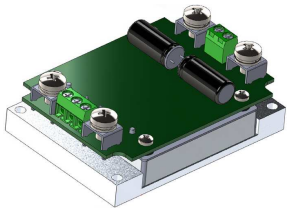
24V & 48V Input Models

Size: 2.40 x 2.28 x 0.50 inches

110V Input Models

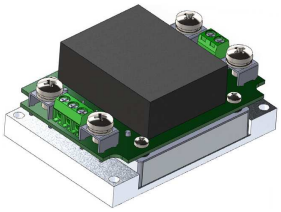
Size: 2.40 x 2.28 x 0.50 inches

Terminal Block Models ("T" suffix)



Size: 3.35 x 2.40 x 1.27 inches

Terminal Block w/ EMC Filter ("TF" suffix)



Size: 3.35 x 2.40 x 1.47 inches

Terminal Block w/ EMC Filter ("TF1" suffix)

Size: 3.35 x 2.40 x 1.53 inches

OPTIONS

- Pin Length
- Heatsinks
- Thru-Hole Inserts
- Negative Logic Remote On/Off
- Terminal Block
- Terminal Block with Aluminum Base-plate and EMC Filter
- Terminal Block with Anodized Aluminum Base-plate and EMC Filter, Can be Connected to PE

APPLICATIONS

- Railway Systems
- Wireless Networks
- Telecom / Datacom
- Industry Control Systems
- Distributed Power Architectures
- Semiconductor Equipment
- Military Applications

FEATURES

- Railway Applications
- Soft-Start
- 4:1 Ultra Wide Input Voltage Ranges
- 82.5~100.8 Watts Output Power
- High Efficiency up to 93%
- Under Voltage Lockout
- No Minimum Load Requirements
- Adjustable Output Voltage
- Remote On/Off Control
- Industry Standard Half-Brick Footprint
- Single Outputs Ranging from 3.3VDC to 48VDC
- 2250VDC Basic Insulation for 24VDC & 48VDC Nominal Input Models
- 3000VAC Reinforced Insulation for 110VDC Nominal Input Models
- Threaded Inserts and Thru-Hole Inserts Available
- Short Circuit, Over Voltage, Over Current, and Over Temp. Protection
- Six-Sided Shielding for 24VDC & 48VDC Input Models
- Compliant to RoHS EU Directive 2011/65/EU
- CE Mark Meets 2006/95/EC, 2011/95/EC, and 2004/108/EC
- UL60950-1, EN60950-1, IEC60950-1, & EN50155 Safety Approvals
- Several Mechanical Options Available

DESCRIPTION

The DCHBW100 series of DC/DC power converters provides up to 100.8 Watts of output power in an industry standard half-brick package and footprint. This series consists of single output models ranging from 3.3VDC to 48VDC with 4:1 ultra wide input voltage ranges. Some features include high efficiency up to 93%, adjustable output voltage, and remote on/off control. These converters also have short circuit, over voltage, over current, and over temperature protection. The DCHBW100 series is RoHS compliant and has UL60950-1, EN60950-1, IEC60950-1, and EN50155 safety approvals. Several different options are available for this series including negative remote on/off control, terminal block, pin length, heatsinks, and thru-hole inserts.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise	No Load Input Current	Output Power	Maximum Capacitive Load	Efficiency
			Min Load	Max Load					
DCHBW100-24S3.3	24 VDC (9 - 36 VDC)	3.3 VDC	0mA	25A	75mVp-p	20mA	82.5W	75,700µF	91%
DCHBW100-24S05		5 VDC	0mA	20A	75mVp-p	25mA	100W	40,000µF	93%
DCHBW100-24S12	24 VDC (8.5 - 36 VDC)	12 VDC	0mA	8.4A	100mVp-p	25mA	100.8W	7000µF	90%
DCHBW100-24S15		15 VDC	0mA	6.7A	100mVp-p	25mA	100.5W	4460µF	91%
DCHBW100-24S24		24 VDC	0mA	4.2A	200mVp-p	25mA	100.8W	1750µF	90%
DCHBW100-24S28		28 VDC	0mA	3.6A	200mVp-p	25mA	100.8W	1280µF	90%
DCHBW100-24S48		48 VDC	0mA	2.1A	300mVp-p	35mA	100.8W	430µF	90%
DCHBW100-48S3.3	48 VDC (16.5 - 75 VDC)	3.3 VDC	0mA	25A	75mVp-p	15mA	82.5W	75,700µF	91%
DCHBW100-48S05		5 VDC	0mA	20A	75mVp-p	15mA	100W	40,000µF	93%
DCHBW100-48S12		12 VDC	0mA	8.4A	100mVp-p	20mA	100.8W	7000µF	90%
DCHBW100-48S15		15 VDC	0mA	6.7A	100mVp-p	20mA	100.5W	4460µF	91%
DCHBW100-48S24		24 VDC	0mA	4.2A	200mVp-p	20mA	100.8W	1750µF	90%
DCHBW100-48S28		28 VDC	0mA	3.6A	200mVp-p	20mA	100.8W	1280µF	92%
DCHBW100-48S48		48 VDC	0mA	2.1A	300mVp-p	25mA	100.8W	430µF	91%
DCHBW100-110S3.3	110 VDC (43 - 160 VDC)	3.3 VDC	0mA	25A	75mVp-p	10mA	82.5W	75,700µF	87%
DCHBW100-110S05		5 VDC	0mA	20A	75mVp-p	10mA	100W	40,000µF	90%
DCHBW100-110S12		12 VDC	0mA	8.4A	100mVp-p	10mA	100.8W	7000µF	90%
DCHBW100-110S15		15 VDC	0mA	6.7A	100mVp-p	10mA	100.5W	4460µF	90%
DCHBW100-110S24		24 VDC	0mA	4.2A	200mVp-p	10mA	100.8W	1750µF	90%
DCHBW100-110S28		28 VDC	0mA	3.6A	200mVp-p	10mA	100.8W	1280µF	90%
DCHBW100-110S48		48 VDC	0mA	2.1A	300mVp-p	10mA	100.8W	430µF	91%

