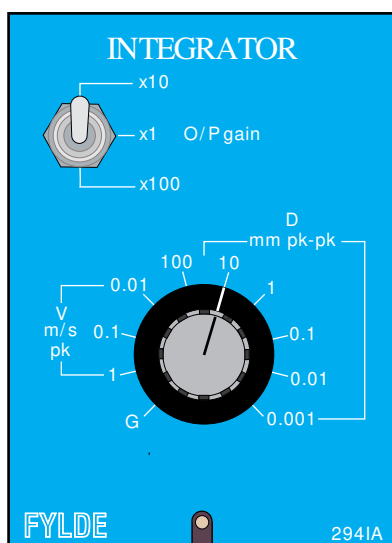


### FE-294 - IA Integrator



For use via FE-128-CA  
Charge Amplifier with :

ACCELEROMETERS



VIBRATION PICKUPS

The FE-294-IA is a general purpose integrator and amplifier for vibration and noise measurement.

Metric scaling is employed, with three velocity and six displacement ranges. An acceleration range is also provided, allowing the output of a pre-amplifier to be buffered through and given gain.

A three position gain switch allows a wide dynamic range with high accuracy.

Normally a charge amplifier will precede the integrator, the amplifier converts the signal from a piezo - electric transducer into a useful voltage signal.

The minimum frequency for accurate integration is a function of the range selection, but is approximately 1Hz on the highest velocity and displacement settings.

The direct output provides drive for data acquisition systems, tape and pen recorders, oscilloscopes and other high impedance devices. An Attenuated output provides drive and matching for low frequency U-V galvanometers.

The module is compatible with other FYLDE amplifiers and a range of cases are available. A matching charge amplifier, FE-128-CA, is available.

Each module has an integral power supply, 240v 50Hz input is standard, and 115v 50/60Hz or 12v DC versions are available.

INPUT	Level Impedance	±10V maximum 2MΩ	
VELOCITY	Ranges  Accuracy	1 m/s pk 0.1 m/s pk 0.01 m/s pk ±2% maximum. Typ. ±1%	Fc=1Hz Fc=10Hz Fc=100Hz
DISPLACEMENT	Ranges  Accuracy	100 mm pk-pk 10 mm pk-pk 1 mm pk-pk 0.1 mm pk-pk 0.01 mm pk-pk 0.001 mm pk-pk ±4% maximum. Typ ±2%	Fc=1.5Hz Fc=5Hz Fc=15Hz Fc=50Hz Fc=150Hz Fc=500Hz
OUTPUT 1 (direct)	Rated  Impedance Voltage maximum Current Offset	1V pk on velocity for range selected (10V max.) 1V pk-pk on displacement for range selected (10V max.) <1Ω ±10 volts maximum, at ±5mA load. ±5mA maximum. <10mV on maximum gain.	
OUTPUT 2 (attenuated)		Via series and damping resistor positions for resistively damped U-V galvanometers. ±5mA maximum current.	
FREQUENCY RESPONSE	Minimum Maximum	Fc is the -1dB point for accurate integration 20kHz	
GAIN	Ranges Accuracy Stability	x1, x10, x100 ±1% on x1,x10; ±2% on x100 0.01% long term.	
TEMPERATURE	Range	0-50°C working.	
POWER SUPPLY		200-240V 50Hz standard. 100-120V 50/60Hz to order. 12V DC to order at extra cost.	
FUSE		1 amp, fitted to p.c. card.	
EARTHING CONNECTIONS		Output common is connected via link E, to mains earth. Input, Output and power on 25 way rear edge connector.	
WEIGHT		6oz (280gm).	
DIMENSIONS		Panel 2.75" x 2" wide, overall depth 8.2" (7 x 5 x 21cm).	
MONITORING		FE-M14-AC, FE-M14-DS/AC	
HOUSING		FE-MC2 single case, FE-MC8 4 channel case. FE-U17 for seven channels and monitor. Compatible with FE-SMR7 & SMC7.	

Specification revised April 1995 - Supersedes all previous issues. Fylde Electronics Laboratories Ltd., reserves the right to change specification without notice in the interests of continued product improvement.