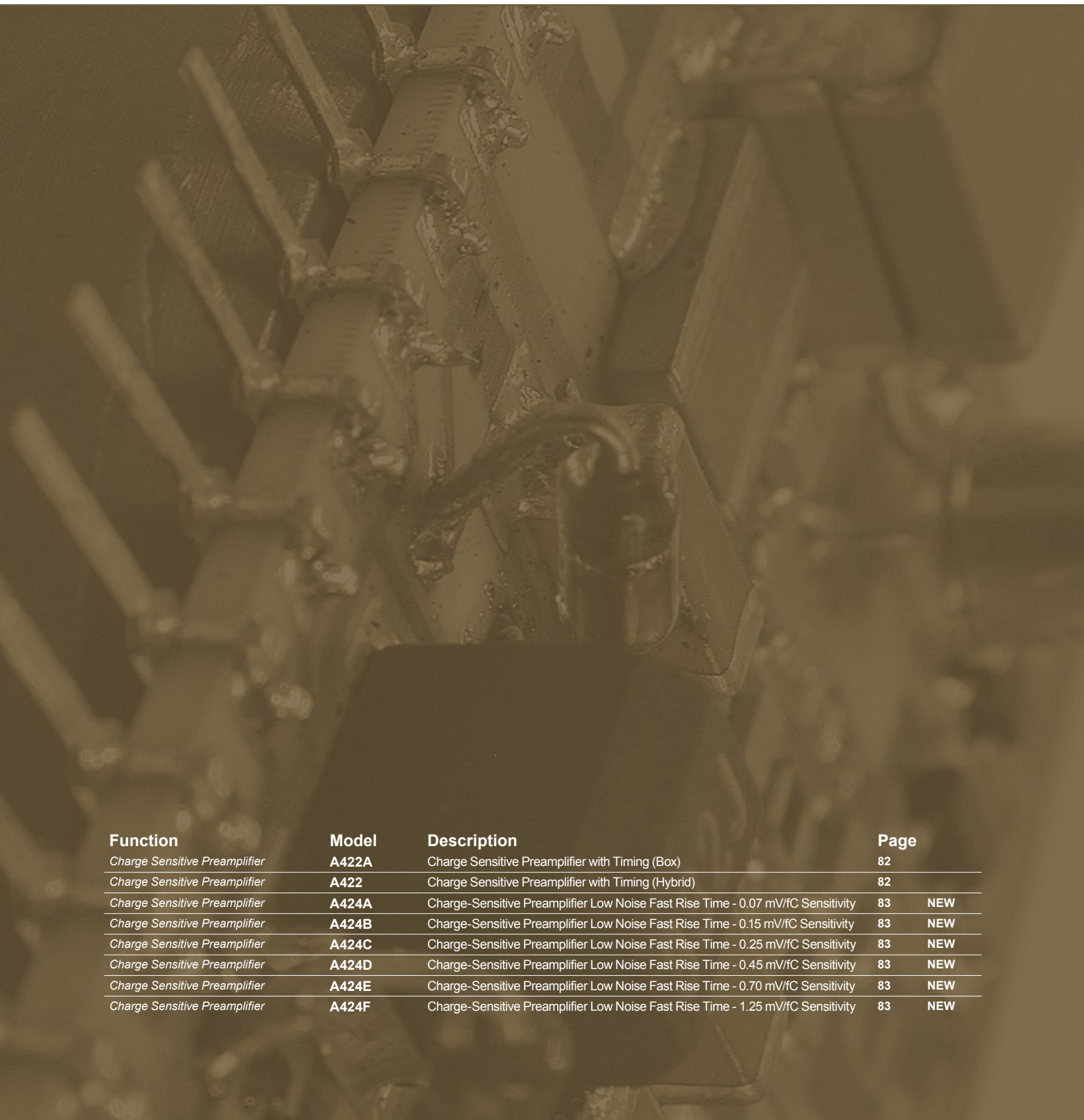


Preamplifiers products

CAEN Short Form Catalog 2007



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A422A Charge Sensitive Preamplifier with timing (Box)

Overview

The Mod. A422A is a charge sensitive preamplifier, designed to be used especially with semiconductor detectors and in particular whenever the charge division is required (as in position sensitive silicon detectors). The unit accepts both positive and negative input pulses. A Test input for detector gain calibration and a HV input (up to 5 kV) for the detector bias are also included. The output is an inverting unipolar voltage pulse, proportional in amplitude to the integrated charge; decay time is 300 μ s. A Timing output provides an unipolar inverting fast voltage pulse, with a 15 ns typical rise time, across a 50 Ohm load. Three different sensitivities (5, 30 or 60 mV/MeV) can be selected.



