

Emerson - AMS 6500**A6210**

Dual-Channel Thrust, Differential Expansion and Rod Drop Monitor

Verified model data

Manufacturer	Emerson
Part number	A6210
Product family	AMS 6500 Machinery Health Monitor
Product type	Dual-channel thrust, differential expansion and rod drop monitor
Channels	2 independent eddy current differential inputs
Monitoring modes	Thrust position; differential expansion; average rod drop
Compatible sensor families	PR6422, PR6423, PR6424 and PR6425
Input voltage range	0 to -22 VDC
Input resistance	>100 k Ω
Input frequency range	0 to 8 Hz; 10 Hz at -3 dB
Sensor supply	Nominal -26.7 VDC, 20 mA; 35 mA maximum

Selection summary

Emerson A6210 is a two-channel AMS 6500 position monitor configurable for thrust position, differential expansion or average rod-drop measurement.

The card accepts compatible PR642x eddy current chains and supplies alarm, buffered and proportional outputs for turbomachinery or reciprocating-compressor protection.

Before replacement or commissioning, preserve the selected operating mode, probe arrangement and polarity, machine geometry, zero and scale, filters, alarm logic, relay assignments, bypasses and rack configuration.

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Additional verified data

Analog outputs	0/4 to 20 mA and 0 to 10 V
Buffered outputs	Front and rear raw-signal outputs
Power consumption	6 W maximum; 250 mA at 24 VDC
Format	3U, 1 slot, hot-swappable
Dimensions	16.0 × 3.0 × 12.84 cm (L × W × H)
Net weight	Approximately 0.32 kg
Rack capacity	Up to 14 modules in a 19-inch rack
Standards	API 670 and API 618 application support

Mode Selection

- Configure thrust position, differential expansion or average rod drop
- Use the mode documented for the actual machine and probe geometry
- Do not copy settings from a different application type

Probe Geometry

- Record both probe gaps, target directions and converter scales
- Preserve machine dimensions and crank or thermal reference data
- Verify channel polarity before calculating combined values

Protection Test

- Compare raw buffered signals with calculated position values
- Test Alert and Danger paths with bypasses formally controlled
- Confirm relay voting and current outputs before normal operation

Application checkpoints

- Steam-turbine thrust position protection
- Turbine differential-expansion monitoring
- Reciprocating-compressor piston-rod position and rod-drop monitoring

Evidence boundary: Official dimensions and net weight apply to the A6210 card only. The rack, rear I/O, relay modules, probes and converters are separate items.

Source basis: Emerson Protection Cards for AMS 6500 Classic Systems, November 2017.