



Size: 4.60in x 2.4in x 0.5in (116.8mm x 61mm x 12.7mm)

### FEATURES

Rev B

- Input Voltage Range of 18~36VDC
- High Efficiency & Power Density
- Metal Baseplate
- Remote On/Off Control
- Low Output Noise
- Industry-Standard Size
- Over Voltage, Under Voltage, Over Temperature, Current Limit, and Short Circuit Protection
- I.O.G. (DC Good): Open Collector Output

DESCRIPTION The DCFHB600-24S28 model of DC/DC converters offers 600 watts of output power in a compact 4.60" x 2.4" x 0.5" full brick package. This is an adjustable single output model with an input voltage range of 18~36VDC. This model also features high efficiency and power density, a metal base plate, remote on/off control, and I.O.G (DC Good). The DCFBH600-24S28 model is protected against over voltage, under voltage, over temperature, current limit, and short circuit conditions and it is useful in centralized modular and distributed power applications.

Maximum Output Voltage, and Maximum Output Ucremet unless otherwise noted. We reserve the fight to change specifications based on technological advances.           SPECIFICATION         Test CONDITIONS         Min         Type         Max         Unit technological advances.           SPECIFICATION         Min         Type         Type <th colsp<="" th=""><th>SPECIFICATIONS</th><th></th><th></th><th></th><th></th><th></th><th></th></th>	<th>SPECIFICATIONS</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	SPECIFICATIONS						
Become of the neght to change specifications based on technological advances.         Typ         Max         Unit           INPUT SPECIFICATIONS Input Voltage Range         18         24         36         V           Absolute Maximum Input Voltage         +In to -In         <100ms         -0.3         36         V           Input Current         Vin=24V, Io Max         -0.3         36         V           Insush Transient         -         2         A/2s         A           Insush Transient         -         2         A/2s         V           Output Voltage Rejection         @120Hz         60         dB         V           Output Voltage Accuracy         Vin=24V, Io Max         27.95         28         28.05         V           Une Regulation         Ion=16, min to To max         20.05         0.01         0.2         %           Load Regulation         Io=17, min to To max         0.05         0.2         %         V           Unput Voltage Prim Range         With cap. 440uF/35V, Tb=25°C         6         110         %/0.5         A           Output Voltage Tim Range         Kemote Sense         -         250         MVPp         200         W/0.5         A           Output Current Limit	All specifications	are based on 25°C, Nominal Input Volta	age, and Maximum Output C	urrent unless of	herwise not	ed.		
Carl Devint CATION         Test CONDITIONS         Mill         typ         Mila         Unit           Input Voltage Range         18         24         36         V           Absolute Maximum Input Voltage         Into -In         <100ms         -0.3         50         V           Input Current         Vin=24V, Io Max         -0.3         36         V           Input Royle Rejection         @120Hz         60         dB         2         A^2s.           Output Voltage Accuracy         Vin=24V, Io Max         27.95         28         28.05         V           Output Voltage Accuracy         Vin=24V, Io Max         27.72         28         28.28.2         V           Output Voltage Accuracy         Vin=24V, Io Max         27.72         28         28.28.2         V           Output Voltage Tim Range         Vin=18V-36V         0.01         0.2         %           Uptad Voltage Tim Range         With cap. 4400F/35V, Tb=25°C         40         +10         %           Output Voltage Tim Range         With cap. 4400F/35V, Tb=25°C         6         110         %/o.5         A           Output Current         At Vos28V, If Yo>28Y, Output Power (Po) should be \$602W         25%         MVo,5         A	SPECIFICATION	We reserve the right to change specific	al advances.	Turp	Max	Linit		
Introduction         Interview         Interview <thinterview< th=""> <thinterview< th="">         &lt;</thinterview<></thinterview<>		TESTCONL	ITIONS		тур	Iviax	Unit	
Induity         Into -In         <100 ms         -0.3         50         V           Absolute Maximum Input Voltage         +In to -In         <100ms	INFUT SFECIFICATIONS			10	24	26	V	
Absolute Maximum Input Voltage         +in to -In         Continuous         -0.3         30         V           Input Current         Vin=24V, Io Max         -0.3         36         V           Input Current         Vin=24V, Io Max         -0.3         36         V           Input Ripple Rejection         @120Hz         60         -0.8         Ac/2s           Input Ripple Rejection         @120Hz         60         -0.8         -0.8         -0.9 <td< td=""><td></td><td></td><td>&lt;100ma</td><td>10</td><td>24</td><td>50</td><td>V</td></td<>			<100ma	10	24	50	V	