SPECIFICATIONS: DCHBW100 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS						
Input Voltage Range	24VDC nominal input models	3.3Vout & 5Vout	9	24	36	VDC
		Others	8.5	24	36	
	48VDC nominal input models		16.5	48	75	
	110VDC nominal input models		43	110	160	
Start-Up Voltage	24VDC nominal input models				9	VDC
	48VDC nominal input models				18	
	110VDC nominal input models				43	
Shutdown Voltage	24VDC nominal input models		7.3		8.1	VDC
	48VDC nominal input models		15.5		16.3	
	110VDC nominal input models		33.0		36.0	
Input Surge Voltage (1sec, max.)	24VDC nominal input models				50	VDC
	48VDC nominal input models				100	
	110VDC nominal input models				185	
Input Current	No Load		See Table			
Input Filter (See Note 1)			Pi type			
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Accuracy			-1.0		+1.0	%
Line Regulation	Low line to high line at full load		-0.1		+0.1	%
Load Regulation	No load to full load		-0.1		+0.1	%
Voltage Adjustability (See Note 6)	Maximum output deviation is inclusive of remote sense		-20		+10	%
Remote Sense (See Note 2)	% of nominal Vout				10	%
Output Power			See Table			
Output Current			See Table			
Minimum Load			0			%
Maximum Capacitive Load	Minimum input and constant resistive load		See Table			
Ripple & Noise (20MHz bandwidth)	With a 1µF/25V X7R MLCC and a 22µF/25V POS-CAP	3.3Vout & 5Vout		75		mVp-p
	With a 1µF/25V X7R MLCC and a 22µF/25V POS-CAP	12Vout & 15Vout		100		
	With a 4.7µF/50V X7R MLCC	24Vout & 28Vout		200		
	With a 2.2µF/100V X7R MLCC	48Vout		300		
Transient Response Recovery Time	25% load step change			200	250	µs
Start-Up Time	Constant resistive load	Power Up		75		ms
		Remote On/Off		75		
Temperature Coefficient			-0.02		+0.02	%/°C
REMOTE ON/OFF CONTROL						
Positive Logic (standard)	Referenced to –Input pin	DC/DC ON	Open or 3 ~ 12VDC			
		DC/DC OFF	Short or 0 ~ 1.2VDC			
Negative Logic (optional)	Referenced to –Input pin	DC/DC ON	Open or 3 ~ 12VDC			
		DC/DC OFF	Short or 0 ~ 1.2VDC			
Input Current of CTRL Pin	Nominal Vin		-0.5		1	mA
Remote OFF Input Current	Nominal Vin			3		mA
PROTECTION						
Short Circuit Protection			Continuous, automatic recovery			
Over Load Protection	% of rated Iout; hiccup mode	24VDC & 48VDC Input Models	120		150	%
		110VDC Input Models		150		
Over Voltage Protection	% of nominal Vout; hiccup mode		115		130	%
Over Temperature Protection				+115		°C
ENVIRONMENTAL SPECIFICATIONS						
Operating Case Temperature	Base-plate		-40		+115	°C
Storage Temperature	Terminal block types		-40		+105	°C
	Others		-55		+125	
Thermal Impedance (See Note 3)	Vertical direction by natural convection (20LFM) Module without assembly options			6.7		°C/W
	0.24" height heatsink			5.4		
	0.45" height heatsink			4.7		
Relative Humidity			5		95	% RH
Thermal Shock			MIL-STD-810F			
Shock			EN61373, MIL-STD-810F			
Vibration			EN61373, MIL-STD-810F			
MTBF	MIL-HDBK-217F Ta=25°C, full load (G/B, controlled environment)		408,700			hours

