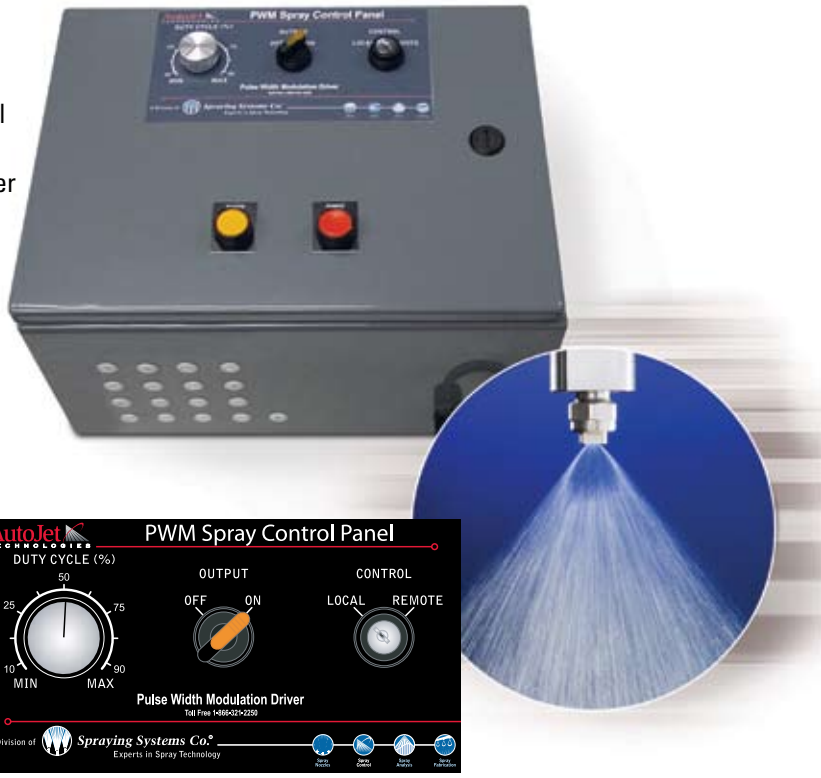
AutoJet® TECHNOLOGIES

AutoJet® PWM Spray Control Panel

The AutoJet PWM Spray Control Panel provides a convenient way to activate electronic nozzles at a specific frequency and duty cycle. The control panel is specifically designed to drive Spraying Systems Co.'s PulsaJet® Automatic Spray Nozzles and includes a power supply and all components needed for "plug-and-spray" operation. The panel can be used as a stand-alone control panel or may be controlled by a remote external system to drive up to sixteen PulsaJet Spray Nozzles.



Local or Remote Control

In "Local" mode, spray nozzles are activated by the "Output" switch and PWM duty cycle is controlled using a dial on the front panel. To prevent accidental changes by an operator, a toggle switch inside the cabinet can require that duty cycle be controlled using a dial located inside the enclosure.

In "Remote" mode, spray nozzles may be activated by a sensor and their duty cycle may be controlled by an external control system such as a PLC.

System Features

- Simple, cost-effective method for implementing PWM Flow Control
- Drives Spraying System Co. PulsaJet Automatic Spray Nozzles to maximum cycle speed of 10,000 cycles per minute
- Drives up to 16 PulsaJet Automatic Spray Nozzles connected in parallel
- Built-in AutoJet Model 1008-PWM Module Panel contains power supply, fuses and all necessary equipment for "plug-and-spray" operation
- Application Security – Duty cycle can be set by dial on the front panel or inside, depending on a selector switch inside the panel

The Benefits of Pulse Width Modulated (PWM) Flow Control

By cycling the spray nozzle quickly at a controlled frequency while adjusting the duty cycle, very precise flow rates are maintained. For a duty cycle of 50%, the nozzle is spraying half the time and the flow will be 50% of the maximum flow rate at a given pressure for the nozzle.

Using PWM Flow Control:

- Relatively low flow rates can be generated with larger, clog-resistant spray tips
- Overspray is minimized
- Chemical consumption can be reduced
- Extremely high flow turndown ratios can be achieved at a single pressure

Control Panel Overview

Spray Control Panel Functions

Output

- Off – Power to the unit is off and the system can not spray
- On – Power is supplied to the driver and the system sprays if commanded

Control

- Local – Duty cycle and nozzle state are controlled at the panel (inside or outside dial)
- Remote – Duty cycle and nozzle state are controlled by a remote unit, such as a PLC

Duty Cycle

- Minimum 10% – Nozzle sprays only 10% of rated flow at the current spray pressure
- Maximum 90% – Nozzle sprays 90% of rated flow at the current spray pressure

Internal Controls

- Frequency – 0.1 to 166 Hz
- Negative Pulse Width – 0.5 to 6.5 ms

Automatic Controls Input

- Duty Cycle Control – 0 to 20mA
- On/Off Control – Switch to ground

Boost Version

- PWM Control Signal – Switch to ground

Power Supply

- 115 VAC, 60 Hz

Enclosure

- Rating – NEMA 12
- Ambient Temperature – 32° F to 104° F
- Relative Humidity – up to 95%

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North America: P.O. Box 7901 Wheaton, Illinois 60189-7901 U.S.A. www.autojet.com
Phone: 866.321.2250 Fax: 630.665.9462 E-mail: info@autojet.com

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