Input Current         Vin=24V, Io Max         Imput Provide Control         30         A           Innush Transient         0         2         A^2s           Input Ripple Rejection         @120Hz         60         dB           OUTPUT SPECIFICATIONS         0         27.95         28         28.05         V           Output Voltage Set Point         Initial Adjusted, @Tb=25°C, Vin=24V, Io Max         27.95         28         28.28         V           Line Regulation         Vin=24V, Io Max         27.97         2.8         28.28         V           Line Regulation         Vin=19V-36V         0.01         0.2         %           Load Regulation         Io= To, min to To max         0.05         0.2         %           Output Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         %Vo, Set           Output Current         At Vos28V, if Yo>28V, Output Power (Po) should be \$602W         21.5         A           Output Current Limit         Current limit Inception point Vo=90% of Vo, set         105         140         % fo, max           Dynamic Response         cap.440uF/35V, Tb=25°C, Vin=24V         Setting Time         300         us         109.20         mVo           Dynamic Response         cap.440	Absolute Maximum Input Voltage	+In to -In	Cantinuaua	-0.3		50	- V	
Input Current         VIIn=24V, Io Max         Imput Reple Rejection         Imput Rejection <thimput rejection<="" th=""> <thimput rejection<="" th=""></thimput></thimput>	In must Command		-0.3		30	•		
Initian Transient         C         2         Procession           OUTPUT SPECIFICATIONS         60         dB           Output Voltage Set Point         Initial Adjusted, @Tb=25°C, Vin=24V, Io Max         27.95         28         28.05         V           Output Voltage Set Point         Initial Adjusted, @Tb=25°C, Vin=24V, Io Max         27.72         28         28.05         V           Line Regulation         Io= To, min to To max         0.01         0.2         %           Load Regulation         Io= To, min to To max         0.01         0.2         %           Utput Voltage Trim Range	Input Current				28.9	A		
Input Ripple Rejection (@120H2 0 dB Output Voltage Set Point Initial Adjusted, @Tb=25°C, Vin=24V, Io Max 27.95 28 28.26 V Unput Voltage Accuracy Vin=24V, Io Max 27.72 28 28.28 V Line Regulation Vin=18V-36V 0.01 0.2 % Load Regulation Io= To, min to To max 0.05 0.2 % Output Voltage Trim Range With cap. 440uF/35V, Tb=25°C 6 110 %Vo, Set Memote Sense 0.025 0.2 % Output Voltage Trim Range Vith cap. 440uF/35V, Tb=25°C 6 110 %Vo, Set Memote Sense 0.025 0.2 % Output Voltage Trim Range 2.25%, If Yo>28Y, Output Power (Po) should be ≤602W 2.15 A Output Current Limit Current limit inception point Vo=90% of Vo, set 105 140 %Vo, max Ripple & Noise <sup>(1)</sup> 2.5%, 50%, 75% load, 0.1A/us; with 2.5%C, Vin=24V Settling Time 2.00 mS Dynamic Response 2.25%, of To, max. Vo with ±1% Vo, set 0.00 Us Turn-On Time 10=80% of To, max. Vo with ±1% Vo, set 0.00 Us Remote On/Off Control Short 0.0F Power Density 10≤20mA 7 8 9 V Power Density 10≤20mA 7 8 9 V Power Density 10≤20mA 7 8 9 V Power Density 10≤20mA 7 8 9 V Over Temperature Protection 10=0.5A 115 135 %Vo, set 105 110 115 °C Recovery Automatic Recovery Automatic Recovery Automatic Recovery 4.00 ±100 °C Storage Temperature <sup>20</sup> Storage Temperature <sup>20</sup> Storage Humidity 0.002 0.02 %/c set 0.002 0.02 %/c Set 0.002 0.02 %/c Set 0.002 0.002 0.02 %/c Set 0.0002 0.002 0.002 %/c Set 0.0002 0	Inrush Transient				00	2	A^2S	
DOI 1PD SPECIFICATIONS         Initial Adjusted, @Tb=25°C, Vin=24V, Io Max         27.95         28         28.05         V           Output Voltage Accuracy         Vin=24V, Io Max         27.72         28         28.28         V           Line Regulation         Vin=24V, Io Max         27.95         28         28.28         V           Line Regulation         Vin=24V, Io Max         27.95         28         28.28         V           Line Regulation         Vin=24V, Io Max         27.95         28         28.28         V           Line Regulation         Vin=24V, Io Max         27.95         28         28.28         V           Line Regulation         Vin=24V, Io Max         0.01         0.2         %           Load Regulation         Io= To, min to To max         0.05         0.2         %           Uptur Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         %Vo, Set           Output Current Limit         Current limit inception point Vo=90% of Vo, set         105         140         %lo, Set           Dynamic Response         25%-50%-75% load, 0.14/us; with         Peak Deviation         3         %Vo, Set           Turm-O Time         Io=80% of To, max. Vo with ±1% Vo, set         300         us		@120Hz			60		dB	
