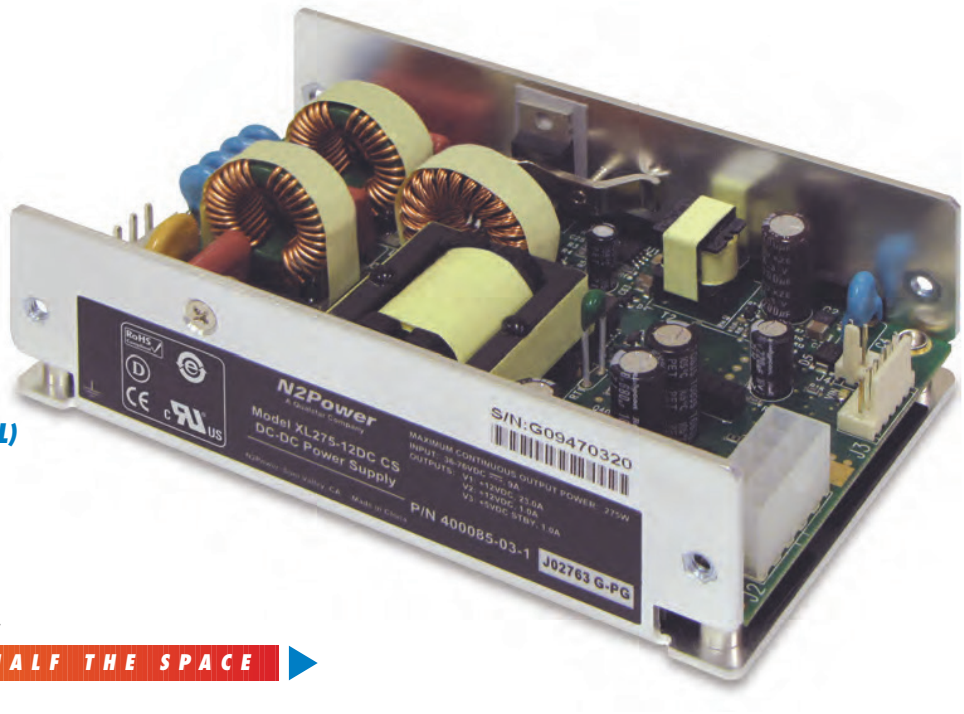
XL275DC SERIES

275 Watt Chassis Mount Power Supply

Measures: 5 x 3 x 1.5”

- **275 W DC-DC / 3” X 5” FOOTPRINT**
- **UP TO 91% EFFICIENCY**
- **HIGH POWER DENSITY: OVER 12 W / in³**
- **ALL OUTPUTS MAY BE PARALLELED**
- **REMOTE ON / OFF**
- **5W 5V STANDBY SUPPLY**
- **ACTIVE CURRENT SHARING**
- **BUILT IN OR-ING MOSFET FOR N, N+1**
- **RoHS COMPLIANT**
- **PMBus™ INTERFACE FOR DIGITAL POWER MANAGEMENT (OPTIONAL)**
- **INPUT TO OUTPUT ISOLATION**



TWICE THE POWER IN HALF THE SPACE

POWER SUPPLY DESIGN LEADER

N2Power™ leads the power density race with its latest small, high efficiency XL275 Series DC-DC power supplies. Our advanced technology yields a very small footprint, reduces wasted power, and offers the highest power density in its class. This efficient design means reduced energy costs, a greater return on your investment, greater reliability and longer product life.

ADVANCED DIGITAL CONTROLLER

The XL275 is the first power supply in this class to use a dedicated digital microcontroller to supervise the unit’s operation. The microcontroller monitors the following parameters:

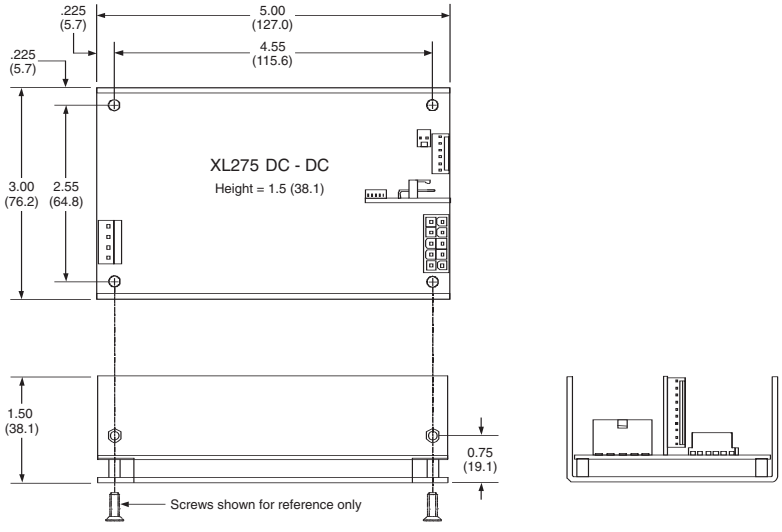
- DC input voltage
- Output voltage
- Output current
- Transformer temperature
- Ambient temperature
- Fan tachometer

The microcontroller enables the main output whenever all of the required startup conditions are met, and shuts it down upon command, loss of input power or whenever excessive loads or temperatures are sensed.