SPECIFICATIONS: DCHBW100 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
GENERAL SPECIFICATIONS						
Efficiency	Nominal input voltage and full load		See Table			
Switching Frequency	24VDC & 48VDC nominal input models		225	250	275	kHz
	110VDC nominal input models		270	300	330	kHz
Isolation Voltage	1 minute (reinforced insulation) 110VDC nominal input models	Input to Output	3000			VAC
		Input to Case	1500			VAC
		Output to Case	1500			VAC
	1 minute (basic insulation) 24VDC & 48VDC nominal input models	Input to Output	2250			VDC
		Input to Case	1600			VDC
		Output to Case	1600			VDC
Isolation Resistance	500VDC		1			GΩ
Isolation Capacitance					2500	pF
PHYSICAL SPECIFICATIONS						
Weight	Standard models		3.70oz (105g)			
	"T" suffix models		8.29oz (235g)			
	"TF" suffix models		9.88oz (280g)			
	"TF1" suffix models		10.12oz (287g)			
Dimensions (L x W x H)	Standard models		2.40 x 2.28 x 0.50 inches (61.0 x 57.9 x 12.7 mm)			
	"T" suffix models		3.35 x 2.40 x 1.27 inches (85.0 x 61.0 x 32.3 mm)			
	"TF" suffix models		3.35 x 2.40 x 1.47 inches (85.0 x 61.0 x 37.3 mm)			
	"TF1" suffix models		3.35 x 2.40 x 1.53 inches (85.0 x 61.0 x 38.8 mm)			
Case Material	24VDC & 48VDC nominal input models		Metal			
	110VDC nominal input models		Aluminum base-plate with plastic case			
Base Material	24VDC & 48VDC nominal input models		FR4 PCB			
Potting Material			Silicon (UL94-V0)			
Shielding	24VDC & 48VDC nominal input models		Six-sided			
SAFETY & EMC CHARACTERISTICS						
Safety Approvals			IEC60950-1, UL60950-1, EN60950-1, EN50155			
EMI (See Note 4)	EN55011, EN55022		Class A Class B			
ESD	EN61000-4-2	Air ±8kV and Contact ±6kV	Perf. Criteria A			
Radiated Immunity	EN61000-4-3	20 V/m	Perf. Criteria A			
Fast Transient (See Note 5)	EN61000-4-4	±2kV	Perf. Criteria A			
Surge (See Note 5)	EN61000-4-5	EN55024 ±2kV and EN50155 ±2kV	Perf. Criteria A			
Conducted Immunity	EN61000-4-6	10 Vrms	Perf. Criteria A			

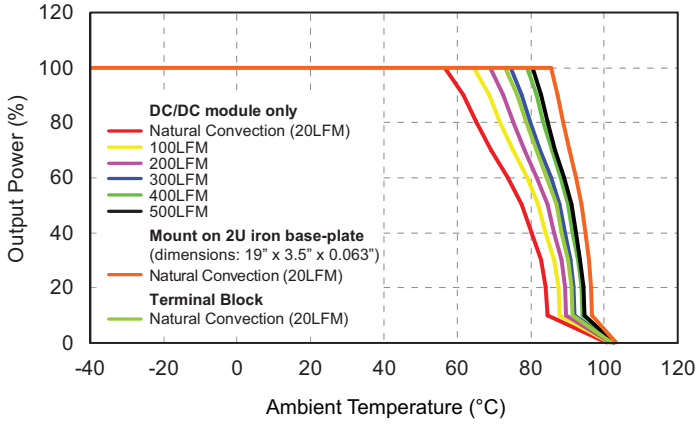
NOTES

1. Input Source Impedance: These converters will operate under all listed specifications without external components assuming that the source voltage has very low impedance and reasonable input voltage regulation. Highly inductive source impedances can affect the stability of the converter. Since real world voltage sources have finite impedance, performance can be improved by adding an external filter capacitor.
   - For 24VDC & 48VDC nominal input models, we recommend Nippon chemi-con KY series, 100µF/100V.
   - For 110VDC nominal input models, we recommend Ruby-con BXF series, 68µF/200V.
2. Maximum output deviation is +10% inclusive of remote sense and trim. If remote sense is not being used the +SENSE should be connected to its corresponding +OUTPUT and likewise the -SENSE should be connected to its corresponding –OUTPUT.
3. (1) Thermal test conditions for vertical direction are by natural convection (20LFM).
   (2) The iron base-plate dimensions are 19" x 3.5" x 0.063" (the height is EIA standard 2U).
   (3) Heat sink is optional. See the "Model Number Setup" table on page 8 for suffix options.
4. The DCHBW100 standard models (without assembly options) can only meet EN55011, EN55022 Class A or Class B with external components added.
5. An external input filter capacitor is required if the module has to meet EN61000-4-4, EN61000-4-5. For 24VDC & 48VDC nominal input models, we recommend connecting two aluminum electrolytic capacitors (Nippon chemi-con KY series, 220µF/100V) in parallel. For 110VDC nominal input models, we recommend connecting three aluminum electrolytic capacitors (Nippon chemi-con KXJ series, 150µF/200V) in parallel.
6. Output voltage is adjustable for 10% trim up or -20% trim down of nominal output voltage by connecting a single resistor between TRIM and +SENSE pins for trim up or between TRIM and -SENSE pins for trim down. To calculate the value of the resistor R_U and R_D for a particular output voltage see page 6.
7. CASE GROUNDING: EMI can be reduced when you connect the four screw bolts to the shield plane.
8. This series comes with several different options: negative remote on/off control, heatsinks, case pin, sync pin, pin length, terminal block, and thru-hole inserts. See the "Model Number Setup" table on page 8 for more ordering information.

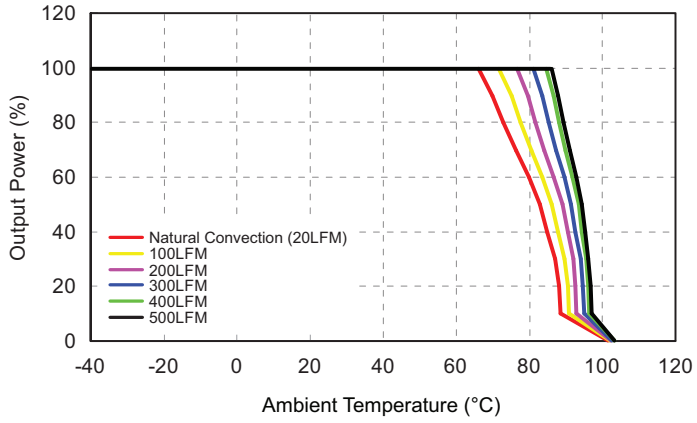
CAUTION: This power converter is not internally fused. An input line fuse must always be used.