Output Voltage Set Point         Initial Adjusted, @ 19=25°C, Vin=24V, to Max         27.93         28         28.05         V           Line Regulation         Vin=24V, to Max         27.72         28         28.05         V           Line Regulation         Io= To, min to To max         0.01         0.2         %           Line Regulation         Io= To, min to To max         40         +10         %           Output Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         % Vo. Set           Remote Sense         Ves         Yes         25         A           Output Voltage Trim Range         Kith cap. 440uF/35V, Tb=25°C         6         110         % Vo. Set           Output Current Limit         Current limit inception point Vo=90% of Vo, set         105         140         % lon, max           Output Current Limit         Current Limit inception point Vo=90% of Vo, set         105         140         % lon, max           Dynamic Response         25%-50%-75% load. 0.1A/us; with Open         Peak Deviation         3         % Vo. Set           Remote On/Off Control         Short         On         0         mVp-D           Output Voltage         los20mA         7         8         9         V	OUTPUT SPECIFICATIONS			07.05		00.05		
Output Voltage AccuracyVin=24/, 10 Max27.722828.28VLine RegulationIo= To, min to To max0.010.2%Load RegulationIo= To, min to To max0.050.2%Trim Range-40+10%Output Voltage Trim Range6110%Vo, SetRemote SenseVerturent600WOutput Voltage Trim RangeAt Vos28V, If Yo>28Y, Output Power (Po) should be ≤602W21.5AOutput Current LimitCurrent limit inception point Vo=90% of Vo, set105140%lo, maxRople & Noise <sup>(1)</sup> 25%-50%-75% load, 0.1A/us; withPeak Deviation3%Vo, SetDynamic Response25%-50%-75% load, 0.1A/us; withPeak Deviation3%Vo, SetTurn-On TimeIo=80% of To, max. Vo with ±1% Vo, set00101usTurn-On TimeIo=80% of To, max. Vo with ±1% Vo, set0010102.9Auxiliary VoltageIos20mA789VPower Density0109.29Win A3PowerCurrent Limit Short Circuit Protection005110115°COver Voltage Protection105110110°CStorge Temperature ProtectionOver Tottage Protection400+100°COutput Voltage Protection005110115°C°CCorrent Limit Short Circuit Protection400+100°COutput Voltage Protection005110 </td <td>Output Voltage Set Point</td> <td>Initial Adjusted, @Ib=25°C, Vin=24V</td> <td>, lo Max</td> <td>27.95</td> <td>28</td> <td>28.05</td> <td>V</td>	Output Voltage Set Point	Initial Adjusted, @Ib=25°C, Vin=24V	, lo Max	27.95	28	28.05	V	
Line Regulation         Vin=18V-36V         0.01         0.2         %           Load Regulation         lo= To, min to To max         0.05         0.2         %           Cutput Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         % Vo, Set           Remote Sense	Output Voltage Accuracy	Vin=24V, IO Max		27.72	28	28.28	V	
Load Regulation         IDE 16, min to 10 max         -40         +10         %           Output Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         %Vo, Set           Remote Sense         Output Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         %Vo, Set           Remote Sense         Cutrent Voltage Trim Range         At Vos28V, if Yo>28Y, Output Power (Po) should be ≤602W         21.5         A           Output Current Limit         Current limit inception point Vo=90% of Vo, set         105         140         %lo, max           Ripple & Noise <sup>(1)</sup> Z5%-50%-75% load, 0.1A/us; with         Peak Deviation         3         %Vo, Set           Dynamic Response         25%-50%-75% load, 0.1A/us; with         Peak Deviation         3         %Vo, Set           Turn-On Time         Io=80% of To, max. Vo with ±1% Vo, set         00         us         so0         us           Remote On/Off Control         Short         On         0         109.29         Win A3           PROTECTION         Current Limit Short Circuit Protection         Io=0.5A         115         135         %Vo, set           Under Voltage Protection         Io=0.5A         105         110         115         °C           Storage Tempera		Vin=18V-36V			0.01	0.2	%	
Inm Range         -40         +10         %           Output Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         %Vo, Set           Remote Sense         0utput Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         %Vo, Set           Output Current Limit         At Vo≤28V, if Yo>28Y, Output Power (Po) should be \$602W         21.5         A           Output Current Limit         Current limit inception point Vo=90% of Vo, set         105         140         %Io, max           Ripple & Noise <sup>(1)</sup> Current limit inception point Vo=90% of Vo, set         105         440         %Io, max           Dynamic Response         25%-50%-75% load, 0.1A/us; with cap. 440uF/35V, Tb=25°C, Vin=24V         Peak Deviation         3         %Vo, Set           Remote On/Off Control         Short         200         mS         mS           Remote On/Off Control         Short         On         0         ust           Over Voltage Protection         Io=0.5A         115         135         %Vo, set           Over Voltage Protection         Io=0.5A         115         135         %Vo, set           Over Voltage Protection         Io=0.5A         115         135         %Vo, set           Over Voltage Protection	Load Regulation	lo= Io, min to Io max			0.05	0.2	%	
