15 WATT

Single And Dual Output

DIN Rail, Wide Input
DC/DC Converters

FEATURES

- DIN Rail DC/DC Converters
- 4:1 Input Range
- 15 Watts Output Power
- Single and Dual Output
- EN55022 Class B
- Internal input fuse protection
- Internal input reverse polarity protection
- Internal input in-rush current limit circuit
- Overload and short circuit protection
- Over voltage protection
- RoHS EU Directive 2002/95/EC
- Reliable snap-on for DIN Rail TS-35/7.5 OR TS-35/15
- I/O-isolation 1600 Vdc
- Case protection meets IP 20 (IEC60529)
- Output DC-OK indicator

DMWB15 Series

SPECIFICATIONS

INPUT

Voltage Range	24Vdc nominal input...9.5-36Vdc
	48Vdc nominal input....18-75Vdc
Input Surge Voltage	24Vdc input...50Vdc 100ms. max
	48Vdc input...100Vdc 100ms. max
Input fuse (slow blow)	24Vdc input...6A
	48Vdc input...4A
In-rush current	15A
Input reflected ripple current	10mA p-p
Start up time Nominal input and Power Up	100mS
	constant resistive load
Startup Voltage	24Vdc input...9.5Vdc
	48Vdc input...18Vdc
Shutdown Voltage	24Vdc input..7.5Vdc
	48Vdc input...15Vdc
Remote ON/OFF (Option) (Note 7)	
(Positive logic)	DC-DC ON.....Open or 3 V <Vr <12V
	DC-DC OFF...Short or 0 V < Vr < 1.2V
(Negative Logic)	DC-DC ON.....Short or 0V < Vr < 1.2V
	DC-DC OFF.....Open or 3V <Vr <12V
Input current of Remote control pin...Nominal Input	-0.5mA. - +0.5mA.
Remote off state input current...Nominal input	2.5 mA.

OUTPUT

Output power			15 Watts Max.
Voltage accuracy	3.3 V Out.		±2.0%
	Others		±1.2%
Minimum Load			0%
Line Regulation	LL to HL at Full Load	Single	±0.2%
		Dual	±0.5%
Load Regulation	No load to Full Load	3.3V Out	±2.0%
	Others		±1.5%
Load Cross Regulation (Note 6)		Dual	±5%
Ripple and Noise	20mHZ Bandwith		See Table
Temperature Coefficient			±0.02%/° C Max.
Transient Response recovery time	25% load step change		250uS
Over voltage protection	3.3Vdc Output		3.9Vdc
Zener diode clamp	5Vdc Output		6.2Vdc
	12Vdc Output		15Vdc
	15Vdc Output		18Vdc
Output Indicator			Green LED
Over load protection	0% of FL at nominal input		150%
Short circuit protection			Hiccup, automatic recovery

See next page for additional specifications.

ADDITIONAL SPECIFICATIONS

GENERAL

Efficiency.....See Table
Isolation Voltage.....Input to Output.....1600Vdc, min. 1 minute
.....Input (Output) to Chassis.....1600Vdc, min. 1 minute
Isolation resistance.....10^9 ohms, min.
Isolation capacitance.....4000pF, max.
Switching frequency.....400KHz ±10%
Design meets safety standard.....IEC60950-1, UL60950-1, EN60950-1
Chassis material.....Aluminum
Dimensions.....4.92 x 2.27 x 0.97
.....(125.0 x 57.6 x 24.5 mm)
Weight.....147.5 g (5.19 oz.)
MTBF (Note 1).....BELLCORE TR-NWT-000332.....1.289 x 10^6 hrs.
.....MIL-HDBK-217F.....9.197 x 10^5 hrs.

