



40 WATT

Single And Dual Output

DIN Rail, Wide Input
DC/DC Converters



FEATURES

- DIN Rail DC/DC Converters
- 4:1 Input Range
- 40 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

DMWB40 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...8A
	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.....20mS
Startup Voltage.....	24Vdc input...9.5Vdc
	48Vdc input...18Vdc
Shutdown Voltage.....	24Vdc input...8Vdc
	48Vdc input...16Vdc
Remote ON/OFF (Option) (Note 10)	
(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.....	24Vdc input.....10 mA
	48Vdc input.....5 mA.

OUTPUT

Output power.....	40 Watts Max.
Voltage accuracy.....	3.3 V Out.....±1.5%
	Others.....±1%
Minimum Load (Note 6).....	See table
Voltage adjustability (Note 7)	
	Single 28V Out.....-3% to +17%
	Single Others.....±10%
Line Regulation.....	LL to HL at Full Load.....Single.....±0.5%
Load Regulation (Note 8).....	No load to Full Load.....3.3V Out.....±2.0%
	Others.....±1%
Load Cross Regulation (Note 9).....	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.



GENERAL

Efficiency.....	See Table
Isolation Voltage.....	Input to Output.....1600Vdc, min. 1 minute
	Input (Output) to Chassis.....1600Vdc, min. 1 minute
Isolation resistance.....	10 ³ 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.....	170 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.

ADDITIONAL SPECIFICATIONS

ENVIRONMENTAL

Operating ambient temperature.....	-40°C to +66° C (without derating)
	+66°C to +87° C (with 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 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	1000mA	50mVp-p	83mA	1741mA	83	DMWB40-24S33	DR	25750µF
9.5 - 36 Vdc	5 Vdc	0mA	8000mA	50mVp-p	103mA	2083mA	84	DMWB40-24S5	DR	13600µF
9.5 - 36 Vdc	5.1 Vdc	0mA	333mA	75mVp-p	56mA	2083mA	84	DMWB40-24S12	DR	2360µF
9.5 - 36 Vdc	12 Vdc	0mA	2666mA	75mVp-p	56mA	2083mA	84	DMWB40-24S15	DR	1510µF
9.5 - 36 Vdc	15 Vdc	0mA	1667mA	100mVp-p	76mA	2083mA	84	DMWB40-24S24	DR	600µF
18 - 75 Vdc	3.3 Vdc	0mA	1333mA	100mVp-p	82mA	1944mA	84	DMWB40-24S28	DR	375µF
18 - 75 Vdc	5 Vdc	0mA	1000mA	100mVp-p	63mA	859mA	84	DMWB40-48S33	DR	25750µF
18 - 75 Vdc	5.1 Vdc	0mA	8000mA	50mVp-p	68mA	1029mA	84	DMWB40-48S5	DR	13600µF
18 - 75 Vdc	12 Vdc	0mA	3333mA	75mVp-p	34mA	1029mA	84	DMWB40-48S12	DR	2360µF
18 - 75 Vdc	15 Vdc	0mA	2666mA	75mVp-p	34mA	1029mA	86	DMWB40-48S15	DR	1510µF
9.5 - 36 Vdc	28 Vdc	0mA	1667mA	75mVp-p	41mA	1042mA	85	DMWB40-48S24	DR	600µF
9.5 - 36 Vdc	± 12 Vdc	0mA	± 1333mA	100mVp-p	41mA	972mA	85	DMWB40-48S28	DR	375µF
9.5 - 36 Vdc	± 15 Vdc	0mA	± 1667mA	100mVp-p	65mA	2083mA	84	DMWB40-24-12	DR	± 1200µF
18 - 75 Vdc	± 5 Vdc	0mA	± 1333mA	100mVp-p	76mA	2083mA	84	DMWB40-24-15	DR	± 750µF
18 - 75 Vdc	± 12 Vdc	0mA	± 1667mA	100mVp-p	34mA	1042mA	84	DMWB40-48-12	DR	± 1200µF
18 - 75 Vdc	± 15 Vdc	0mA	± 1333mA	100mVp-p	34mA	1042mA	84	DMWB40-48-15	DR	± 750µF

Note:

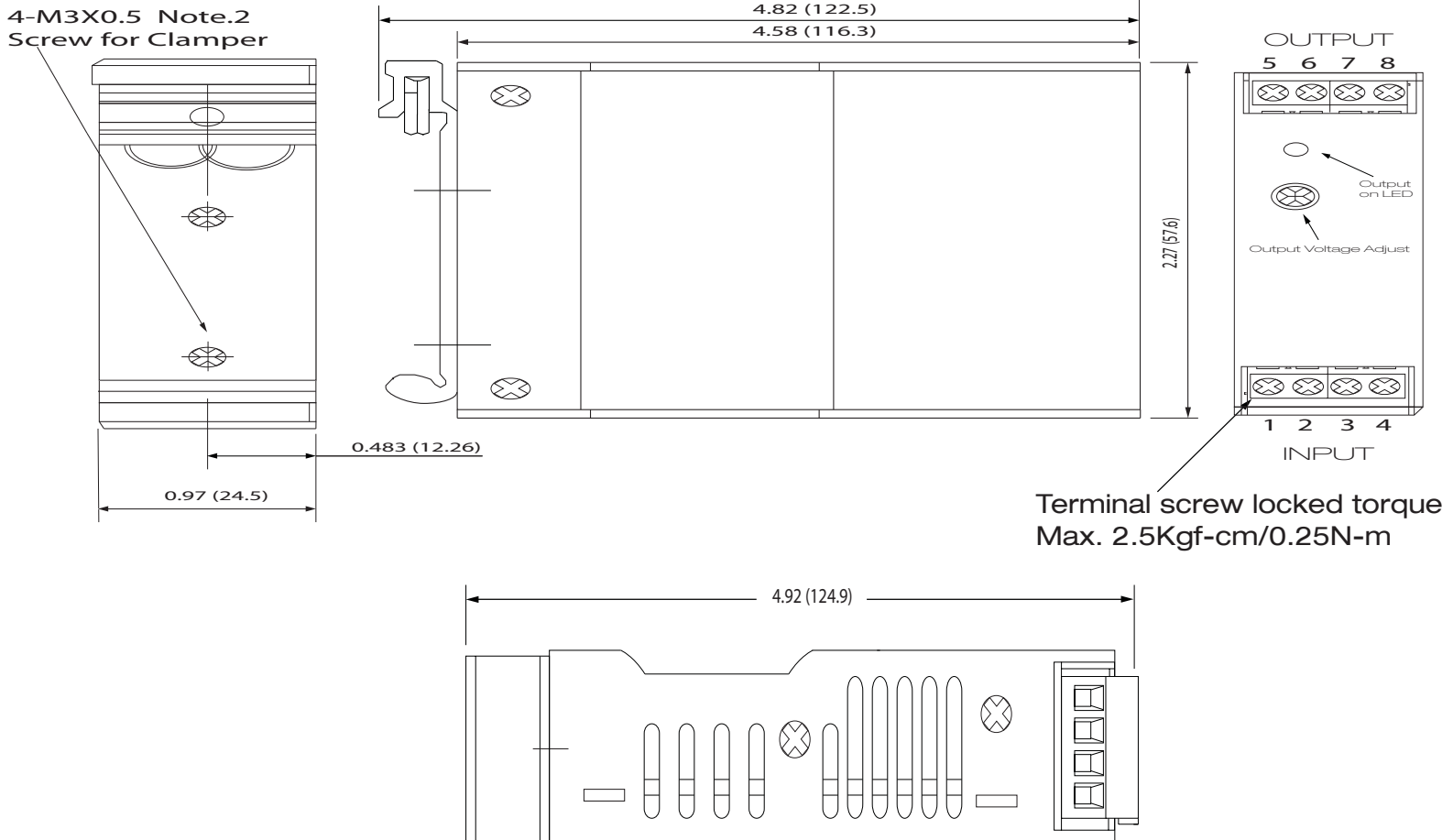
- BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C. MIL-HDBK-217F Notice2 @Ta=25 °C, Full load(Ground, Benign, controlled environment).
- Maximum value at nominal input and full load.
- Typical value at nominal input and no load.
- Typical value at nominal input and full load.
- Test by minimum input and constant resistive load.
- The output requires minimum loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however, they may not meet all listed specification.
- Single output installs a potentiometer to adjust the output voltage.
- Load regulation for dual output: Min load to 100% load balanced on all outputs.
- Cross regulation for dual output: asymmetrical load 25% / 100% FL
- The ON/OFF voltage is referenced to -INPUT
- To order negative logic ON/OFF control add the suffix -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



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