Output Voltage Trim Range         With cap. 440uF/35V, Tb=25°C         6         110         %Vo, Set           Remote Sense         Ves         0utput Power         600         W           Output Current         At Vo≤28V, if Yo>28Y, Output Power (Po) should be ≤602W         21.5         A           Output Current Limit         Current limit inception point Vo=90% of Vo, set         105         140         %Io, max           Apple & Noise <sup>(1)</sup> 25%-50%-75% load, 0.1A/us; with cap. 440uF/35V, Tb=25°C, Vin=24V         Peak Deviation         3         %Vo, Set           Turn-On Time         Io=80% of To, max. Vo with ±1% Vo, set         200         mS         300         us           Turn-On Time         Ios20mA         7         8         9         V           Auxiliary Voltage         Ios20mA         7         8         9         V           Power Density         Ios20mA         7         8         9         V           Outer Voltage Protection         Io=0.5A         115         135         %Vo, set           Under Voltage Protection         Io=0.5A         105         110         15         °C           Over Tomperature Protection         Io=0.5A         105         110         °C         °C           ENVI	Trim Range			-40		+10	%	
Remote Sense         Yes           Output Power         At Vo≤28V, if Yo>28Y, Output Power (Po) should be ≤602W         600         W           Output Current Limit         Current Limit initi inception point Vo=90% of Vo, set         105         140         %lo, max           Ripple & Noise <sup>(1)</sup> 25%-50%-75% load, 0.1A/us; with cap. 4400/F/35V, Tb=25°C, vin=24V         Settling Time         300         us           Dynamic Response         25%-50%-75% load, 0.1A/us; with cap. 4400/F/35V, Tb=25°C, vin=24V         Settling Time         300         us           Tum-On Time         10=80% of To, max. Vo with ±1% Vo, set         200         mS           Remote On/Off Control         Short         0pen         Off           Auxiliary Voltage         10≤200 A         7         8         9         V           Power Density         10≤20A         7         8         9         V           Protection         10         105         110         115         °C           Over Voltage Protection         10=0.5A         115         135         %Vo, set           Under Voltage Protection         10=0.5A         110         115         °C           Recovery         Automatic Recovery         100         °C         °C           Storage	Output Voltage Trim Range	With cap. 440uF/35V, Tb=25°C	6		110	%Vo, Set		
Output PowerAt Vos28V, if Yo>28Y, Output Power (Po) should be ≤602W600WOutput CurrentAt Vos28V, if Yo>28Y, Output Power (Po) should be ≤602W21.5AOutput Current LimitCurrent limit inception point Vo=90% of Vo, set105140%lo, maxRipple & Noise <sup>(1)</sup> 25%-50%-75% load, 0.1A/us; with cap. 440uF/35V, Tb=25°C, Vin=24VPeak Deviation3%Vo, SetDynamic Response $25\%-50\%-75\%$ load, 0.1A/us; with cap. 440uF/35V, Tb=25°C, Vin=24VSettling Time300usTurn-On Timelo=80% of To, max. Vo with ±1% Vo, set200mSRemote On/Off ControlNortOrfOrfAuxiliary Voltagelo≤20mA789VPower Density105109.29W/in.A3PROTECTION105110115°CCurrent Limit/ Short Circuit Protectionlo=0.5A115135%Vo, setOver Voltage Protectionlo=0.5A115110115°CCover Voltage Protectionlo=0.5A115110115°CRecoveryAutomatic Recovery100°C°CStorage Temperature <sup>(2)</sup> °CStorage Temperature <sup>(2)</sup> Automatic Recovery1095%Operating Temperature <sup>(2)</sup> 1095%%Operating HumidityTb=-40 to 100°C200, loe200.0020.02%/°CShockSine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.59) X, Y.Z Hour, @no operation12mHrs <td>Remote Sense</td> <td colspan="2"></td> <td></td> <td colspan="3">Yes</td>	Remote Sense				Yes			
Output Current         At Vos28Y, f Yo>28Y, Output Power (Po) should be ≤602W         21.5         A           Output Current Limit         Current limit inception point Vo=90% of Vo, set         105         140         %lo, max           Ripple & Noise <sup>(1)</sup> 25%-50%-75% load, 0.1A/us; with cap, 440uF/35V, Tb=25°C, Vin=24V         Peak Deviation         3         %Vo, Set           Dynamic Response         25%-50%-75% load, 0.1A/us; with cap, 440uF/35V, Tb=25°C, Vin=24V         Peak Deviation         3         %Vo, Set           Tum-On Time         Io=80% of To, max. Vo with ±1% Vo, set         0         0         mS           Remote On/Off Control         Short         Onf         0         mS           Auxiliary Voltage         Io≤20mA         7         8         9         V           Power Density         0         105         115         135         %Vo, set           PROTECTION         0         0         0         V         Vo           Over Voltage Protection         Io=0.5A         115         135         %Vo, set           Over Temperature Protection         Io=0.5A         105         110         115         °C           Recovery         Automatic Recovery         100         °C         °C         V         °C <td>Output Power</td> <td></td> <td></td> <td></td> <td></td> <td>600</td> <td>W</td>	Output Power					600	W	