ENVIRONMENTAL

Operating ambient temperature.....-40 to +85° C (without derating)
Storage temperature range.....-40 to +105° C
Thermal Shock.....MIL STD 810F
Vibration.....MIL STD 810F
Relative Humidity.....5% to 95% RH

EMC

EMI.....EN55022.....Class B
ESD.....EN61000 -4-2.....Air.....+/-8KV
.....Perf. Criteria A.....Contact.....+/-6KV

Radiated Immunity.....EN61000-4-3.....10 V/m.....Perf. Criteria A
Fast transient.....EN61000-4-4.....+/-2KV.....Perf. Criteria A
Surge.....EN61000-4-5.....+/-0.5KV.....Perf. Criteria A
Conducted immunity.....EN61000-4-6.....10Vr.m.s.....Perf. Criteria A

SELECTION GUIDE

Input Voltage Range	Output Voltage	Output Current		Output[4] Ripple & Noise	Input Current		Efficiency[4] (%)	Model Number	Case	Capacitor Load max.[5]
		Min. load	Full load		No load[3]	Full load[2]				
9.5 - 36 Vdc	3.3 Vdc	0mA	4500mA	50mVp-p	52mA	773mA	84	DMWB15-24S3.3	DR	14700µF
9.5 - 36 Vdc	5 Vdc	0mA	3000mA	50mVp-p	67mA	772mA	85	DMWB15-24S5	DR	7200µF
9.5 - 36 Vdc	5.1 Vdc	0mA	3000mA	50mVp-p	67mA	787mA	85	DMWB15-24S5.1	DR	7200µF
9.5 - 36 Vdc	12 Vdc	0mA	1250mA	75mVp-p	26mA	772mA	85	DMWB15-24S12	DR	1250µF
9.5 - 36 Vdc	15 Vdc	0mA	1000mA	75mVp-p	26mA	772mA	85	DMWB15-24S15	DR	800µF
18 - 75 Vdc	3.3 Vdc	0mA	4500mA	50mVp-p	37mA	387mA	84	DMWB15-48S3.3	DR	14700µF
18 - 75 Vdc	5 Vdc	0mA	3000mA	50mVp-p	38mA	381mA	86	DMWB15-48S5	DR	7200µF
18 - 75 Vdc	5.1 Vdc	0mA	3000mA	50mVp-p	38mA	389mA	86	DMWB15-48S5.1	DR	7200µF
18 - 75 Vdc	12 Vdc	0mA	1250mA	75mVp-p	18mA	386mA	85	DMWB15-48S12	DR	1250µF
18 - 75 Vdc	15 Vdc	0mA	1000mA	75mVp-p	18mA	386mA	85	DMWB15-48S15	DR	800µF
9.5 - 36 Vdc	± 5 Vdc	0mA	± 1500mA	75mVp-p	57mA	772mA	85	DMWB15-24-5	DR	± 3600µF
9.5 - 36 Vdc	± 12 Vdc	0mA	± 625mA	75mVp-p	35mA	762mA	86	DMWB15-24-12	DR	± 625µF
9.5 - 36 Vdc	± 15 Vdc	0mA	± 500mA	75mVp-p	35mA	762mA	86	DMWB15-24-15	DR	± 400µF
18 - 75 Vdc	± 5 Vdc	0mA	± 1500mA	75mVp-p	37mA	381mA	86	DMWB15-48-5	DR	± 3600µF
18 - 75 Vdc	± 12 Vdc	0mA	± 625mA	75mVp-p	20mA	381mA	86	DMWB15-48-12	DR	± 625µF
18 - 75 Vdc	± 15 Vdc	0mA	± 500mA	75mVp-p	20mA	381mA	86	DMWB15-48-15	DR	± 400µF

Note:

1. BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C.
   MIL-HDBK-217F Notice2 @Ta=25 °C, Full load(Ground, Benign, controlled environment)
2. Maximum value at nominal input and full load.
3. Typical value at nominal input and no load.
4. Typical value at nominal input and full load.
5. Test by minimum input and constant resistive load.
6. Cross regulation for dual output : asymmetrical load 25% / 100% FL
7. The ON/OFF control pin voltage is referenced to -INPUT .
   To order positive logic ON/OFF control add the suffix-P (Ex:DMWB15-48S5-P)
   To order negative logic ON/OFF control add the suffix-N (Ex:DMWB15-48S5-N)

