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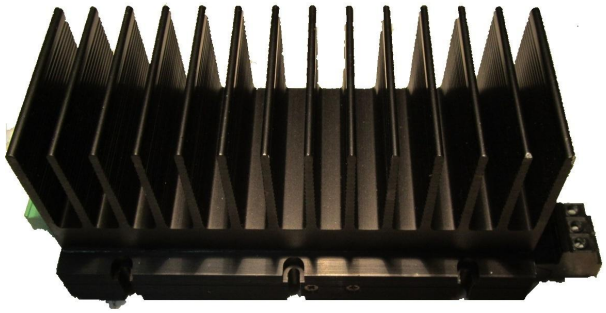

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1. INTRODUCTION

The *GB2-360 360W DC/DC converter* is a highly integrated DC/DC converter designed for Industrial applications. Different output voltages are available. The full encapsulation of these converters provide ultimate moisture and shock protection. The GB2-360 series also use a patented startup circuitry to enhance startup of high surge load.

The unit is encapsulated into an aluminium U-channel as the heatsink surface for the converter. Utilising the latest planar magnetic and high integration ceramic technology, the unit footprint is measured only 90x180mm, with the total height of 95mm.

Input and Output to the unit are via 5mm pluggable screw-lock terminal blocks. A green LED indicates the present of output voltage. Output voltage is factory set to the initial accuracy of 0.5%.

Maximum operating ambient temperature of the unit is 60°C without derating. The maximum surface temperature rise of the heatsink would be around 40°C above ambient. (Direct skin contact with the heatsink surface should be avoided.)

The module has an internal shunting device for input surge and reverse polarity protection. In order for these protections to function correctly and also to avoid fire risk, the unit must be connected with an external fuse. Recommended fuse rating for different models are in Sec. 2.

2. ELECTRICAL SPECIFICATION

2.1 Input

Parameter	min	typ	max	unit
Input				
Input Voltages	**10-16V , 18-36V , 36-75V , 45-90V , 65-154V**			
External input fuse	**Must be installed**			
Reverse polarity protection	**Blow input fuse. Internal clamp with no damage to unit.**			
Input surge/transient protection	**Provided**			

2.2 Output

Parameter	min	typ	max	unit
OUTPUT				
Setup accuracy (V_{nom})	**99.5**		**100.5**	**%$V_{nominal}$**
Rated Current (I_{rated})	**See table 2.6**			
Load regulation (0A to I_{rated})		**0.1**	**0.25**	**±%$V_{nominal}$**
Line regulation (full input range)		**0.1**	**0.25**	**±%$V_{nominal}$**
Output noise: switching frequency ripple **high frequency spike (30MHz BW)** **Note: Measured at the output connector with 100n ceramic decoupling capacitor across output.**			**0.25** **0.5**	**±%$V_{nominal}$** **±%$V_{nominal}$**
Current limit	**105**	**115**	**135**	**±%I_{rated}**
Overload protection	Trip and restart, approx. 0.3s on, 3s off.			
Efficiency at full load (model dependent)		**89**		**%**
Output Voltages	**12V , 24V , 48V 56V 60V , other voltages on request**			

Model Code: GB2-360-XXYY

XX: Input Voltage
YY: Output Voltage

Environmental factors

Parameter	min	typ	max	unit
Operating Ambient temperature	**-20**		**+60**	**°C**
Cooling	Natural Convection cooling			
Thermal shutdown (Unit shutdown and automatic recover after overtemperature condition subside.)		**105**		**°C$_{chassis}$**
Operating Orientation	**Stand-alone unit. Heatsink fins in vertical position.**			
Humidity			**95**	**%**
Altitude			**7700**	**metres**
Shock & vibration (Design to meet)	**MIL-STD 810E & IEC61373**			
Electrostatic Discharge immunity:	**Design to meet IEC61000-4-2: 4KV**			
MTBF (G_m, T_{amb}=25°C)	**260Khours (estimated)**			
INTERFACE				
Input	**3 way pluggable screw-lock 5mm terminal block (mating connector provided.)**			
Output	**4 way pluggable screw-lock 5mm terminal block (mating connector provided.)**			
Indication: DCOK (Output)	**Green LED on chassis** (output face)			

2.4 Isolation

ISOLATION				
Input to Output	**1000**	**(2KV 1second)**		**Vdc**
Input to chassis	**1000**	**(2KV 1second)**		**Vdc**
Output to Chassis	**500**			**Vdc**

2.5 Mechanical

MECHANICAL	
Outside dimension	**90x180x95mm**
Casing	**Aluminium with Black anodisation.**
Weight	**2.0Kg max**

3. MECHANICAL SPECIFICATION

3.1 Mechanical outline