Output Current Limit         Current limit inception point Vo=90% of Vo, set         105         140         %lo, max mVp-p           Ripple & Noise <sup>(1)</sup> 25%-50%-75% load, 0.1A/us; with cap. 440uF/35V, Tb=25°C, Vin=24V         Peak Deviation         3         %Vo, Set           Turn-On Time         lo=80% of To, max. Vo with ±1% Vo, set         200         mS           Remote On/Off Control         Short         200         mS           Power Density         Open         0ff         0m           Power Density         105         115         135         %lo, set           Por Voltage Protection         lo=0.5A         115         135         %los, set           Over Voltage Protection         lo=0.5A         115         135         %los, set           Over Temperature Protection         lo=0.5A         105         110         115         °C           Cover Y         Automatic Recovery         100         °C         °C         °C         °C           Storage Temperature <sup>(2)</sup> 4utomatic Recovery         100         95         %           Operating Temperature <sup>(2)</sup> 30         95         %         %           Storage Temperature <sup>(2)</sup> Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm         200, 166/ns/sec, S	Output Current	At Vo≤28V, if Yo>28Y, Output Power	(Po) should be ≤602W			21.5	A	
Ripple & Noise <sup>(1)</sup> mVp-p           Dynamic Response         25%-50%-75% load, 0.1A/us; with cap. 440uF/35V, Tb=25°C, Vin=24V         Peak Deviation         3         %Vo, Set           Turn-On Time         lo=80% of To, max. Vo with ±1% Vo, set         200         mS           Remote On/Off Control         Short         200         mS           Auxiliary Voltage         los20mA         7         8         9         V           Power Density         7         8         9         V           Power Density         109.29         W/in.A3           PROTECTION         109.29         W/in.A3           Current Limit/ Short Circuit Protection         lo=0.5A         115         135         %Vo, set           Over Voltage Protection         lo=0.5A         115         135         %Vo, set           Over Temperature Protection         lo=0.5A         115         12         V           Over Temperature Protection         lo=0.5A         110         115         °C           Storage Temperature <sup>(2)</sup> Automatic Recovery         100         °C         °C           Storage Temperature <sup>(2)</sup> 5         +1125         °C         °C           Storage Temperature <sup>(2)</sup> 5         +125	Output Current Limit	Current limit inception point Vo=90%	105		140	%lo, max		
Dynamic Response         25%-50%-75% load, 0.1A/us; with cap. 440uF/35V, Tb=25%C, Vin=24V         Peak Deviation Setting Time         3         %Vo, Set           Turn-On Time         lo=80% of To, max. Vo with ±1% Vo, set         200         mS           Remote On/Off Control         Short         200         mS           Auxiliary Voltage         lo≤20mA         7         8         9         V           Power Density         Io≤20mA         7         8         9         V           PROTECTION         Ios20mA         7         8         9         V           Current Limit/ Short Circuit Protection         Io=0.5A         115         135         %Vo, set           Over Voltage Protection         Io=0.5A         115         135         %Vo, set           Under Voltage Protection         Io=0.5A         115         135         %Vo, set           Over Voltage Protection         Io=0.5A         115         135         %Vo, set           Under Voltage Protection         Io=0.5A         115         12         V           Over Temperature Protection         40         +100         °C           Storage Temperature <sup>(2)</sup> Automatic Recovery         100         95         %           Operating Temperat	Ripple & Noise <sup>(1)</sup>					250	mVp-p	
Dynamic Response         cap. 440uF/35V, Tb=25°C, Vin=24V         Settling Time         300         us           Turn-On Time         Io=80% of To, max. Vo with ±1% Vo, set         0         200         mS           Remote On/Off Control         Shot         On         0         0           Auxiliary Voltage         Io≤20mA         7         8         9         V           Power Density         Io≤20mA         7         8         9         V           PROTECTION         Ios20mA         109.29         W/in.A3           Current Limit/ Short Circuit Protection         Io=0.5A         115         135         %Vo, set           Under Voltage Protection         Io=0.5A         115         135         %Vo, set           Under Voltage Protection         Io=0.5A         110         115         °C           Recovery         Automatic Recovery         100         °C         °C           Storage Temperature?         -40         +100         °C           Storage Temperature         -55         +125         °C           Storage Humidity         0         95         %           Operating Temperature Drift         Tb=-40 to 100°C         0.002         0.002         0.002         %	Dimensio Disease	25%-50%-75% load, 0.1A/us; with	Peak Deviation		3		%Vo, Set	
