



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 andPower 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 3 V < Vr < 12V
.....	DC-DC OFF.....Short or 0 V < 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.....	±1.5%
.....	±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%
.....	±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
.....	3.9Vdc 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 ±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 x 10 ⁶ hrs. .MIL-HDBK-217F.....3.455 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.....+/ -8KVPerf. 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

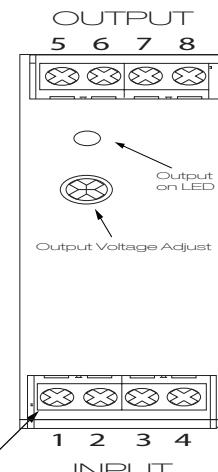
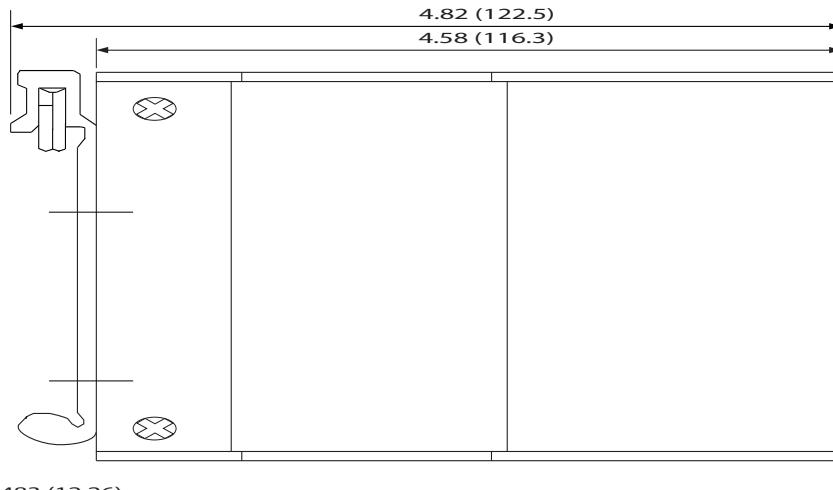
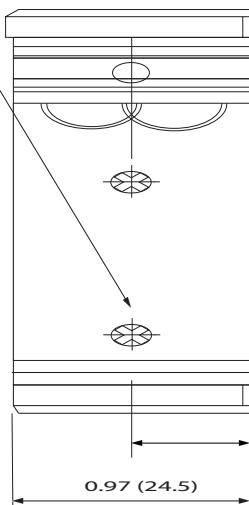
SELECTION GUIDE

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	19500µF
10 - 40 Vdc	5 Vdc	0mA	6000mA	50mVp-p	67mA	1563mA	84	DMWB30-24S5	DR	10200µF
10 - 40 Vdc	12 Vdc	0mA	2500mA	75mVp-p	69mA	1563mA	84	DMWB30-24S12	DR	3300µF
10 - 40 Vdc	15 Vdc	0mA	2000mA	75mVp-p	75mA	1543mA	85	DMWB30-24S15	DR	1100µF
10 - 40 Vdc	24 Vdc	0mA	1250mA	130mVp-p	39mA	1602mA	82	DMWB30-24S24	DR	500µF
10 - 40 Vdc	28 Vdc	0mA	1000mA	130mVp-p	45mA	1477mA	83	DMWB30-24S28	DR	340µF
18 - 75 Vdc	3.3 Vdc	0mA	6000mA	50mVp-p	32mA	509mA	85	DMWB30-48S33	DR	19500µF
18 - 75 Vdc	5 Vdc	0mA	6000mA	50mVp-p	32mA	762mA	86	DMWB30-48S5	DR	10200µF
18 - 75 Vdc	12 Vdc	0mA	2500mA	75mVp-p	38mA	772mA	85	DMWB30-48S12	DR	3300µF
18 - 75 Vdc	15 Vdc	0mA	2000mA	75mVp-p	48mA	762mA	86	DMWB30-48S15	DR	1100µF
18 - 75 Vdc	24 Vdc	0mA	1250mA	130mVp-p	30mA	781mA	83	DMWB30-48S24	DR	500µF
18 - 75 Vdc	28 Vdc	0mA	1000mA	130mVp-p	30mA	720mA	84	DMWB30-48S28	DR	340µF
10 - 40 Vdc	± 12 Vdc	0mA	± 1250mA	100mVp-p	34mA	1602mA	82	DMWB30-24-12	DR	± 1000µF
10 - 40 Vdc	± 15 Vdc	0mA	± 1000mA	100mVp-p	40mA	1582mA	83	DMWB30-24-15	DR	± 680µF
18 - 75 Vdc	± 12 Vdc	0mA	± 1250mA	100mVp-p	28mA	791mA	83	DMWB30-48-12	DR	± 1000µF
18 - 75 Vdc	± 15 Vdc	0mA	± 1000mA	100mVp-p	28mA	781mA	84	DMWB30-48-15	DR	± 680µF

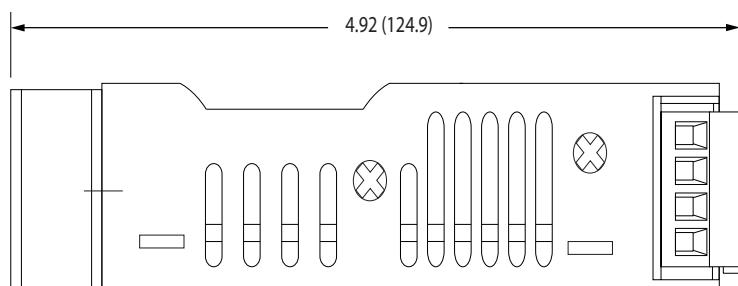
Note:

1. BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C.
 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. Single output installs a potentiometer to adjust the output voltage.
 7. Cross regulation for dual output : asymmetrical load 25% / 100% FL
 8. The ON/OFF control pin voltage is referenced to -INPUT .
- To order negative logic ON/OFF control add the suffix-N (Ex:DMWB30-48S5-N)

4-M3X0.5 Note.2
Screw for Clamper



Terminal screw locked torque
Max. 2.5Kgf-cm/0.25N-m



1. All dimensions in inches (mm)
Tolerance: $X.XX \pm 0.02$ ($X.X \pm 0.5$)
 $X.XXX \pm 0.01$ ($X.XX \pm 0.25$)
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