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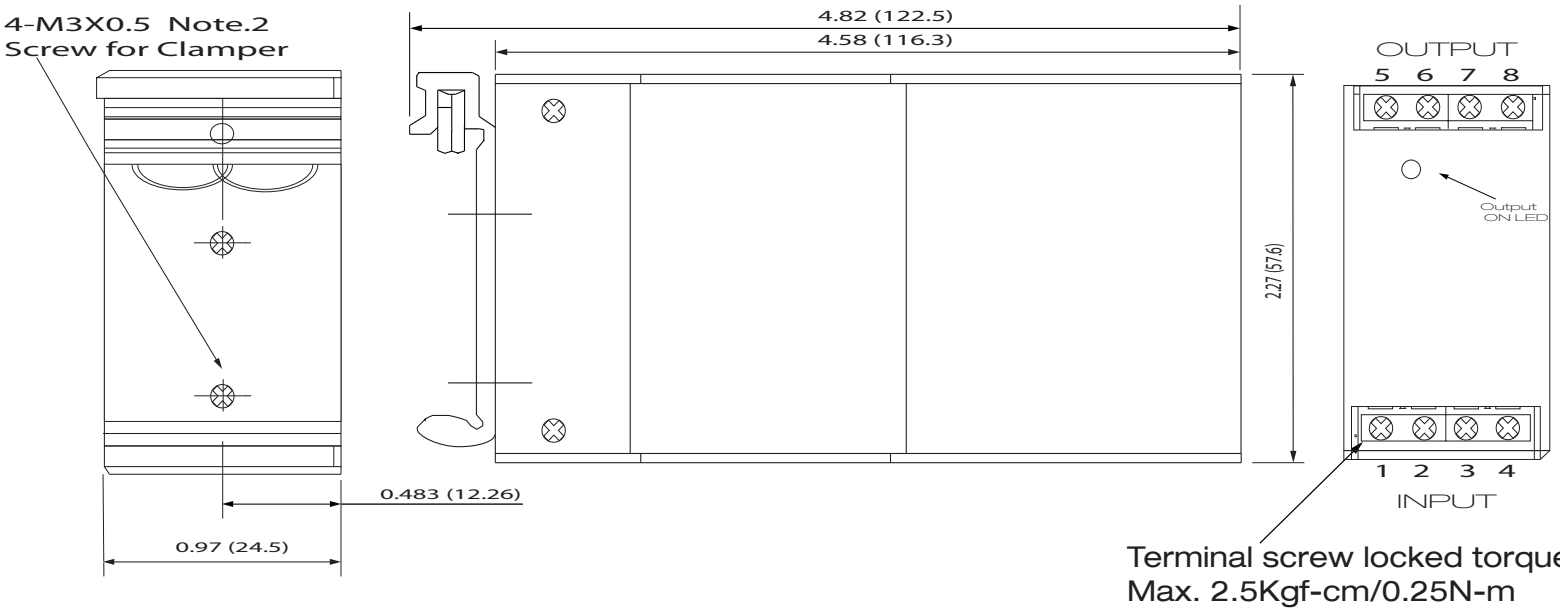

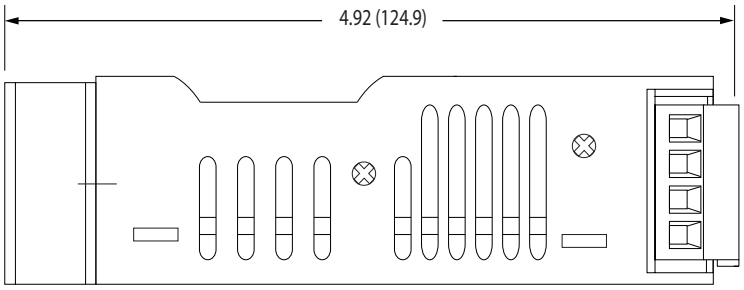

1. All dimensions in inches (mm)
   Tolerance: X.XX ±0.02 (X.X±0.5)
   X.XXX±0.01 (X.XX±0.25)
2. The screw locked torque: Max 0.49N.M (5.0Kgf.cm)

PRODUCT OPTIONS TABLE	
OPTION	SUFFIX
Positive logic Remote ON/OFF	-P
Negative logic Remote ON/OFF	-N

PIN CONNECTION		
PIN	SINGLE	DUAL
1	CTRL	CTRL
2	-INPUT	-INPUT
3	-INPUT	-INPUT
4	+INPUT	+INPUT
5	NC	NC
6	-OUTPUT	-OUTPUT
7	+OUTPUT	COMMON
8	NC	+OUTPUT