Highlights

- ...> Positive or negative input signals
- ...> Energy sensitivity range of 5, 30 or 60 mV/MeV (Si)
- ...> Low noise
- ...> Timing output
- ...> Up to 5 kV (positive or negative) detector bias voltage

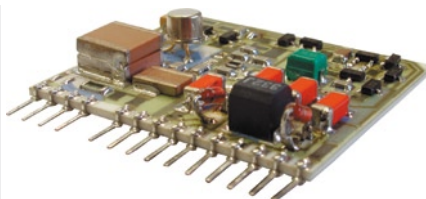
Ordering options

Code	Description
WA422AXAAAAA	A422A - Charge Sensitive Preamplifier with timing (Box)

A422 Charge Sensitive Preamplifier with Timing (Hybrid)

Overview

The Mod. A422 is a charge sensitive preamplifier implemented on an open frame SIP hybrid assembly. The module is designed to be used especially with semiconductor detectors and in particular whenever the charge division is required (as in position sensitive silicon detectors). The unit accepts both positive and negative input pulses. A Test input for detector gain calibration and a HV input (up to 1 kV) for the detector bias are also included. The output is an inverting unipolar voltage pulse, proportional in amplitude to the integrated charge; decay time is 220 μ s. A Timing output provides an unipolar inverting fast voltage pulse, with a 15 ns typical rise time, across a 50 Ohm load. Three different sensitivities (1, 45 or 90 mV/MeV) can be selected via internal connections. A 8-slot motherboard for the A422 is also available; it can be purchased equipped with LEMO 00 I/O connectors (Mod. A658) or with soldering pads (Mod. A658A).



Highlights

- ...> Fast, low noise inverting preamplifier
- ...> Positive or negative input signals
- ...> Energy sensitivity range selectable between 1, 45 or 90 mV/MeV (Si)
- ...> Timing output
- ...> Up to 1 kV (positive or negative) detector bias voltage

Ordering options

Code	Description
WA422XAAAAAA	A422 - Charge Sensitive Preamplifier with timing (Hybrid)
WA658AXAAAAA	A658A - A422 Mother Board (Without connectors)
WA658XAAAAAA	A658 - A422 Mother Board (With connectors)

A424A/B/C/D/E/F Low Noise Fast Rise Time Charge Sensitive Preamplifier**NEW****Overview**

The Mod. A424 preamplifier is a low-noise charge sensitive amplifier suitable for use with charged-particle detectors, scintillation detectors, or proportional counters. Fast rise time and small size make this module excellent for small detectors or laboratory measurements.

The preamplifier is optimized for high input capacitance (up to 1000 pF).

The module has a HV detector bias input (up to ± 3 kV), a protection circuit to avoid breakdown of the preamplifier's input circuit, and a test input for detector gain calibration.

The preamplifiers line Mod A424 include six options with the following sensitivities:

A424A: 0.07 mV/fC

A424B: 0.15 mV/fC

A424C: 0.25 mV/fC

A424D: 0.45 mV/fC

A424E: 0.70 mV/fC

A424F: 1.25 mV/fC

The Preamplifier input is provided by SHV connector and accepts positive and negative input pulses from detectors and supplies the HV bias to the detectors itself. The output, provided by BNC connector, is an inverting unipolar voltage pulse, proportional in amplitude to the integrated charge. A test input for detector gain calibration, provided by BNC connector, and a HV input (up to 3 kV), provided by SHV connector, are also included.

**Highlights**

- ...> **Fast, low noise inverting preamplifier**
- ...> **Positive or negative input signals**
- ...> **Energy sensitivity from between 0.07 to 1.25 mV/fC**
- ...> **Up to 3 kV (positive or negative) detector bias voltage**

Ordering options

Code	Description	
WA424AXAAAAA	A424A - Low-Noise, Fast-Rise-Time, Charge-Sensitive Preamplifiers 0.07 mV/fC sensitivity	NEW
WA424BXAAAAA	A424B - Low-Noise, Fast-Rise-Time, Charge-Sensitive Preamplifiers 0.15 mV/fC sensitivity	NEW
WA424CXAAAAA	A424C - Low-Noise, Fast-Rise-Time, Charge-Sensitive Preamplifiers 0.25 mV/fC sensitivity	NEW
WA424DXAAAAA	A424D - Low-Noise, Fast-Rise-Time, Charge-Sensitive Preamplifiers 0.45 mV/fC sensitivity	NEW
WA424EXAAAAA	A424E - Low-Noise, Fast-Rise-Time, Charge-Sensitive Preamplifiers 0.70 mV/fC sensitivity	NEW
WA424FXAAAAA	A424F - Low-Noise, Fast-Rise-Time, Charge-Sensitive Preamplifiers 1.25 mV/fC sensitivity	NEW