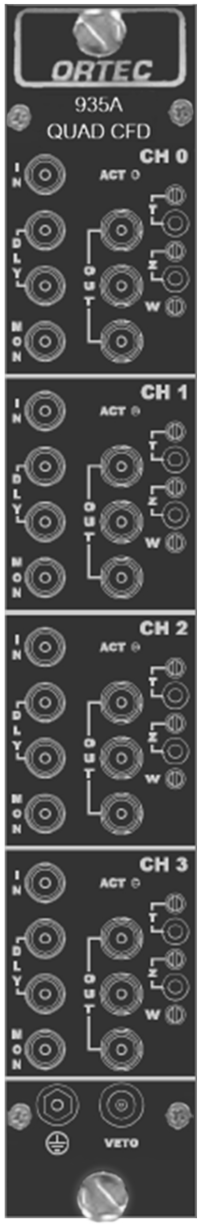
935A

Quad 200-MHz Constant Fraction Discriminator

The Model 935A Quad 200-MHz Constant-Fraction Discriminator incorporates four separate and independently adjustable timing discriminators in a single-width NIM module for fast-timing applications with microchannel plates, fast photomultiplier tubes, fast scintillators, and fast silicon detectors. The excellent timing resolution is established using a constant-fraction technique that ensures timing accuracy independent of the input pulse amplitude.



Specifications

INPUTS

Quantity: 4 independent LEMO Fast Negative analog

Impedance: 50 Ω

Max Voltage: –10 V

Reflection: <10% for input rise times >2 ns

Rise Time: <1 ns

Threshold: –15 to –1000 mV

Constant Fraction: 20% of max input pulse amplitude

Walk: <50 ps

Linear Range: –20 mV to –5 V

Max Frequency: 250 MHz

Pulse-Pair Resolution: <4 ns

OUTPUTS

Timing Output: 3 bridged fast negative NIM outputs with Updating/Blocking Modes. Amplitude –800 mV on 50 Ω load.

Timing Output Width: 2 ns to 500 ns

Transmission Delay: Typically <7 ns with 3 ns external delay

Transmission Delay Temperature Sensitivity: <±10 ps/ºC from 0 to 50ºC

Threshold and Walk Voltage Test Points

Constant Fraction Shaped Signal Monitor

Activity Indicator: Front-panel LED for each channel indicates output signal has occurred

Common Veto: Inhibits timing output for all channels with veto enabled

Independent Gate: Each channel output independently configurable for Coincidence or Anti-Coincidence

ELECTRICAL AND MECHANICAL

Power Requirements: –6V, 1600 mA / +6V, 300 mA / – 12V, 100 mA

Net/Shipping Weight: ~1 kg / ~2 kg

Operating Temperature: 0 to 50°C

Dimensions: NIM-standard single-width module, 3.43 X 22.13 cm (1.35 X 8.714 in.)

ORDERING INFORMATION

Model	Description
935A	Quad 200-MHz Constant-Fraction Discriminator

www.ortec-online.com
Tel. (865) 482-4411 ortec.info@ametek.com
801 South Illinois Avenue, Oak Ridge, TN 37830 U.S.A.
Visit Our Website For International Office Locations

Specifications subject to change
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