



30 WATT

Single And Dual Output

DIN Rail, Wide Input
DC/DC Converters



FEATURES

- DIN Rail DC/DC Converters
- 4:1 Input Range
- 30 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

DMWB30 Series

SPECIFICATIONS

INPUT

Voltage Range.....	24Vdc nominal input...10-40Vdc
	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.....	15mA p-p
Start up time.....	Nominal input and Power Up.....100mS
	Constant Resistive Load.....Remote On/Off.....10mS
Startup Voltage.....	24Vdc input...10Vdc
	48Vdc input...18Vdc
Shutdown Voltage.....	24Vdc input...8Vdc
	48Vdc input...16Vdc
Remote ON/OFF (Option) (Note 8)	
(Positive logic).....	Standard.....DC-DC ON.....Open or 3V < Vr < 12V
	DC-DC OFF...Short or 0V < Vr < 1.2V
(Negative Logic).....	Option.....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.....3 mA.

OUTPUT

Output power.....	30 Watts Max.
Voltage accuracy.....	3.3 V Out.....±1.5%
	Others.....±1%
Minimum Load.....	0%
Voltage adjustability (Note 6)	
	Single 28V Out.....-3% to +17%
	Single Others.....±10%
Line Regulation.....	LL to HL at Full Load.....Single.....±1.5%
Dual.....±1%
Load Regulation.....	No load to Full Load.....3.3V Out.....±2.0%
	Others.....±1.5%
Load Cross Regulation (Note 7).....	Dual.....±5%
Ripple and Noise.....	20mHZ Bandwidth.....See Table
Temperature Coefficient.....	±0.02%/°C Max.
Transient Response recovery time.....	25% load step change.....250uS
	3.3Vdc Output.....3.9Vdc
	5Vdc Output.....6.2Vdc
Over voltage protection.....	12Vdc Output.....15Vdc
Zener diode clamp.....	15Vdc Output.....18Vdc
	24Vdc Output.....30Vdc
	28Vdc Output.....36Vdc

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 details.



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 \pm 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.....170 g (5.98 oz.)
 MTBF (Note 1).....BELLCORE TR-NWT-000332..... 1.014×10^6 hrs.
MIL-HDBK-217F..... 3.455×10^6 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⁾				
10 - 40 Vdc	3.3 Vdc	0mA	6000mA	50mVp-p	52mA	1031mA	84	DMWB30-24S33	DR	19500 μ F
10 - 40 Vdc	5 Vdc	0mA	6000mA	50mVp-p	67mA	1563mA	84	DMWB30-24S5	DR	10200 μ F
10 - 40 Vdc	12 Vdc	0mA	2500mA	75mVp-p	69mA	1563mA	84	DMWB30-24S12	DR	3300 μ F
10 - 40 Vdc	15 Vdc	0mA	2000mA	75mVp-p	75mA	1543mA	85	DMWB30-24S15	DR	1100 μ F
10 - 40 Vdc	24 Vdc	0mA	1250mA	130mVp-p	39mA	1602mA	82	DMWB30-24S24	DR	500 μ F
10 - 40 Vdc	28 Vdc	0mA	1000mA	130mVp-p	45mA	1477mA	83	DMWB30-24S28	DR	340 μ F
18 - 75 Vdc	3.3 Vdc	0mA	6000mA	50mVp-p	32mA	509mA	85	DMWB30-48S33	DR	19500 μ F
18 - 75 Vdc	5 Vdc	0mA	6000mA	50mVp-p	32mA	762mA	86	DMWB30-48S5	DR	10200 μ F
18 - 75 Vdc	12 Vdc	0mA	2500mA	75mVp-p	38mA	772mA	85	DMWB30-48S12	DR	3300 μ F
18 - 75 Vdc	15 Vdc	0mA	2000mA	75mVp-p	48mA	762mA	86	DMWB30-48S15	DR	1100 μ F
18 - 75 Vdc	24 Vdc	0mA	1250mA	130mVp-p	30mA	781mA	83	DMWB30-48S24	DR	500 μ F
18 - 75 Vdc	28 Vdc	0mA	1000mA	130mVp-p	30mA	720mA	84	DMWB30-48S28	DR	340 μ F
10 - 40 Vdc	\pm 12 Vdc	0mA	\pm 1250mA	100mVp-p	34mA	1602mA	82	DMWB30-24-12	DR	\pm 1000 μ F
10 - 40 Vdc	\pm 15 Vdc	0mA	\pm 1000mA	100mVp-p	40mA	1582mA	83	DMWB30-24-15	DR	\pm 680 μ F
18 - 75 Vdc	\pm 12 Vdc	0mA	\pm 1250mA	100mVp-p	28mA	791mA	83	DMWB30-48-12	DR	\pm 1000 μ F
18 - 75 Vdc	\pm 15 Vdc	0mA	\pm 1000mA	100mVp-p	28mA	781mA	84	DMWB30-48-15	DR	\pm 680 μ F

