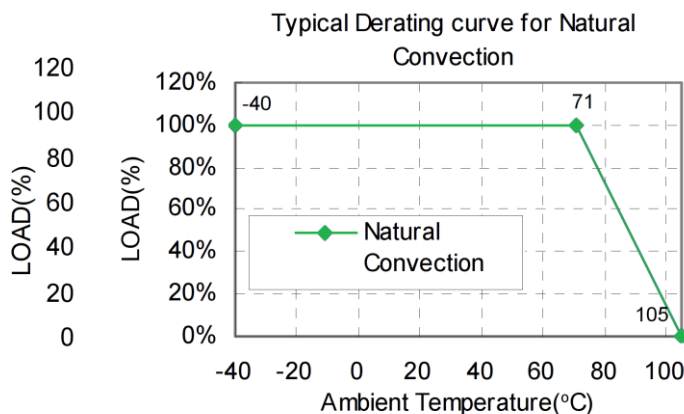
Voltage Accuracy.....		±1,5% max.
Voltage Balance (Dual).....		±1,0% max.
Transient Response: 75% - 100% Step Load Change.....	Error Band.....	±5% Vout nominal
	Recovery Time.....	<500us
Ripple & Noise, 20 MHz BW ( Measured with 0,1uF MLCC ).....		75mV p-p max.
Temperature Coefficient.....		±0,03%/°C
Output Short Circuit Protection.....		Continuous
Line Regulation (Measured From High Line to Low Line ).....	Single.....	±0,2 % max.
	Dual.....	±0,5 % max.
Load Regulation ( Measured From Full Load to Zero Load ).....		±1,0 % max.
Cross Regulation ( Dual Output ).....	Load cross variation 25% / 100%.....	±5 % max.
Over Voltage Protection.....		Zener or TVS Clamp
External Trim Adj. Range ( Single Outputs only ).....		±10%
Start up Time.....		5ms typ.

## GENERAL SPECIFICATIONS:

Efficiency.....		See Table
Isolation Voltage Input/Output.....		1500VDC max
Isolation Resistance.....		10 <sup>8</sup> Ohms min.
Isolation Capacitance.....		1000pF typ.
Switching Frequency.....	Single.....	350 KHz, typ.
	Dual.....	400 KHz, typ.
Operating Ambient Temperature Range.....		-40°C to +85°C
Derating, above 71°C.....		Linearly to Zero Power at +105°C
Case Temperature (Note3).....		105°C max.
Thermal Shutdown.....		110°C typ.
Storage Temperature Range.....		-55°C to +125°C
Cooling.....		Natural Convection
Humidity.....		95% RH max. Non condensing
EMI / RFI.....		Six Sided Continuous Shield
Safety meets.....		UL62368-1, EN62368-1, IEC62368-1
EMC.....		meet EN50155(EN50121-3-2) with external filter
Shock/Vibration.....		meet EN50155(EN61373)
Fire & Smoke.....		meet EN45545-2
MTBF (MIL-STD-217F, GB, 25°C, Full Load).....		720 Khrs typ.
Dimensions.....		2 x 1 x 0,4 inches ( 50,8 x 25,4 x 10,2 mm )
Weight.....		35 g
Case Material.....		Black Coated Copper with Non-Conductive Base