DERATING CURVES

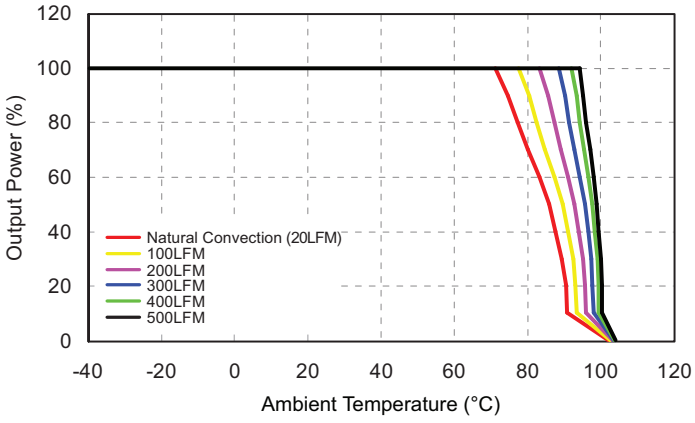
DCHBW100-48S05 Derating Curve (Note 3)



DCHBW100-48S05 Derating Curve with 0.24" Height Heatsink (Note 3)

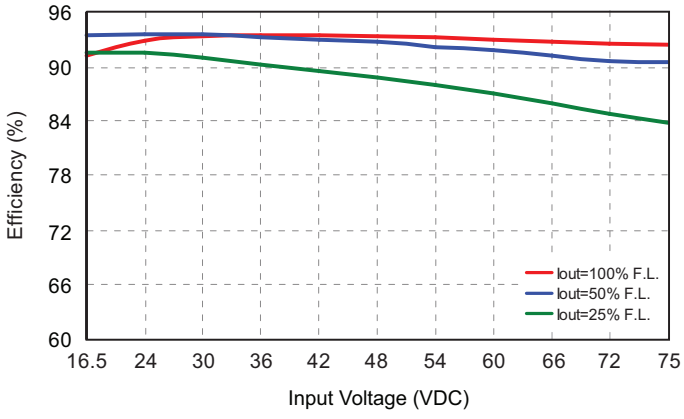


DCHBW100-48S05 Derating Curve with 0.45" Height Heatsink (Note 3)

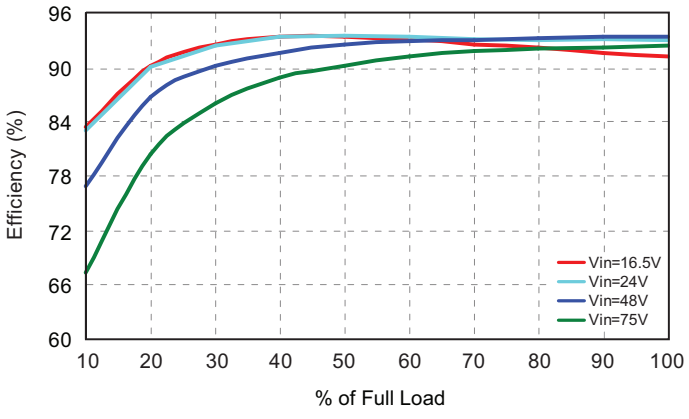


EFFICIENCY GRAPHS

DCHBW100-48S05 Efficiency vs Input Voltage

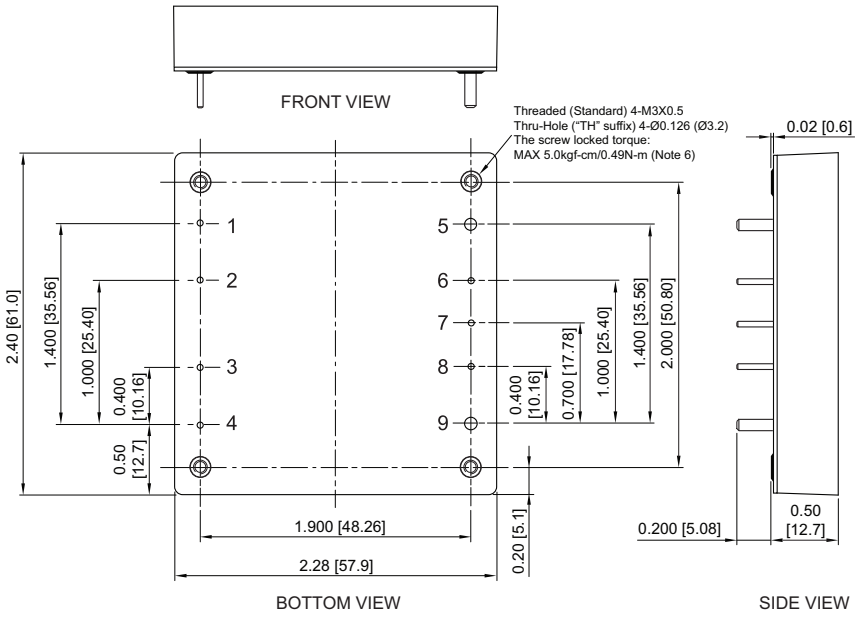


DCHBW100-48S05 Efficiency vs Output Load



MECHANICAL DRAWINGS

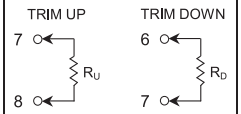
METAL CASE (24VDC & 48VDC Nominal Input Models)



PIN CONNECTIONS		
Pin	Define	Diameter
1	- INPUT	0.04 in.
2	CASE	0.04 in.
3	CTRL	0.04 in.
4	+ INPUT	0.04 in.
5	- OUTPUT	0.08 in.
6	- SENSE	0.04 in.
7	TRIM	0.04 in.
8	+ SENSE	0.04 in.
9	+ OUTPUT	0.08 in.

