

Isolated DC/DC Converters

Bellnix's isolated DC/DC converters suitable for medical and measuring instruments that require low noise.

BLA and BLC series are compact isolated DC/DC converters that achieve very low noise (8mVp-p) and high efficiency by employing an original resonance circuit. 5-sided metal shield case suppresses radiation noise. Those are extremely reliable products. Ideal for noise isolation between analog and digital circuits. It is also suitable for the amplifiers in a measuring instrument that amplify small signals.



Features:

- Output voltage adjustable
- Dual output model can be used as a single output power supply
- Overcurrent protection
- No use of electrolytic or tantalum capacitors
- Operating temperature; -40°C to +85°C (temperature derating required)
- ON/OFF control
- Withstand voltage; 500V AC
- UVLO
- 5-sided metal shielded
- RoHS compliant

Application: Medical equipment, Measurement instruments

Series	Input Voltage Vdc[V]	Output Voltage Vdc[V]												Output Power [W]	Withstand Voltage [kV]	Low Noise
		Single Output						Dual Output								
		3.3	5	9	12	15	24	+/-3.3	+/-5	+/-9	+/-12	+/-15	+/-24			
BLA Series	3 to 9		X		X	X					X	X		1.5	0.5AC	X
	9 to 18		X		X	X					X	X				X
BLC Series	4.5 to 9		X		X	X					X	X		5	0.5AC	X
	9 to 18		X		X	X					X	X				X



Isolated DC/DC Converters (BY Series)

BY series are very low noise isolated DC-DC converters. The output noise of 10mVp-p has been realized by adopting a patented resonant technology. Radiation noise is also suppressed by 5-side shielded metal case. Those are very reliable products and are suitable for noise separation between analog and digital circuits. It is also suitable for the amplifier used in a measurement instrument, that amplifies small signals.



Features:

- 24-pin DIP IC size
- Short-circuit/overcurrent protection
- EMI line filter
- No electrolytic and tantalum capacitors
- Operating temperature; -25°C to +71°C (temperature derating required)
- Withstand voltage; AC 500V
- Over temperature protection
- Long life due to TCT patented circuit
- 5-sided metal shielded
- RoHS compliant

Application: Medical equipment, Measurement instruments

Series	Input Voltage Vdc[V]	Output Voltage Vdc[V]												Output Power [W]	Withstand Voltage [kV]	Low Noise
		Single Output						Dual Output								
		3.3	5	9	12	15	24	+/-3.3	+/-5	+/-9	+/-12	+/-15	+/-24			
BY-L Series	4.75 to 6		x	x	x	x			x		x	x		1.5	0.5AC	x

Ultra-compact high voltage power supply

Bellnix's BYH, MHV, and PHV series are the industry's first ultra-compact medium-to-high voltage power supply modules (HIC) that use the latest SMT (surface mount technology).

These products have been successfully miniaturized to the 1/6 size of conventional products by making full use of the combined technologies of high voltage, magnetic materials, and surface mount technology. The output voltage of BYH, MHV, and PHV series can be adjusted from approximately 0V to the maximum rated voltage. The voltage adjustment can be either by an external variable resistor or by applying an external voltage.



Features:

- Various series from 100V to 2000V
- World's first module of medium-high voltage power
- High density and high withstand voltage achieved by the latest surface mounting technology
- Adjustable output voltage from 0V (all this series products)
- 5-sided metal shielded
- ON/OFF control (varies by product)
- Low noise and small ripple
- Short-circuit and overcurrent protection
- High performance and high reliability
- Long lifetime design

Application: X-ray, TEM/SEM etc.



Series	Input Voltage Vdc[V]	Output Voltage Vdc[V]	Output Current [mA or μ A]	Output Power [W]	Load Reg. (k Ω or M Ω (min.))	Noise [mV/p-p](typ.)
BYH05-100S02	+4.75 to 5.25	0 to 100	0 to 2mA	0.2	-	10
BYH12-100S02	+11 to 16					
BYH05-200S01	+4.75 to 5.25	0 to 200	0 to 1mA			
BYH12-200S01	+11 to 16					
OHV12-1.0K1500P, N	+11 to 13	0 to +/-1000	0 to 1.5mA	1.5	666.7k Ω min.	5
OHV12-1.5K1000P, N		0 to +/-1500	0 to 1mA		1500k Ω min.	7
OHV12-2.0K700P, N		0 to +/-2000	0 to 0.7mA		2857k Ω min.	10
MHV12-180S15P, N	+10.8 to 13.2	0 to +/-180	0 to 15mA	2.5 to 3	12k Ω min.	30
MHV12-300S10P, N		0 to +/-300	0 to 10mA		30k Ω min.	
MHV12-350S07P, N		0 to +/-350	0 to 7mA		50k Ω min.	
MHV12-470S06,P N	+10.8 to 13.2	0 to +/-500	0 to 6mA	2 to 3	83.3k Ω min.	40
MHV12-1.0K2000P, N	+10.8 to 16.5	0 to +/-1000	0 to 2mA		500k Ω min.	30
MHV12-1.5K1300P, N		0 to +/-1500	0 to 1.3mA		1150k Ω min.	30
MHV12-2.0K1000P, N		0 to +/-2000	0 to 1mA		2000k Ω min.	50
PHV12-350S10P, N	+10.8 to 16.5	0 to +/-350	0 to 10mA	3.5	-	100
PHV12-0.5K10000P, N	+10.8 to 16.5	0 to +/-500	0 to 10mA	5	-	60
PHV12-1.0K5000P, N		0 to +/-1000	0 to 5mA		-	80
PHV12-2.0K2500P, N		0 to +/-2000	0 to 2.5mA		-	160