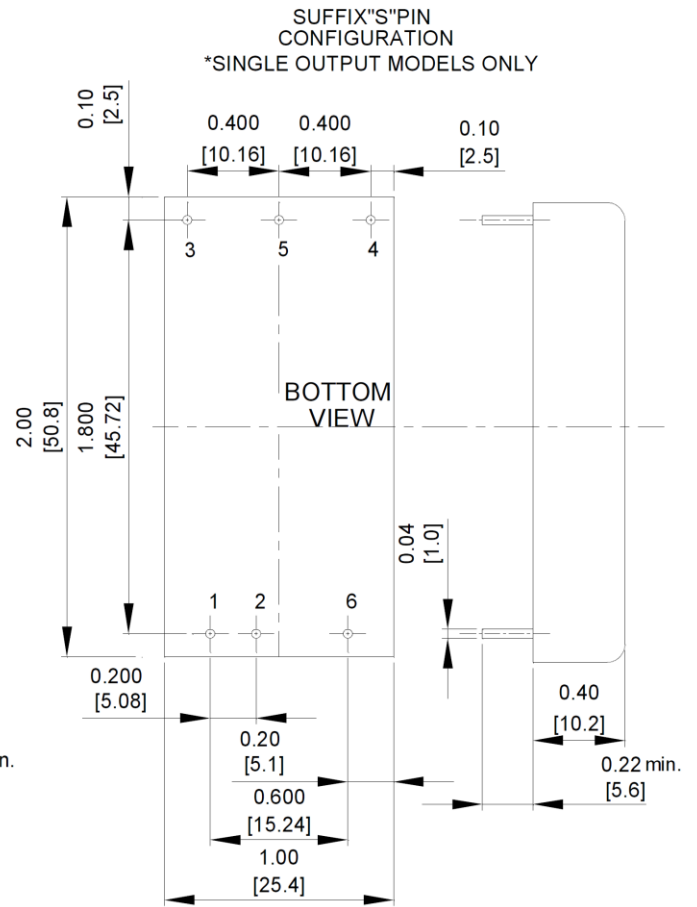
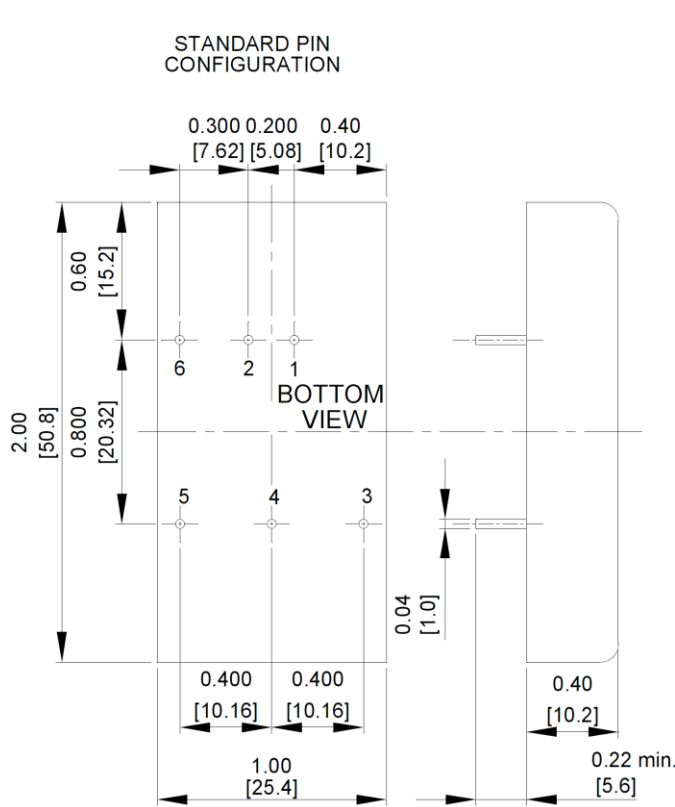
Note:

- Suffix "N" to the Model Number Negative Logic Remote ON/OFF  
Module ON..... 0 to <1.2Vdc  
Module OFF..... >5.5Vdc to 75Vdc or Open Circuit
- Suffix "S" to the Model Number with Alternative Pin Configuration, Single output models only.**
- Maximum case temperature under any operating condition should not be exceeded 105°C.



Technische Änderungen vorbehalten / Specifications are subject to change without notice

All Dimensions in Inches (mm)  
 Tolerance: Inches: x.xx= ±0.04, x.xxx= ±0.010  
 mm: x.x= ±1.0, x.xx= ±0.25



PIN CONNECTION		
Pin	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	Trim	Common
5	-Vout	-Vout
6	Remote ON/OFF	Remote ON/OFF

