

A6210

Thrust Position Monitor

Emerson A6210 is a dual-channel monitor for thrust position, differential expansion and rod position in AMS 6500 Classic systems. Each channel accepts a compatible eddy-current sensor system and can be configured for the documented measurement mode.

IDENTITY	VERIFIED VALUE
Manufacturer	Emerson
Complete model	A6210
Product role	Thrust Position Monitor
System family	AMS 6500 Classic Protection System
Country of origin	USA

DOCUMENT SCOPE

Exact identity, manufacturer-supported technical data, installation checks, applications, precautions and controlled verification records.

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Technical Specifications

PARAMETER	VERIFIED VALUE
Complete model	A6210
Channels	2
Measurement modes	Thrust position; differential expansion; rod position
Compatible sensors	PR6422, PR6423, PR6424, PR6425
Buffered signal	-1 to -24 V; input above 100 kΩ
Gap output	0–10 V
Gap accuracy	±1%
Operating temperature	0–65 °C
Power	6 W / 250 mA at 24 VDC

Model-Specific Engineering Note

ENGINEERING BOUNDARY

Preserve the selected thrust, differential-expansion or rod-position mode and its mechanical zero before replacing A6210. Verify sensor gap, direction, zero reference and every alarm output after the monitored shaft or rod is in its approved condition.

Pre-Installation Checks

NO.	REQUIRED CHECK
1	Confirm A6210 and the configured mode for each channel.
2	Place thrust or expansion protection in the approved maintenance state.
3	Record mechanical zero, gap voltage, polarity and alarm limits.
4	Label both sensor, common and shield connections.
5	Protect the rack connector and use ESD controls.

System Role and Architecture

Emerson A6210 is a dual-channel monitor for thrust position, differential expansion and rod position in AMS 6500 Classic systems. Each channel accepts a compatible eddy-current sensor system and can be configured for the documented measurement mode.

FUNCTION 1

Supports three selectable axial-position measurement modes

FUNCTION 2

Processes two independent eddy-current channels

FUNCTION 3

Provides buffered sensor and 0–10 V gap outputs

FUNCTION 4

Applies configurable alarm delay to machinery-position limits

Common Applications

APPLICATION	ENGINEERING CONTEXT
Steam-turbine thrust position	Tracks rotor axial location against configured protection limits.
Differential expansion monitoring	Measures relative axial growth between rotating and stationary structures.
Reciprocating rod position	Observes rod movement with an approved eddy-current arrangement.
Dual-channel axial protection	Uses two channels for independent or voting-based position logic.

CONTROLLED ACCEPTANCE DUTY

Confirm identity, physical interface, companion hardware, configured values and functional response against the installed-system record before release.

Engineering Precautions

NO.	PRECAUTION
1	Confirm A6210 and the configured mode for each channel.
2	Place thrust or expansion protection in the approved maintenance state.
3	Record mechanical zero, gap voltage, polarity and alarm limits.
4	Label both sensor, common and shield connections.
5	Protect the rack connector and use ESD controls.
6	Do not move the reference surface while zero data are being preserved.
7	Verify direction and 0–10 V gap scaling after startup.
8	Move through a controlled position range and prove each enabled alarm path.

Model-Specific FAQ - Part 1

QUESTION	ANSWER
Which variables can Emerson A6210 measure?	It can be configured for thrust position, differential expansion or rod position.
How many independent inputs does Emerson A6210 provide?	A6210 has two measurement channels.
Which transducer families are documented for Emerson A6210?	The reference lists PR6422, PR6423, PR6424 and PR6425 eddy-current systems.
What is the Emerson A6210 buffered-signal range?	The buffered sensor signal is documented from -1 to -24 V with input impedance above 100 kΩ.

Model-Specific FAQ - Part 2

QUESTION	ANSWER
What gap output does Emerson A6210 provide?	A6210 provides a 0–10 V gap output with $\pm 1\%$ stated accuracy.
Why must mechanical zero be preserved when replacing Emerson A6210?	Thrust and differential-expansion protection depend on the installed reference position and polarity, so an arbitrary zero can reverse or offset the protection limits.
What rack supply load does Emerson A6210 impose?	The card is specified at 6 W or 250 mA from 24 VDC.
How should Emerson A6210 direction be commissioned?	Move the monitored member in a known axial direction and verify sensor voltage, displayed position, analog output and alarm logic all change with the recorded polarity.

Related Products on Apter Power

MODEL	APTER POWER PAGE
Bently Nevada 16925-33	View Bently Nevada 16925-33
Bently Nevada 16925-99	View Bently Nevada 16925-99
Bently Nevada 16M1081-01	View Bently Nevada 16M1081-01
Bently Nevada 1701-05	View Bently Nevada 1701-05
Bently Nevada 1701-15	View Bently Nevada 1701-15
Bently Nevada 170180-01-05	View Bently Nevada 170180-01-05
Bently Nevada 170180-02-00	View Bently Nevada 170180-02-00
Bently Nevada 177230-00-01-05	View Bently Nevada 177230-00-01-05

MANUFACTURER SOURCE RECORD

Protection Cards for AMS 6500 Classic Systems
Protection Cards for AMS 6500 Classic Systems; November 2017

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