Note:

- 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)
- Maximum value at nominal input and full load.
- Typical value at nominal input and no load.
- Typical value at nominal input and full load.
- Test by minimum input and constant resistive load.
- Single output installs a potentiometer to adjust the output voltage.
- Cross regulation for dual output : asymmetrical load 25% / 100% FL
- The ON/OFF control pin voltage is referenced to -INPUT .
To order negative logic ON/OFF control add the suffix-N (Ex:DMWB20-48S5-N)

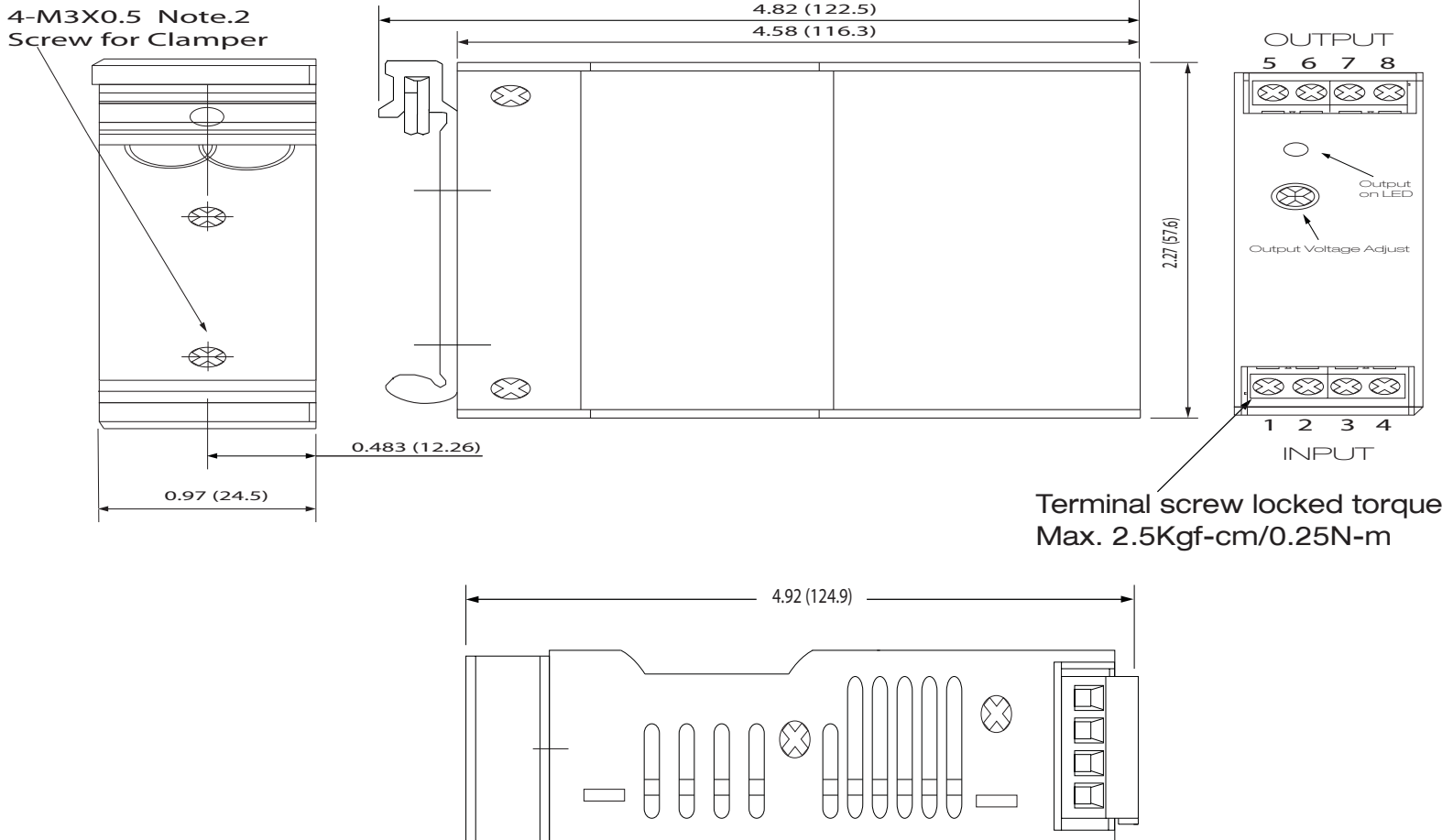
See next page for mechanical specifications.



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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
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



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