



CONTROL

ADVANCED ELECTRONIC CONTROL TECHNOLOGIES

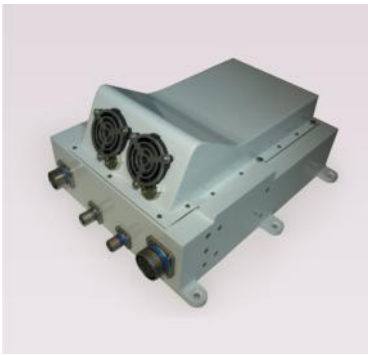
PNEUMATIC SYSTEM CONTROLLER

APS



 **MAROTTA®**

We're in Control



“Sensorless, variable speed controller designed to control the rotary reloadable pneumatic sonobuoy launcher on the P-8A.”

DC Brushless, Sensorless Motor Controller

The MCONTROL APS System Controller is a sensorless, variable speed motor controller designed to control the rotary reloadable pneumatic sonobuoy launcher compressor on the new P-8A Multi-Mission Maritime Aircraft.

Selected for its power handling ability, the MCONTROL APS Controller with its efficient AC/DC conversion and Digital Power Control for optimum power management, is rated for 3000 VA. This Controller design was engineered with extensive BIT and reporting capabilities, including temperature controls for the manifold and compressor, as well as pressure reading and compressor control.

The MCONTROL APS Controller uses an advanced, thermally efficient forced air-cooling system.

This application utilizes 3-phase 115VAC 400 Hz input power, which is filtered and rectified via a 30 pulse Autotransformer Rectifier Unit (ATRU). The ATRU is proven technology for providing stable 270 VDC power to the system, while minimizing current harmonics emissions to the AC mains. The ATRU also contains additional filtering for conducted emissions mitigation.

Key Features

- DC Brushless motor control
- Variable speed, sensorless motor drive
- DSP servo control
- 3-phase 115 VAC 400 Hz Input Power
- Autotransformer Rectifier Unit generating DC power while minimizing harmonic emissions
- Proven, two-loop state-of-the-art all digital velocity servo control
- PID algorithms
- Built-in-test (BIT) diagnostics
- Proven low power bias supply
- Pulse Width Modulated PWM motor and heater drivers for optimum power conversion efficiency
- State-of-the-art motor drive circuits using Isolated Gate Bipolar Transistors (IGBTs)
- Dual heater controls.
- Four solenoid valve controls
- Sensor interfaces for measuring pressure and temperature
- Motor output power – up to 2600 VA
- MISRA-C Software
- Hardware based over-current, over-temperature and over-voltage safety features
- CAN Bus communications
- Weight: 19.5 lbs
- Size: 9.5” x 6.5” x12.5”



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**WHEN IT COMES TO
ELECTRONIC CONTROL SYSTEMS
WE'RE IN CONTROL**