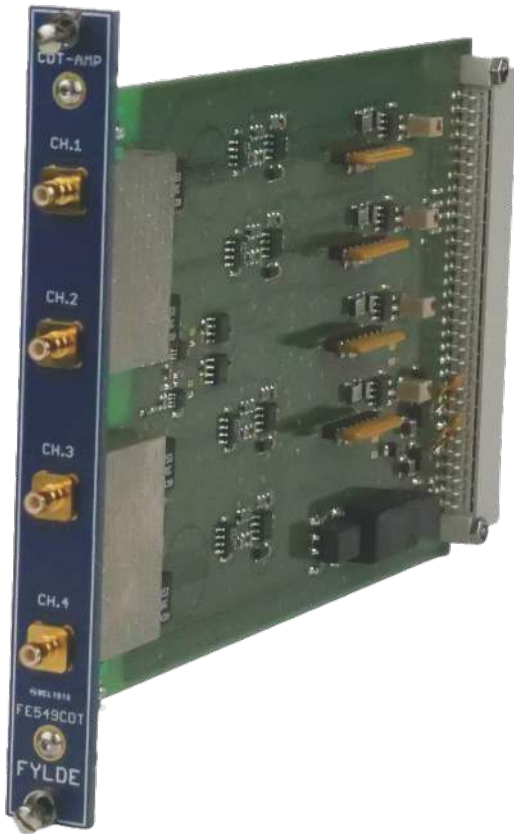


FE-549-CDT Capacitive Displacement

Eurocard



Presented in a narrow panel, 100mm x 160mm Eurocard format, this 4 channel CDT amplifier enables the connection of 4 separate capacitance transducers, or 2 back to back dual channel transducers, and provides a voltage proportional to capacitance on 4 buffered outputs.

Featuring a unique transformer coupled pre amplifier the energisation level is raised to 40V p-p which brings benefits to noise and stability.

The unit is driven from a common oscillator utilising individual power buffers, and the problems of beating which may be associated with multichannel CDT systems are thus avoided.

Oscillator options are available fixed value or user selectable can be accommodated.

Applications

Rotating Large Circumference Measurements

- Vibration
- Clearance
- Distance
- Position
- Axial Oscillation

Large Area Flat Surfaces Measurements

- Displacement
- Deflection
- Deformation

Dual Back to Back Transducers

- Linear pass
- Oscillation
- Thickness



Up to 14 modules (56 channels) may be fitted into a 42HP Eurocard frame, which contains a common power supply and master oscillator.

Specification

INPUT	connectors	4 x SMB connectors, front panel mounted.
	range	0.01pF to 1pF.
	default	2.5V for 0.1pF. low noise with triboelectric coating,
	cable	coax or triax. up to 10m.
	cable length	
oscillator drive		40Vp-p @16kHz typ. (options available on request)
GAIN	range	may be factory preset for custom range.
FREQUENCY	response	DC to 5kHz (- 3 dB).
RECTIFIER	type	synchronous full wave.
FILTER	response	3 pole Butterworth (Bessel to special order).
	setting	4.7Hz to 4.7kHz via field changeable resistor pack.
	default	100Hz using 47k Ω .
OUTPUT	analogue	voltage proportional to capacitance.
	range	0 - 10V.
	noise	1 mVp-p (note 1).
	offset	Typ $\leq \pm 10$ mV.
	impedance	100 Ω approximately.
POWER SUPPLY	requirement	± 12 V or ± 15 V @70mA (4 channels).
OSCILLATOR	requirement	typically 1VRMS @16kHz (options available on request).
ENVIRONMENTAL	temperature range	0 to 40 °C.
CONNECTOR	DIN 41612	2 row (a + b).
DIMENSIONS	Panel width	3HP (15.24mm).
	Card	100mm x 160mm.

Notes:

1. At 100Hz filter setting.