EXTERNAL OUTPUT TRIMMING

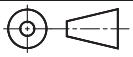
Output can be externally trimmed by using the method shown below.



PRODUCT OPTIONS			SUFFIX
Negative Remote On/Off Logic	0.200" pin length		R
	0.145" pin length		RL
Positive Remote On/Off Logic	0.200" pin length		None
	0.145" pin length		S
Thru-Hole Inserts	Ø0.126 thru-hole (no thread) inserts		TH [1]
Heatsinks	H = 0.45" Vertical Fin	P/N: 7G-0021A-F	H
	H = 0.24" Horizontal Fin	P/N: 7G-0022A-F	H1
	H = 0.24" Vertical Fin	P/N: 7G-0023A-F	H2
	H = 0.45" Horizontal Fin	P/N: 7G-0024A-F	H3
Terminal Block	Terminal Block		T [2][3]
	Terminal Block with Aluminum Base-plate and EMC Filter		TF [2][3][4]
	Terminal block with anodized aluminum base-plate and EMC filter, can be connected to protective earth (PE)		TF1 [2][3][4]

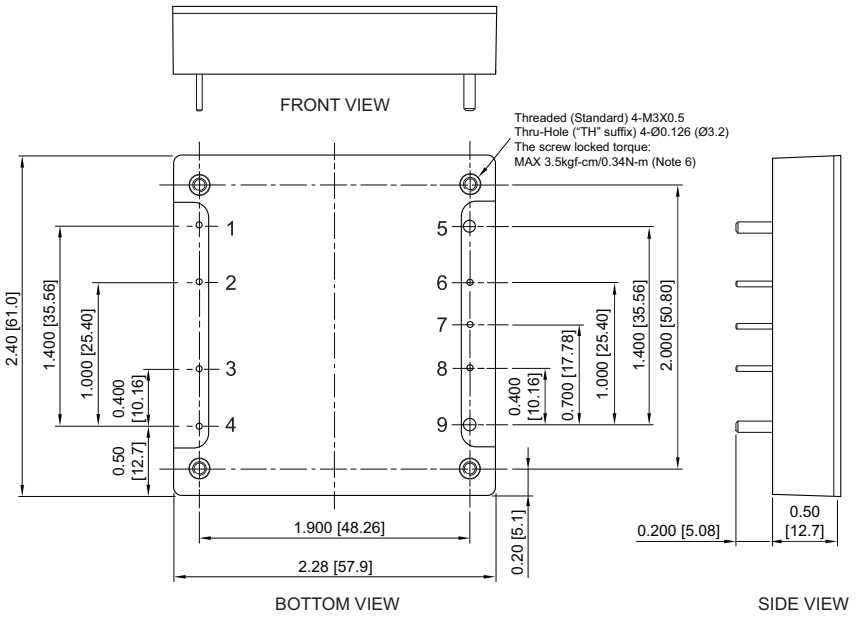
NOTES
1. Models with thru-hole inserts cannot be equipped with a heatsink.
2. Terminal block models (suffix "T", "TF", and "TF1") cannot be equipped with a heatsink.
3. Only 0.200" pin length is available with terminal block options.
4. Models with EMC filter (suffix "TF" and "TF1") meet EN55011, EN55022 Class A.

UNLESS OTHERWISE SPECIFIED
ALL DIMENSONS ARE IN INCHES
[XX] ARE IN MILLIMETERS
APPLIED TOLERANCES:
ANGLES= ±1°
.XX=±.02[0.5] .XXX=±.010[0.25]
DO NOT SCALE DRAWING
INTERPRET DIMENSION AND TOLERANCE PER ASME Y14.5M - 1994
THIRD ANGLE PROJECTION



NOTES:
1. UNIT: INCHES [MM]
2. TOLERANCE: X.XX±0.02 [X.X±0.5]
   X.XXX±0.010 [X.XX±0.25]
3. PIN PITCH TOLERANCE: ±0.01 [±0.25]
4. PIN DIMENSION TOLERANCE: ±0.004 [±0.1]
5. MOUNTING SCREWS SHOULD ALWAYS BE USED
6. CASE GROUNDING: EMI CAN BE REDUCED WHEN THE FOUR SCREW BOLTS ARE CONNECTED TO THE SHIELD PLANE
7. UNIT COMES WITH EITHER M3x0.5 THREADED-THRU INSERTS OR FOR Ø.126 THRU-HOLE ADD THE "TH" SUFFIX TO MODEL NUMBER
8. FOR HEATSINK SEE THE "PRODUCT OPTIONS" TABLE FOR DIFFERENT OPTIONS
   NOTE: THRU-HOLE MODELS CANNOT BE EQUIPPED WITH A HEATSINK
9. FOR TERMINAL BLOCK OPTIONS SEE PAGE 6
10. DIMENSIONS ARE FOR REFERENCE ONLY

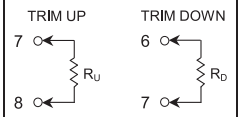
PLASTIC CASE (110VDC Nominal Input Models)



PIN CONNECTIONS		
Pin	Define	Diameter
1	- INPUT	0.04 in.
2	CASE	0.04 in.
3	CTRL	0.04 in.
4	+ INPUT	0.04 in.
5	- OUTPUT	0.08 in.
6	- SENSE	0.04 in.
7	TRIM	0.04 in.
8	+ SENSE	0.04 in.
9	+ OUTPUT	0.08 in.

