Bulletin 1609

Allen-Bradley

Next Generation Industrial UPS

Features and Benefits

The 1609 family of Industrial Uninterruptible Power Supplies is designed for industrial applications – with features required for remote control and operation inside of industrial control panels.

DIN-rail/panel/floor mount

- Flexibility to meet most installation scenarios, included control panels typically used in production environments.

Hard-wired input and output

- Electrical codes typically do not allow plug-in connections within a control panel.

Integrated remote on/off and Dry I/O contacts

- Meet code requirements to allow proper shutdown of the UPS when control panel is open and closed and provide for remote monitoring and control of UPS.

USB communications

- Provides remote monitoring and configuration through included software

True sine wave AC output

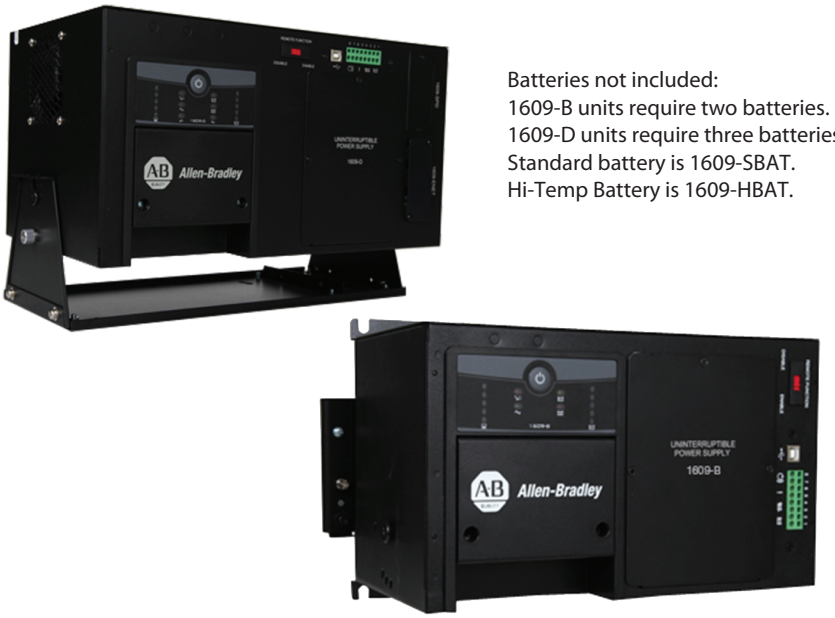
- Compatible with the widest range of equipment.

Expandable battery capacity

- Additional batteries can be added to the UPS to extend run-time or accommodate additional equipment. (1609-D Only)

EtherNet/IP communications

- Allows the ability to communicate with and integrate to Rockwell Automation Integrated Architecture. (Optional, for 1609-D Only)



Batteries not included:
1609-B units require two batteries.
1609-D units require three batteries.
Standard battery is 1609-SBAT.
Hi-Temp Battery is 1609-HBAT.

Faster Recovery From Power Failures

An industrial uninterruptable power supply (UPS) can enable your production production process to recover quickly from a line power interruption, saving you lost production time and work in process. Sometimes users think that because there isn't a battery large enough to keep the process itself going, a UPS won't make any difference. What a UPS can do effectively, is to keep the control system, networks and sensors powered, so when power returns, the control system knows where everything is and can start up without having to completely reset and clear the work in process.

The 1609 is uniquely designed for the industrial market to provide back-up AC power to the control cabinet. The 1609 will provide back-up power to bridge dips, sags, or brief losses of power. If necessary, the 1609 will facilitate a safe shut-down of your industrial PC, PLC, data logging HMI, or any other critical device in the control scheme. Without a 1609 in place, the customer is faced with nuisance power dips, ex¬tended down-time, and potential machine damage; all of which can result in signifi¬cant and costly challenges

The newer technologies of industrial controls are much more sensitive to power fluctuations, the need for clean consistent reliable power continues to grow as industrial automation and process control continues to migrate more towards more sensitive electronic controls and extensive networking. Industrial UPS products are about increasing system reliability and minimizing down time due to power disruptions and product failures in the control system.

	Panel Mount	Integrated Dry I/O Contacts	Remote On/Off	Replaceable Surge Protection	EtherNet/IP	USB	AVR	Expandable Battery
1609-B	●	●	●	●		●		
1609-D	●	●	●	●	●	●	●	●

1609 - D 600 N

Bulletin
1609

Product Family
D= Deluxe (Full featured)
B= Basic

VA (Volt-Amperes)
600= 600 VA
1000 = 1000 VA
1500 = 1500 VA

Voltage
N = 120VAC Input/Output

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Input

V nom.		120V
Capacity	600N	600VA (390 W)
	1000N	1000VA (650 W)
	1500N	1500VA (980 W)
Voltage Range, default		90~145V
Voltage Range, widest, on line		90~145V
Current nom.		5.5A
Capacity Frequency		50/60Hz±3Hz
PFC		None (Load power factor is reflected in the input line current)

Output

V nom.		120V
Capacity	600N	600VA (390 W)
	1000N	1000VA (650 W)
	1500N	1500VA (980 W)

On Line

Output Range, default	108~132V
Output Voltage Range, widest	108~132V
Transfer Point Accuracy	±3%

On Battery

V nom.	120V (Sine Wave)
Frequency	50/60Hz ±0.5Hz (Factory Default: 60Hz ±0.5Hz)
THD	≦10% (Full Linear Load)

Short Circuit Protection

Crest Factor	2.2:1

Efficiency

On Battery	75% (Typical with resistive load)
On Line	86% (Typical with resistive load excluding AVR mode)

Protection

Surge	380 Joules (Total Performance Rated With 10*1000ms Pulse)
Overload	>110-130% Shutdown after 10 Seconds
	>130% Shutdown immediately
Output Short On Line	Premises branch circuit over-current protection
Output Short On Battery	Shutdown
Thermal Protection	UPS inside temperature 60 degree C
Bypass	N/A

Regulatory

Safety	UL1778, CSA C22.2 No. 107.3-05, EN/IEC62040-1
EMC	FCC & CE (Class A)
Markings	UL, cUL, FCC, CE

Battery Pack

Run Time		≧5 Minutes (at 25 degree C, full R load)
Type		Sealed Lead Acid Battery
Rated Capacity	0-40°C: B.B. BP5-12	12V/5.5Ah
	0-50°C: B.B. HRL5.5-12	
Charger		Current limited, constant voltage float charger
Recharge Time		Less than 8 hours to 90% capacity after discharged with full load
Lifetime		2~3 years @ 25 degree C ambient

Environmental

Operating Temperature – Standard Battery		0°C~40°C (32°F~104°F) 0°C~50°C (32°F~122°F)
Operating Temperature – Hi Temperature Battery		0°C~50°C (32°F~122°F)
Storage Temperature		- 15...45°C (5°F...113°F)
Altitude		Operating 0 ... 6600 feet (0 to 2000 meters)
Humidity		Operating/Storage 5~95 % RH (Non-condensing)
Heat Output	On Line, Full load:	217 BTU per hour
	On Line, Full load, Charging:	296 BTU per hour
	On Battery: Full Load:	1331 BTU per hour
Audible Noise		50 dBA at front side one meter

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Publication 1609-PP005A-EN-P – February 2013