Turn-On TimeIo=80% of To, max. Vo with $\pm 1\%$ Vo, set200mSRemote On/Off ControlShortOnOpenOffAuxiliary VoltageIo≤20mA789VPower DensityIo≤20mA789VPROTECTIONIo=0.5A115135%Vo, setOver Voltage ProtectionIo=0.5A115135%Vo, setUnder Voltage ProtectionIo=0.5A115110115°CRecoveryAutomatic Recovery100100°C°CENVIRONMENTAL SPECIFICATIONS-40+100°C°CStorage Temperature-40+100°C°CStorage Temperature-55+125°C°CStorage Temperature-55+125°C°CStorage HumidityTb=-40 to 100°C0.0020.020.02%/°CShockSine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation12mHrsMTBFThe=40°C log80% To max Viez4W12mHrs	Dynamic Response	cap. 440uF/35V, Tb=25°C, Vin=24V	Settling Time			300	us	
Remote On/Off ControlShort OpenOnAuxiliary Voltagelo<20mA	Turn-On Time	Io=80% of To, max. Vo with ±1% Vo, set				200	mS	
OpenOpenOffAuxiliary Voltagelo<20mA	Remote On/Off Control	Short		On				
Auxiliary VoltageIo<20mA789VPower Density109.29W/in.A3PROTECTIONVertor109.29W/in.A3Current Limit/ Short Circuit ProtectionIo=0.5A115135%Vo, setOver Voltage Protection105110115°CRecoveryAutomatic Recovery100°CENVIRONMENTAL SPECIFICATIONS-40+100°COperating Temperature <sup>(2)</sup> -40+100°CStorage Temperature <sup>(2)</sup> -40+100°CStorage Humidity1095%Operating Humidity1095%Temperature DriftTb=-40 to 100°C0.0020.02%/°CShockSine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X, Y, Z Hour, @no operation12mHrs		Open		Off				
Power Density         109.29         W/in.A3           PROTECTION         Current Limit/ Short Circuit Protection         Ioe.5A         115         135         %Vo, set           Over Voltage Protection         Ioe.5A         115         135         %Vo, set           Under Voltage Protection         0         115         12         V           Over Temperature Protection         105         110         115         °C           Recovery         Automatic Recovery         100         °C         °C           ENVIRONMENTAL SPECIFICATIONS         -40         +100         °C           Storage Temperature <sup>(2)</sup> -40         +100         °C           Storage Temperature         -55         +125         °C           Operating Humidity         10         95         %           Operating Humidity         30         955         %           Temperature Drift         Tb=-40 to 100°C         0.002         0.02         %/°C           Shock         20g, 166in/sec, Square Wave         Vibration         Vibration         Th=40°C Ioe80% To max Vi=24V         12         mHrs	Auxiliary Voltage	lo≤20mA	7	8	9	V		
PROTECTION       Yes         Current Limit/ Short Circuit Protection       Io=0.5A       115       135       %Vo, set         Under Voltage Protection       115       12       V         Over Temperature Protection       105       110       115       °C         Recovery       Automatic Recovery       100       °C       °C         ENVIRONMENTAL SPECIFICATIONS       Operating Temperature <sup>(2)</sup> -40       +100       °C         Storage Temperature       -55       +125       °C         Storage Humidity       10       95       %         Operating Humidity       10       95       %         Temperature Drift       Tb=-40 to 100°C       0.002       0.02       %/°C         Shock       20g, 166in/sec, Square Wave       20g, 166in/sec, Square Wave       Vibration         MTBE       Tb=40°C Io=80% To max Vi=24V       12       mHrs	Power Density				109.29	W/in.A3		
Current Limit/ Short Circuit Protection       Io=0.5A       Yes         Over Voltage Protection       115       135       %Vo, set         Under Voltage Protection       115       12       V         Over Temperature Protection       105       110       115       °C         Recovery       Automatic Recovery       100       °C       °C         ENVIRONMENTAL SPECIFICATIONS       -40       +100       °C         Storage Temperature <sup>(2)</sup> -40       +100       °C         Storage Temperature       -55       +125       °C         Storage Humidity       10       95       %         Operating Humidity       10       0.002       0.02       %/°C         Shock       20g, 166in/sec, Square Wave       10       %/°C         Vibration       Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation       12       mH	PROTECTION							
Over Voltage Protection         lo=0.5A         115         135         %Vo, set           Under Voltage Protection         12         V           Over Temperature Protection         105         110         115         °C           Recovery         Automatic Recovery         100         °C         °C           ENVIRONMENTAL SPECIFICATIONS         -40         +100         °C           Storage Temperature <sup>(2)</sup> -40         +125         °C           Storage Temperature         -55         +125         °C           Storage Humidity         10         95         %           Operating Humidity         10         95         %           Temperature Drift         Tb=-40 to 100°C         0.002         0.02         %/°C           Shock         20g, 166in/sec, Square Wave         Vibration         Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation         12         mHrs	Current Limit/ Short Circuit Protection				Y	es		