EXTERNAL OUTPUT TRIMMING

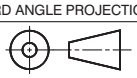
Output can be externally trimmed by using the method shown below.



PRODUCT OPTIONS			SUFFIX
Negative Remote On/Off Logic	0.200" pin length		R
	0.145" pin length		RL
Positive Remote On/Off Logic	0.200" pin length		None
	0.145" pin length		S
Thru-Hole Inserts	Ø0.126 thru-hole (no thread) inserts		TH [1]
Heatsinks	H = 0.45" Vertical Fin	P/N: 7G-0021A-F	H
	H = 0.24" Horizontal Fin	P/N: 7G-0022A-F	H1
	H = 0.24" Vertical Fin	P/N: 7G-0023A-F	H2
	H = 0.45" Horizontal Fin	P/N: 7G-0024A-F	H3
Terminal Block	Terminal Block		T [2][3]
	Terminal Block with Aluminum Base-plate and EMC Filter		TF [2][3][4]
	Terminal block with anodized aluminum base-plate and EMC filter, can be connected to protective earth (PE)		TF1 [2][3][4]

NOTES
1. Models with thru-hole inserts cannot be equipped with a heatsink.
2. Terminal block models (suffix "T", "TF", and "TF1") cannot be equipped with a heatsink.
3. Only 0.200" pin length is available with terminal block options.
4. Models with EMC filter (suffix "TF" and "TF1") meet EN55011, EN55022 Class A.

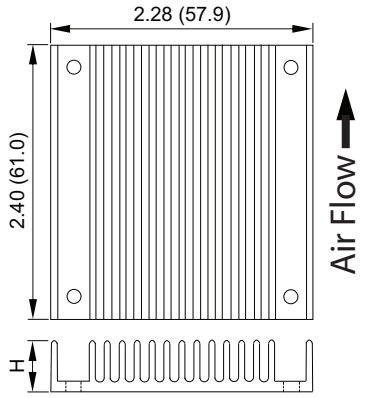
UNLESS OTHERWISE SPECIFIED
ALL DIMENSONS ARE IN INCHES
[XX] ARE IN MILLIMETERS
APPLIED TOLERANCES:
ANGLES= ±1°
.XX=±.02[0.5] .XXX=±.010[0.25]
DO NOT SCALE DRAWING
INTERPRET DIMENSION AND TOLERANCE PER ASME Y14.5M - 1994
THIRD ANGLE PROJECTION



NOTES:
1. UNIT: INCHES [MM]
2. TOLERANCE: X.XX±0.02 [X.X±0.5]
   X.XXX±0.010 [X.XX±0.25]
3. PIN PITCH TOLERANCE: ±0.01 [±0.25]
4. PIN DIMENSION TOLERANCE: ±0.004 [±0.1]
5. MOUNTING SCREWS SHOULD ALWAYS BE USED
6. CASE GROUNDING: EMI CAN BE REDUCED WHEN THE FOUR SCREW BOLTS ARE CONNECTED TO THE SHIELD PLANE
7. UNIT COMES WITH EITHER M3x0.5 THREADED-THRU INSERTS OR FOR Ø.126 THRU-HOLE ADD THE "TH" SUFFIX TO MODEL NUMBER
8. FOR HEATSINK SEE THE "PRODUCT OPTIONS" TABLE FOR DIFFERENT OPTIONS
   NOTE: THRU-HOLE MODELS CANNOT BE EQUIPPED WITH A HEATSINK
9. FOR TERMINAL BLOCK OPTIONS SEE PAGE 6
10. DIMENSIONS ARE FOR REFERENCE ONLY

HEATSINK OPTIONS

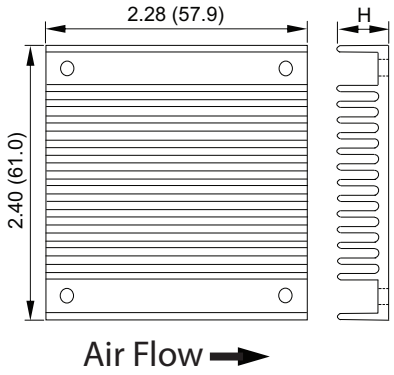
Vertical Fin Orientation (Suffixes "H", "H2")



Heatsink Options
H = 0.24" (H2 suffix)
H = 0.45" (H suffix)

NOTES
1. Unit: inches (mm)
2. Tolerance: x.xx±0.02 (x.x±0.5)
x.xxx±0.01 (x.xx±0.25)
3. All dimensions are for reference only

Horizontal Fin Orientation (Suffixes "H1", "H3")

