

BlueCube™ – LX5i

5W Power Module

Universal Input, AC/DC Converter

Isolated / Compact / Eco-friendly



Synergistic Technology
Solutions, Inc.



Description

BlueCube power modules are highly integrated and fully encapsulated offline board-mount converters ideally suited for main and auxiliary power requirements in appliance, industrial and consumer product applications.

The LX5i isolated series delivers 5 Watts at 5 to 24 Volts from universal AC input and is an immediate drop-in power solution requiring no additional external circuitry.

Product Highlights

- Board-mount, compact AC-DC converter
- Low cost single component solution
- Fully integrated, no external circuitry
- Universal AC input (85-265 Vac)
- High Voltage DC input (100-350 Vdc)
- Single output voltage (5V to 24V range)
- Optimized design for minimal pcb footprint
- Fully protected: over voltage, over power, over temperature & short circuit protection
- Meets UL/CSA & EN product safety reqts
- Meets EN 55014, Class B, FCC Part 15, B
- Extremely energy efficient design
 - ◆ Meets US & Int'l Energy Star regulations
 - ◆ Meets California CEC requirements
 - ◆ No-load consumption <500 mW

ELECTRICAL SPECIFICATIONS

INPUT

Voltage range	85 - 265 Vac (50/60Hz)
Surge withstand	3KV, L-N
Inrush current	< 30A @ 265 Vac
Leakage current	< 250 µA @ 50/60 Hz 265 Vac input

OUTPUT

Voltage range	5 to 24 V (family range)
Voltage accuracy	± 5%
Line / load regulation	± 5%
Minimum load	0%
No-load consumption	< 500 mW @ 265 V
Ripple	< 1% output voltage
Noise	< 1% output voltage
Efficiency	Meet CEC
Hold-up time	> 5mS @ 90 Vac input
Input-Output isolation	3750 Vac

PROTECTION

Over power	Hiccup mode, auto-recovery
Over voltage	Hiccup mode, auto-recovery
Over current	Hiccup mode, auto-recovery
Over temperature	Hysteretic
Short circuit	Hiccup mode, indefinite (auto-recovery)

ENVIRONMENT

Operating temperature	-20 to 70°C
Storage temperature	-40 to 85°C
Humidity	0 to 95%, non-condensing
MTBF	> 100,000 h @ 25°C

MECHANICAL

Dimension – L x W x H	1.80 x 0.92 x 1.07 in. (45.5 x 23.5 x 27.3 mm)
Case material	Polycarbonate blue (flammability to UL94V-0)
Weight	1.60 ounces (45 grams)
Cooling	Free air convection

EMC

EMI (conducted & radiated emissions)	Meet EN 55014 FCC Part 15 Class B
EMS (noise immunity)	Meet EN 55024

SAFETY

Agency	UL 1310 recognized UL File: E310433
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All specifications valid at 120 Vac input and +25°C unless otherwise stated

