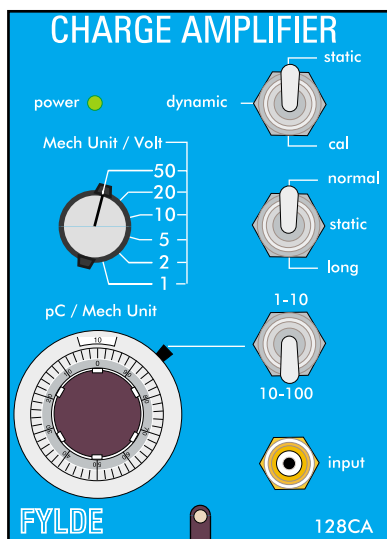


FE-128 - CA Charge Amplifier



A piezo transducer amplifier with conventional charge amplifier characteristics and a wide sensitivity range for static and dynamic applications.

The amplifier converts the signal from a piezo - electric transducer into a useful voltage signal. For dynamic signals a choice of time constants is provided.

Transducer sensitivity matching is achieved by means of a range switch and calibrated ten turn dial. A separate switch allows the number of mechanical units per volt of output to be set. As with all charge amplifiers, sensitivity is virtually independent of input cable length.

For use with :

ACCELEROMETERS



VIBRATION PICKUPS



PRESSURE TRANSDUCERS



FORCE TRANSDUCERS



LOAD TRANSDUCERS

The output is capable of $\pm 10V$ and is suitable for data acquisition systems, tape recorders, oscilloscopes and other indicating and storage instruments.

A low pass filter is incorporated; this may be internally set for cut off frequency by means of a removable resistor network.

Each module has an integral power supply; 230v 50Hz input is standard, and 115v 50/60Hz or 12v DC versions are optional.

The module is compatible with a range of cases to accept from 1 to 8 channels.

INPUT	Range For 1 V output Maximum Noise Protection	1-10 pC per unit (g, p.s.i. lb) or 10-100 pC per unit. 1, 2, 5, 10, 20, 50 units (g, p.s.i. lb etc.). 50,000 pC standard, for 10 V output. 0.05 pC + 0.05 pC per 10 metres of recommended cable (peak-peak). Withstands open or short circuit input.
OUTPUT	Impedance Voltage Current Drift	<1 Ω (but EMC filtering within case may raise this to 100 Ω) \pm 10 volts maximum, at \pm 5 mA load. Polarity switch on p.c. card. \pm 20 mA maximum, at reduced output voltage. <5 mV/ $^{\circ}$ C on maximum sensitivity (<0.05%/ $^{\circ}$ C).
FREQUENCY RESPONSE	Charge converter Voltage amplifier	Normal Time Constant is 1 second (10-100 pC/unit) and 0.1 second (1-10 pC/unit). Long Time Constant is typically 10 seconds (10-1000 pC/unit) and 1 second (1-10 pC/unit). Static Time Constant - typically 1 pC/second drift. High frequency response is >100 kHz, normally limited to 10 kHz (-3 dB) by internal filter. Standard a.c. coupling (dynamic) is 0.15 Hz (-3 dB). High frequency response is 100 kHz (-3 dB) or preset filter, normally set to 10 kHz (-3 dB)
CALIBRATION		Internal d.c. calibrator develops 1 V (\pm 0.5%) at the output for all sensitivity positions.
GAIN	Accuracy Stability	\pm 1%. <1% error with 100 metres cable, DC to 20 kHz. \pm 0.1% long term.
INDICATION	Limit	Flashing (green) indication when input conditions are abnormal. Constant (green) indication for normal operation.
TEMPERATURE	Range	0-50 $^{\circ}$ C working.
POWER SUPPLY		207-253 V 50 Hz standard. 103-127 V 50/60 Hz to order. 12 V DC to order at extra cost.
FUSE		1 amp, fitted to p.c. card.
EARTHING		Output common is connected via a p.c. link, to mains earth via link E.
CONNECTIONS		Output and power on 25 way rear edge connector. Input : Microdot L1403/CS/Au socket on front panel.
WEIGHT		9 oz (280 gm).
DIMENSIONS		Panel 2.75" x 2" wide, overall depth 8.2" (7 x 5 x 21 cm).
HOUSING		FE-PE2 single channel case, FE-PE4 case for two channels or one channel and monitor FE-PE8 case for four channels or three and monitor. FE-PE17 case or subrack (PE17-RK) for eight channels or seven channels and monitor.