13080 16 Channel CFD

The Model 13080 Constant Fraction Discriminator (CFD) provides 16 independent CFD channels. The module provides this high density function in a single width CAMAC form factor.

All interfaces to the module are provided on the front panel or through the CAMAC bus. Connectors include two 34-pin ribbon headers for receiving analog preamplifier pulses and providing the CFD results in ECL format, and three Lemo compatible connectors which provide fast NIM logic signals for monitoring purposes. The fast NIM logic signals include a Multiplicity output, a logic OR of all sixteen channels, and a monitor output for a specific channel's CFD signal as selected through the CAMAC interface. In addition, two status LEDs provide visible indication when the module is addressed by the CAMAC controller and when any one of the sixteen CFD signals activates.

The CAMAC interface allows the module to be configured via the CAMAC controller. The walk, noise threshold, and input polarity of each CFD channel can be configured independently. One of eight CFD fractions and one of eight CFD time delays can be selected common to all channels. In addition, 1-of-16 channels can be selected for monitoring a CFD channel at the front panel.

The input impedance of each preamplifier channel is 1 kΩ which makes it compatible with a variety of NIM and CAMAC modules. All outputs drive 50 Ω loads. The Multiplicity output provides 50 mV per CFD channel into 50 Ω.

PERFORMANCE	**CFD Pulse Width**	25 ns to 400 ns ±30 ns via CAMAC
	CFD Ratio	12.5% to 100% in 12.5% steps via CAMAC
	CFD Delay	20,40,60,80,100,120,160,200 ns via CAMAC
	CFD Walk	± 64 mV in 256 steps of 0.5 mV via CAMAC
	CFD Threshold	± 64 mV in 256 steps of 0.5 mV via CAMAC
	CFD Polarity	Independent channel polarity via CAMAC
	CFD Enable	Independent channel enable via CAMAC
	CFD Monitor	Select 1 of 16 channels to monitor via CAMAC
	CFD Inhibit Interval	25 ns to 3.2 µs ±30 ns via CAMAC
	Preamp Input	± 5 V into 1KΩ
ELECTRICAL	**Power**	< 6 Watts from ± 6 V CAMAC Supply
	Current	< 1 Ampere from ± 6 V CAMAC Supply
MECHANICAL	**Dimensions**	Standard CAMAC single-width module 1.70 X 22.15 cm (0.67 X 8.72 in.)
	Weight	1.0 kg (2.2 lb) Net 1.4 kg (3.0 lb) Shipping
CONNECTORS	**Front Panel**	3 x LEMO 2 x 34-pin 0.1 in. pin spacing shrouded headers
DISPLAYS	**LED**	Red LED indicates CAMAC activity Green LED indicates CFD activity