Typical Mechanical Drawing:

Inches (millimeters), connectors and pinouts may vary with model.

Refer to XL275 Product Specification for complete information.



PMBus™ OPTION

An optional PMBus™ digital communications interface is also provided to allow up to four XL275 to communicate over the same bus using the PMBus™ protocol. This interface allows routine remote control of the main outputs and the 12V fans. It can also notify the host if a fan fails (lost tachometer pulses). The host can also query the microcontroller for its output voltage and current plus the ambient and transformer temperatures. Because it is programmable, the microcontroller code can be customized to meet unique OEM requirements.

N2POWER

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MODEL	PART NUMBER	OUTPUT	VOLTAGE	REGULATION (%)	MAXIMUM CURRENT (A)	RIPPLE & NOISE (P-P)
XL275-12DC XL275-12DC CS	400084-03-4 400085-03-1	V1	12	±3	22.9	100 mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-24DC XL275-24DC CS	400084-05-9 400085-05-6	V1	24	±3	11.5	200 mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-48DC XL275-48DC CS	400084-06-7 400085-06-4	V1	48	±3	5.7	200 mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-54DC XL275-54DC CS	400084-09-1 400085-09-8	V1	54	±3	5.1	200 mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV
XL275-56DC XL275-56DC CS	400084-10-9 400085-10-6	V1	56	±3	4.9	200 mV
		V2	12	±5	1.0	80 mV
		V3	5sb	±5	1.0	50 mV

CS = Current Sharing

INPUT SPECIFICATIONS

Nominal Input Voltage:	36 – 76 VDC
Input Current:	9.2 A @ 36 VDC
Input Protection:	10 A fuse
Safety Isolation:	3000 V input to output 1500 V input to ground

OUTPUT SPECIFICATIONS

Total Output:	275 W
Efficiency:	Up to 91%†
Minimum Load:	No load
Over / Under Shoot:	Maximum 10% at turn-on

PROTECTION

Overvoltage Protection:	V1 and V2 latch off
Overpower Protection:	Protected / Auto Recovery
Short Circuit Protection:	Auto recovery of all outputs protected against short circuit
Thermal Shutdown:	Auto recovery protection against over temperature conditions

OPERATING SPECIFICATIONS

Operating Temperature:	–25°C to +50°C
Temperature Derating:	2.5% / degree 50°C to 70°C
Storage Temperature:	–40°C to +85°C
Forced Air Cooling:	10 CFM minimum†
Convection Cooling:	150W
MTBF:	>200,000 hours calculated

SIGNALS

Remote Sense:	V1 and Return
Active Current Sharing:	V1 using OR-ing MOSFET
Passive Redundancy:	V2 and V3 outputs may be wire OR-ed
Fan Output 1:	V2 on a 2-pin keyed connector
Fan Output 2:	ON above 45°C ambient or hot transformer
Fan Tachometer Input:	(Optional) Reports fan speed via PMBus™
Optional I²C Data / Clock:	Provides PMBus™ control / status interface
Power Good (PG) Output:	High-true CMOS logic and LED drive outputs
Standby Output:	LED drive on when V1 and V2 outputs disabled
Remote Enable Input:	Low-true input enables V1 and V2 outputs†
Onboard LED Indicators:	DC On, Power Good

† See Product Specification

Compliance:[1]

USA / Canada:

Safety: Underwriters Laboratories: UL 60950-1:2007 (2nd Edition) / C22.2 No. 60950-1-07 Safety of Information Technology Equipment (ITE)

EMC: FCC part 15, subpart B

[1]See Product Specification for additional information

Europe:

2006/95/EC - “Low Voltage (Safety) Directive”
Demko: EN 60950-1:2006+A11:2009
(2nd Edition)

2004/108/EC “Electromagnetic Compatibility (EMC) Directive”
EN 61204-3 Class B

International:

IEC 60950-1:2005 (2nd Edition) Safety of Information Technology Equipment

IEC 61204-3 Class B