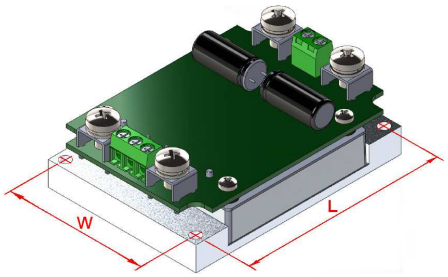


Heatsink Options
H = 0.24" (H2 suffix)
H = 0.45" (H suffix)

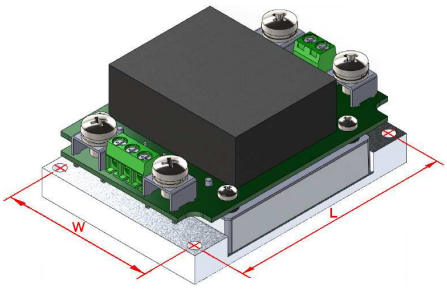
NOTES
1. Unit: inches (mm)
2. Tolerance: x.xx±0.02 (x.x±0.5)
x.xxx±0.01 (x.xx±0.25)
3. All dimensions are for reference only

TERMINAL BLOCK OPTIONS

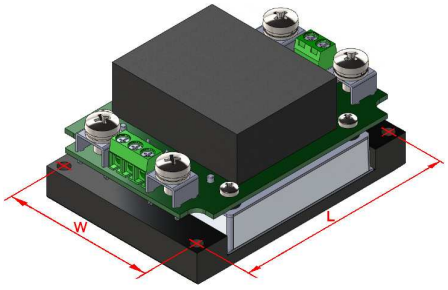
Terminal Block with Al Base-plate (Suffix T)



Terminal Block with Al Base-plate and EMC Filter (Suffix TF)



Terminal Block with Anodized Al Base-plate and EMC Filter (Suffix TF1)



Terminal Block Type	T	TF	TF1
Weight	8.29oz (235g)	9.88oz (280g)	10.12oz (287g)
Dimensions	3.35 x 2.40 x 1.27 inches (85.0 x 61.0 x 32.3 mm)	3.35 x 2.40 x 1.47 inches (85.0 x 61.0 x 37.3 mm)	3.35 x 2.40 x 1.53 inches (85.0 x 61.0 x 38.8 mm)
Thru-Hole (WxL)	2.126 x 3.071 inches (54.00 x 78.00 mm), 4-Ø0.17 inches (Ø4.3mm)		

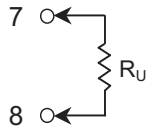
NOTES
1. Terminal block models (suffix "T", "TF", and "TF1") cannot be equipped with a heatsink.
2. Only 0.200" pin length is available with terminal block options.
3. Models with EMC filter (suffix "TF" and "TF1") meet EN55011, EN55022 Class A.

OUTPUT VOLTAGE ADJUSTMENT

Output is adjustable for 10% trim up or -20% trim down of nominal output voltage by connecting an external resistor between the TRIM pin and either the +SENSE or -SENSE pins. With an external resistor between the TRIM and -SENSE pin, the output voltage set decreases. With an external between the TRIM and -SENSE pin, the output voltage set point increases. Maximum output deviation is +10% inclusive of remote sense. The value of the external resistor can be obtained by the equations below. The external TRIM resistor needs to be at least 1/8W resistor.

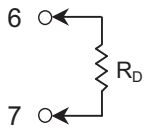
Trim Up

$$R_U = \left(\frac{V_{OUT}(100+\Delta\%)}{1.225\Delta\%} - \frac{(100+2\Delta\%)}{\Delta\%} \right) K\Omega$$