Under Voltage Protection         12         V           Over Temperature Protection         105         110         115         °C           Recovery         Automatic Recovery         100         100         °C           ENVIRONMENTAL SPECIFICATIONS         -40         +100         °C           Operating Temperature <sup>(2)</sup> -40         +100         °C           Storage Temperature         -55         +125         °C           Storage Humidity         10         95         %           Operating Humidity         10         95         %           Temperature Drift         Tb=-40 to 100°C         0.002         0.02         %/°C           Shock         20g, 166in/sec, Square Wave         Vibration         Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation         12         mHrs	Over Voltage Protection	lo=0.5A	115		135	%Vo, set		
Over Temperature Protection         105         110         115         °C           Recovery         Automatic Recovery         100         °C         °C           ENVIRONMENTAL SPECIFICATIONS         -40         +100         °C           Operating Temperature <sup>(2)</sup> -40         +100         °C           Storage Temperature         -55         +125         °C           Storage Humidity         10         95         %           Operating Humidity         10         95         %           Temperature Drift         Tb=-40 to 100°C         0.002         0.02         %/°C           Shock         20g, 166in/sec, Square Wave         Vibration         Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation         12         mHrs	Under Voltage Protection				12		V	
Recovery       Automatic Recovery       100       °C         ENVIRONMENTAL SPECIFICATIONS       -40       +100       °C         Operating Temperature <sup>(2)</sup> -40       +100       °C         Storage Temperature       -55       +125       °C         Storage Humidity       10       95       %         Operating Humidity       10       95       %         Operating Humidity       30       95       %         Temperature Drift       Tb=-40 to 100°C       0.002       0.02       %/°C         Shock       20g, 166in/sec, Square Wave       20g, 166in/sec, Square Wave         Vibration       Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation       12       mHrs	Over Temperature Protection			105	110	115	°C	
ENVIRONMENTAL SPECIFICATIONS         Operating Temperature <sup>(2)</sup> -40       +100       °C         Storage Temperature       -55       +125       °C         Storage Humidity       10       95       %         Operating Humidity       30       95       %         Temperature Drift       Tb=-40 to 100°C       0.002       0.02       %/°C         Shock       20g, 166in/sec, Square Wave         Vibration       Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation       12       mHrs	Recovery	Automatic Recovery		100			°C	
Operating Temperature <sup>(2)</sup> -40         +100         °C           Storage Temperature         -55         +125         °C           Storage Humidity         10         95         %           Operating Humidity         30         95         %           Temperature Drift         Tb=-40 to 100°C         0.002         0.02         %/°C           Shock         20g, 166in/sec, Square Wave         20g, 166in/sec, Square Wave           Vibration         Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation         12         mHrs	ENVIRONMENTAL SPECIFICATION	S			1	1		
Storage Temperature     -55     +125     °C       Storage Humidity     10     95     %       Operating Humidity     30     95     %       Temperature Drift     Tb=-40 to 100°C     0.002     0.02     %/°C       Shock     20g, 166in/sec, Square Wave       Vibration     Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation     12     mHrs	Operating Temperature <sup>(2)</sup>			-40		+100	°C	
Storage Humidity     10     95     %       Operating Humidity     30     95     %       Temperature Drift     Tb=-40 to 100°C     0.002     0.02     %/°C       Shock     20g, 166in/sec, Square Wave       Vibration     Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation     12     mHrs	Storage Temperature			-55		+125	°C	
Operating Humidity     30     95     %       Temperature Drift     Tb=-40 to 100°C     0.002     0.02     %/°C       Shock     20g, 166in/sec, Square Wave       Vibration     Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation     12     mHrs	Storage Humidity		10		95	%		
Temperature Drift     Tb=-40 to 100°C     0.002     0.002     0.002     %C       Shock     20g, 166in/sec, Square Wave       Vibration     Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation     12     mHrs	Operating Humidity		30		95	%		
Shock     20g, 166in/sec, Square Wave       Vibration     Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation       MTBE     Th=40% Lo=80% To max Vi=24V	Temperature Drift	Tb=-40 to 100°C		0.002	0.02	%/°C		
Sine Wave, 10-55Hz (sweep for 1 min.), Amplitude 0.825mm constant (max 0.5g) X,Y,Z Hour, @no operation     200, 1001//300, 004//200       MTBE     Th=40°C lo=80% To max Vi=24V     1.2	Shock			20g 166in/sec Square Wave				
MTBE The 40% (in = 80% To mar Vi= 24V 12 mHrs	Vibration	Sine Wave, 10-55Hz (sweep for 1 mi	n.), Amplitude 0.825mm	20	9, 10011/300	, equale W	4.0	
	MTBF	Tb=40°C, lo=80% To, max, Vi=24V		1.2		mHrs		



