

A6110

Shaft Vibration Monitor

Emerson A6110 is a dual-channel shaft relative vibration monitor for AMS 6500 Classic protection systems. It conditions two eddy-current measurement channels and provides relay, analog and buffered outputs for machinery protection.

IDENTITY	VERIFIED VALUE
Manufacturer	Emerson
Complete model	A6110
Product role	Shaft Vibration 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.

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com



Technical Specifications

PARAMETER	VERIFIED VALUE
Complete model	A6110
Monitored variable	Shaft relative vibration
Channels	2
Compatible sensors	PR6422, PR6423, PR6424, PR6425 with CON drivers
Measurement range	0–400 mV to 0–8000 mV
Analog outputs	0/4–20 mA and 0–10 V
Buffered output band	0.1–16 kHz
Gap output accuracy	±1%
Operating temperature	0–65 °C
Power	Maximum 6 W at 24 VDC

Model-Specific Engineering Note

ENGINEERING BOUNDARY

Record both channel scales, sensor types, alert delays and relay voting before replacing A6110. After installation, verify gap voltage, vibration response, 0/4–20 mA outputs and every enabled alarm path with a controlled test.

Pre-Installation Checks

NO.	REQUIRED CHECK
1	Verify A6110 and both installed channel assignments.
2	Place every affected protection function in the approved maintenance state.
3	Record probe type, scale, alert delay and relay logic before removal.
4	Measure and label both signal, common and shield connections.
5	Use ESD controls when handling the monitor and rack connectors.

System Role and Architecture

Emerson A6110 is a dual-channel shaft relative vibration monitor for AMS 6500 Classic protection systems. It conditions two eddy-current measurement channels and provides relay, analog and buffered outputs for machinery protection.

FUNCTION 1
Protects two independent relative-vibration channels

FUNCTION 2
Accepts documented PR642x eddy-current sensor systems

FUNCTION 3
Provides current, voltage and buffered outputs

FUNCTION 4
Supports configurable alarm delay and relay logic

Common Applications

APPLICATION	ENGINEERING CONTEXT
Turbine shaft vibration protection	Monitors radial shaft motion on two configured channels.
Compressor rotor monitoring	Provides relative-vibration indication and alarm outputs.
Pump train protection	Connects compatible eddy-current probes to the AMS 6500 rack.
Retrofit channel replacement	Restores an existing A6110 channel while preserving configured ranges and voting.

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	Verify A6110 and both installed channel assignments.
2	Place every affected protection function in the approved maintenance state.
3	Record probe type, scale, alert delay and relay logic before removal.
4	Measure and label both signal, common and shield connections.
5	Use ESD controls when handling the monitor and rack connectors.
6	Do not alter range or voting while performing a like-for-like replacement.
7	Confirm gap voltage and analog output scaling after startup.
8	Inject a controlled vibration signal and prove alarms, relays and buffered outputs.

Model-Specific FAQ - Part 1

QUESTION	ANSWER
Which measurement does Emerson A6110 protect?	A6110 is the dual-channel monitor for shaft relative vibration.
Which probes can feed Emerson A6110?	The official card reference lists PR6422, PR6423, PR6424 and PR6425 systems with their corresponding CON drivers.
What measurement spans can Emerson A6110 be configured for?	The documented span extends from 0–400 mV at the smallest setting to 0–8000 mV at the largest.
Which retransmission outputs are available from Emerson A6110?	The monitor supports 0/4–20 mA and 0–10 V outputs, plus buffered sensor signals.

Model-Specific FAQ - Part 2

QUESTION	ANSWER
What frequency band is available at the Emerson A6110 buffered output?	The rear buffered output is specified for 0.1–16 kHz.
How accurate is the Emerson A6110 DC gap output?	The official reference states $\pm 1\%$ accuracy.
How much power should be reserved for Emerson A6110?	Allow up to 6 W from the 24 VDC rack supply.
What commissioning test is appropriate for Emerson A6110?	Verify both gap voltages, inject a traceable dynamic signal through each channel and prove display, analog output, alert delay and relay action.

Related Products on Apter Power

MODEL	APTER POWER PAGE
Bently Nevada 146054-12-05-01-05	View Bently Nevada 146054-12-05-01-05
Bently Nevada 146054-32-05-01-05	View Bently Nevada 146054-32-05-01-05
Bently Nevada 146054-34-20-02-05	View Bently Nevada 146054-34-20-02-05
Bently Nevada 146054-36-05-01-05	View Bently Nevada 146054-36-05-01-05
Bently Nevada 146055-10-02-00	View Bently Nevada 146055-10-02-00
Bently Nevada 146056-15-10-02-02-05	View Bently Nevada 146056-15-10-02-02-05
Bently Nevada 146056-38-10-02-02-05	View Bently Nevada 146056-38-10-02-02-05
Bently Nevada 147663-01	View Bently Nevada 147663-01

MANUFACTURER SOURCE RECORD

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

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com



A6110