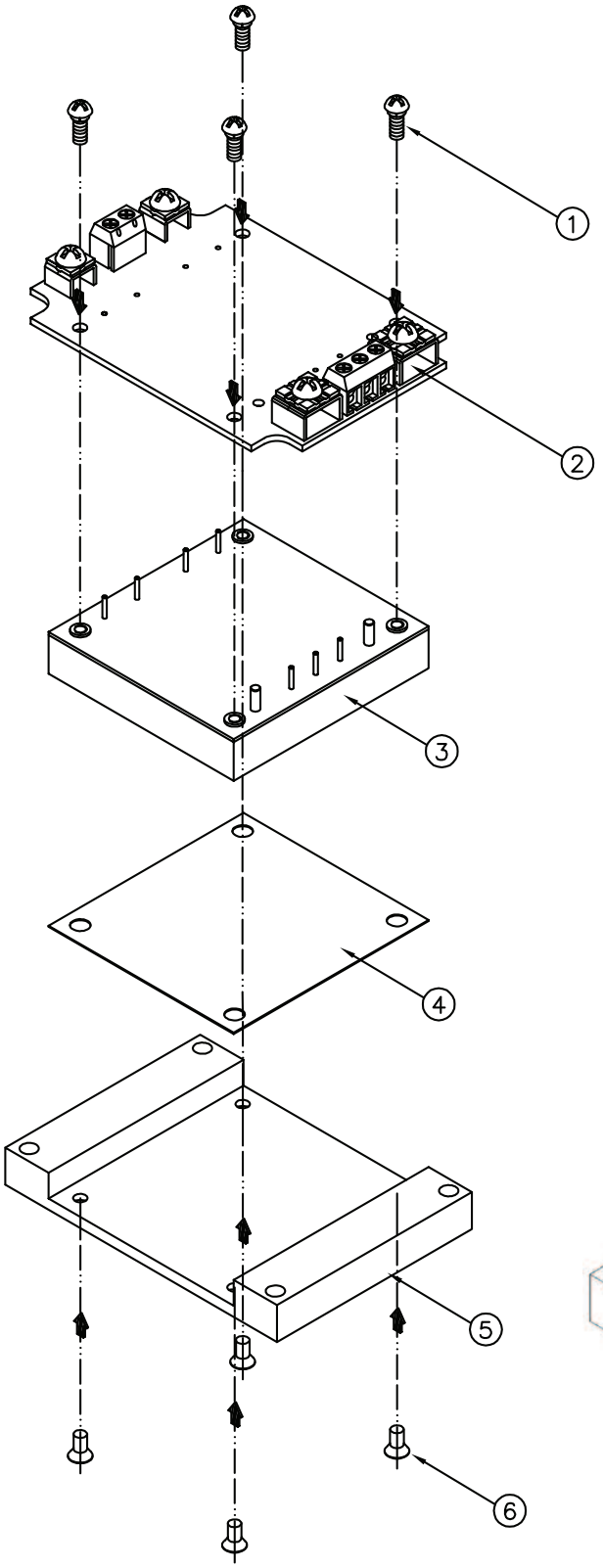
Trim Down

$$R_D = \left(\frac{100}{\Delta\%} - 2 \right) K\Omega$$



APPLICATION NOTES

Assembly



① Round-Head screw and spring washer (see note)

② Terminal block

③ DC/DC converter

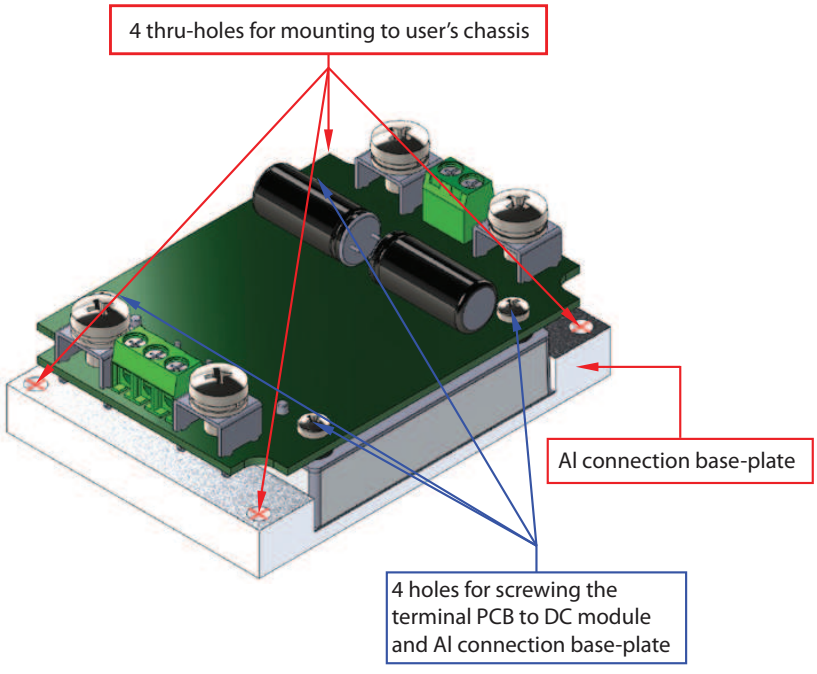
④ Thermal pad

⑤ Aluminum connection base-plate

⑥ Flat-head screw M3X0.5-6L (see note)

Note: Information for Assemble Screw

1. Tools: Automatic screwdriver
2. Torque: 4~5 kgf.cm
3. Assembly Sequence of Screw
   Screw in opposite angles first, then fasten all four screws



MODEL NUMBER SETUP

DCHBW	100	-	24	S	12	R
Series Name	Output Power		Input Voltage	Output Quantity	Ouptut Voltage	Remote On/Off & Pin Length
	100: 100 Watts		**24:** 8.5-36 VDC 9-36 VDC **48:** 16.5-75 VDC **110:** 43-160 VDC	**S:** single	**3.3:** 3.3 VDC **05:** 5 VDC **12:** 12 VDC **15:** 15 VDC **24:** 24 VDC **28:** 28 VDC **48:** 48 VDC	**None:** positive Logic, 0.200" pin length **S:** positive Logic, 0.145" pin length **R:** negative Logic, 0.200" pin length **RL:** negative Logic, 0.145" pin length

TH	H	TF
Thru-Hole Inserts [1]	Heatsink [1] [2]	Terminal Block [2] [3] [4]
None: threaded inserts **TH:** Ø0.126 thru-hole inserts [1]	**None:** no heatsink **H:** 0.45" vertical **H1:** 0.24" horizontal **H2:** 0.24" vertical **H3:** 0.45" horizontal	**None:** no terminal block **T:** Terminal block with aluminum base-plate **TF:** Terminal block with aluminum base-plate and EMC filter **TF1:** Terminal block with anodized aluminum base-plate and EMC filter, can be connected to Protective Earth (PE)

NOTES
1. Models with thru-hole inserts cannot be equipped with a heatsink.
2. Terminal block models (suffix "T", "TF", and "TF1") cannot be equipped with a heatsink.
3. Only 0.200" pin length is available with terminal block options.
4. Models with EMC filter (suffix "TF" and "TF1") meet EN55011, EN55022 Class A.

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 ISO9001-2008 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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