SPECIFICATIONS						
All specifications a	are based on 25°C, Nom We reserve the right to c	inal Input Voltage, and Maximum Outpu hange specifications based on technolo	t Current unless oth gical advances.	nerwise note	ed.	
SPECIFICATION		TEST CONDITIONS	Min	Тур	Max	Unit
GENERAL SPECIFICATIONS						
Efficiency	Vin=24V, Vo=28V, Io=80%Io, max, Th=25°C			91		%
Isolation	60 Seconds	Input to Output		1500		VDC
		Input to Case		1500		
		Output to Case		500		
Input to Output Capacitance		· · · · ·		2000		pF
Isolation Resistance	Tb=25°C, 70%RH, Ot	Itput to Baseplate=500VDC	100			MΩ
PHYSICAL SPECIFICATIONS						
Weight			7.94oz (225g)			
Dimensions (L x W x H)			4.59in x 2.4in x 0.5in (116.8mm x 61mm x 12.7mm)			
Baseplate Material			Metal			

Rev B

NOTES

- 1. Bandwidth 5Hz-20MHz with filter 0.1uF MLCC series 100 ohm Min. Output capacitor:  $220uF^{*2}$ , Tc  $\geq$  -20°C,  $220uF^{*4}$ , Tc  $\leq$  -20°C
- 2. Temperature measure should be taken from baseplate (Tb). Refer to Baseplate Measure Point drawing for location.

\*Due to advances in technology, specifications subject to change without notice.

# DERATING CURVES -





## MECHANICAL DRAWINGS



### TRIM CIRCUIT -



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## 2. Output Voltage Adjustment by Applying External DC Voltage

Output voltage can be adjusted either by applying an external voltage or external resistor at the trim terminal. The relationship between the trim voltage and output voltage is shown in Fig. 2.

Rev B





### BASEPLATE MEASURE POINT -



#### COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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