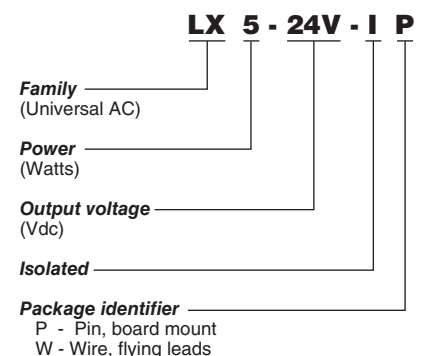
Applications

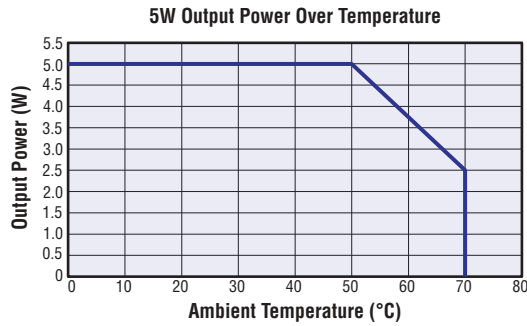
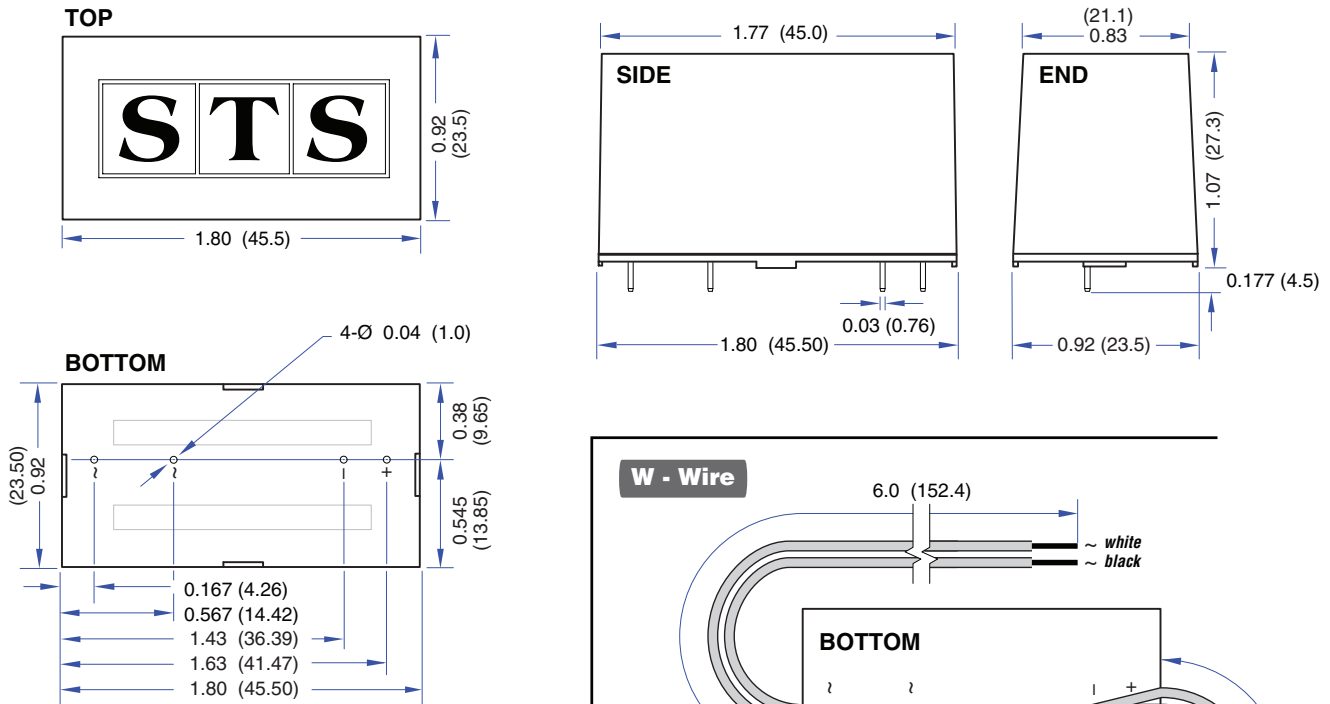
- Home appliances, white goods
- Industrial control, auxiliary supplies
- Stand-by power for clock, microprocessor
- Power for remote control sensor
- As linear transformer replacement in <10VA AC/DC applications

LX5i PRODUCT FAMILY

Part number	Voltage (V)	Current (mA)	Power (W)
LX5-05V-IP	5V	1000	5.00
LX5-09V-IP	9V	550	5.00
LX5-12V-IP	12V	400	5.00
LX5-15V-IP	15V	330	5.00
LX5-24V-IP	24V	200	5.00

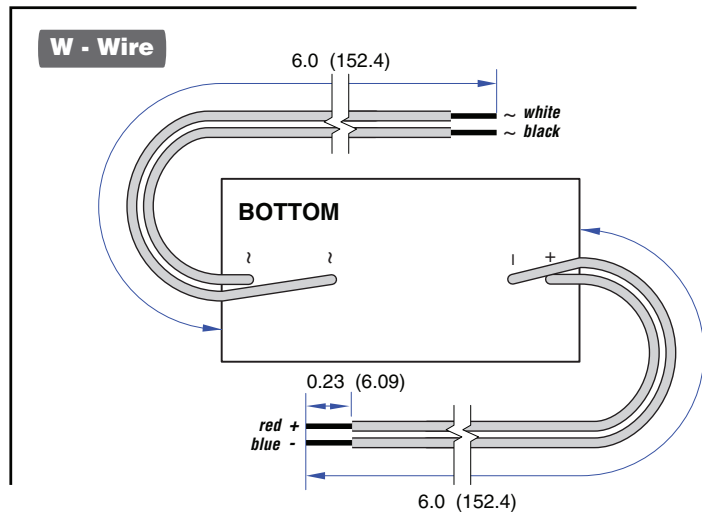
PART NUMBER KEY



DERATING CURVE

PACKAGE OPTION SPECIFICATIONS
P - Pin

NOTES:

1. Dimensions inches (mm)
2. 18 AWG wire for AC input
3. 20 AWG wire for DC output

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W - Wire

North America

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