

ACM-1A ACPD CRACK GROWTH MONITOR



Designed as a 'Black Box' ACPD crack growth monitor to reduce costs and simplify end user installation, the ACM-1 is ideally suited to semi-permanent installations for long term crack growth monitoring, for example in power utility installations and structural applications.

The ACM-1 utilises the alternating current potential drop method (ACPD) which is an established technique covered by the ASTM 647 standard. The technique involves passing an alternating current through the metal under test and measuring the resultant voltage drop that is created across the specimen. The presence of a growing defect will alter this voltage and by suitable calibration, a measure of the defect depth can be obtained.

ACM-1A FEATURES

- 300 Hz output frequency, normally fixed. Variable frequency models available.
- Built in scan controller, measure multiple locations from one unit.
- Built in high precision pre-amplifier circuitry.
- Small compact size! Measures only 160mm * 160mm * 60mm.
- 2 Amps output, normally fixed. Variable current models available.
- Two channels as standard, measure active and reference signals.
- Wi-Fi and Ethernet communication modules available.
- Fixed gain setting at 20,000

Applications

- Slow crack growth
- Crack sizing
- Stress corrosion testing
- Crack initiation
- Fatigue crack initiation
- Condition monitoring

ACM-1A SPECIFICATIONS

Main Specifications	
Current O/P	2Amps High stability fixed current supply. At our discretion it may be possible to increase the current output to as much as 5 Amperes, and make it adjustable, call for further information.
Frequency O/P	Fixed frequency output set at 300Hz At our discretion it may be possible to make the frequency adjustable between 300Hz and 30kHz, call for further information.
Amplification	Fixed gain setting of each channel set to 20,000.
Offset	No offset feature provided
Filter	No filters provided At our discretion it may be possible to add filters, call for further information.
Display	No display provided, all display of variables via PC display
Outputs	No analogue O/P's Digital O/P of all set and displayed values. (Via RS-232) The unit outputs the following parameters via RS-232, Ethernet or wifi; Current o/p Frequency o/p Signal X (0 degree or 90 degree component ONLY , as chosen by user before dispatch) Signal Y (0 degree or 90 degree component ONLY , as chosen by user before dispatch)
Connectors	6-pin Lemo for both current output and signal in * 2 9-pin D-type for RS232 25-pin D-type for scanner control
EMC and Safety	Conforms to all relevant European directives.
Power supply	To be advised
Line Fuses	To be advised
Mechanical	To be advised
Dimensions / Weight	160mm * 160mm * 60mm (approx)
Operating Temperature	0°-35°C.

Other specifications	
Built in Pre-amps	Two built in pre-amplifiers will be provided, for signal X and Y
Software	The basic price of the unit includes simple software to control and read the unit and also store the values to a text file. (This does NOT include control or reading of any scanners)

Available accessories and options on all models	
SM1-HF	4 dual channel signal switching unit. (500KHz compliant)
SM2-HF	4 channel current switching unit. (5A compliant)
PDSOFT	16 channel data logging software, with formula entry for real time 'mm' output.
Mounting brackets	A range of mounting brackets are available for directly mounting to any flat surface.*

*Please specify this option when ordering.

PRICING	
ACM-1A Main Unit	£14,175
Adjustable frequency	£788
Adjustable Current	£788
Software for scanners	£1,260
Wi-fi module	£788
Hand held probe	£1,575
Cable converter for use of standard CGM-7 leads	£263
0.1Hz output filter.	£1,260
PDSOFT	£1,376