

AT LAST—A CM BUILDING BLOCK THAT'S
SIMPLE TO USE



APU— Advanced Processing Unit

Condition Monitoring (CM) of rotating machinery

Simply outstanding

The use of high frequency Acoustic Emission (AE) monitoring to detect the early signs of problems in rotating machinery is well established. Compared with conventional vibration analysis AE is in general more sensitive to fault conditions and less sensitive to background noises associated with normal operation.

If you are interested in detecting faults in rotating machinery at an early stage and monitoring the subsequent degradation you should be interested in the APU products from Holroyd Instruments Ltd. They are specifically designed to automatically extract the fault related features from AE signals and make this available to you in the simplest possible form.

Highly sensitive to faults

- poor lubrication & rubbing
- race/ball/roller defects
- grease/oil contamination
- gear teeth pitting, etc..
- even down to 45 rpm!

Monitor most rotating machinery

- motor-pump sets
- gearbox & pulley drive systems
- roll and shaft support bearings
- machine tools, etc..
- even works on plain bearings!

Our APU products incorporate the unique Distress parameter which has been outstandingly successful in the MHC range of portable CM instruments. The Distress parameter allows an instant indication of machine condition and has a common interpretation for most rotating machinery.

A new CM capability that's

- non-invasive yet sensitive
- accurate & stable
- requires no AE knowledge
- outputs to PLC, DVM etc..

Very easy to use and interpret

- Distress gives early warning
- dB Level tracks degradation
- no scaling or set up required
- common interpretation



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Note: specification subject to change without notification

	APU/2	Portable APU
Sensor Input:	50 Ω +24 V Ph. Drive SMB connector	High Impedance +10 V Ph. Drive BNC connector
Input Range:	100 μ V pk-pk to 4 V pk-pk (40,000:1)	
Bandwidth:	35 kHz to 100 kHz	
Outputs:	Distress Parameter, 0 to +2 VDC (20 mV/unit) 5 second time constant, 2 k Ω O/P impedance Mean Level (logarithmic), 0 to +2 VDC (20 mV/dB) 5 seconds time constant, 2 k Ω O/P impedance	
Output connectors:	Detachable screw terminals	BNC connectors
Status LED's:	Sensor open circuit Sensor short circuit	Power on Recharging Battery low
Status Relay:	Volt free SPCO contacts rated at 1A @ 30 VDC with re-settable fuse protection at 0.5A (detachable screw terminals)	None
Power Supply:	+24 VDC @ <100 mA detachable screw terminals Use regulated linear PSU	Built-in NiCd (+12 VDC) Up to 5 hours use per charge 240 VAC mains re-charger supplied
Housing:	ABS, DIN rail mounting	Aluminium
Dimensions:	200 mm x 120 mm x 60 mm (excluding connectors)	164mm x 70mm x 29mm (excluding connectors)
Weight:	~550 g	~400 g
QUALITY BUILT ON SOUND TECHNOLOGY		

Technical Specification

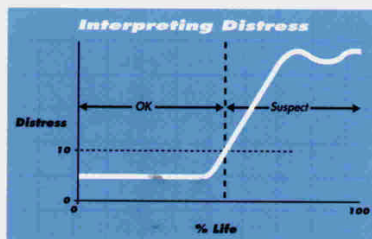


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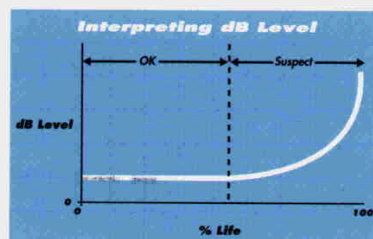
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01629 822060

Simply the best



Hardwired Systems:

The APU/2 forms a very capable core at the heart of a permanently installed CM system. Its DIN rail mounting and ease of use make it ideal for incorporation by systems integrators into bespoke systems. To increase long term measurement integrity the APU/2 continuously checks the sensor wiring to detect both open and short circuit conditions. A DIN rail mounting '16 Channel Scanner Module' is also available to ease the creation of cost-effective multi-channel systems.



Portable Monitoring:

The Portable APU incorporates rechargeable batteries to provide a truly mobile measurement capability. Its DC analogue outputs of Distress and dB Level can be directly read on a DVM, or more usually, logged so that long term trends can be followed (eg via an ADC into a laptop PC). Another use for the portable APU is in combination with other mobile instrumentation (eg for CM or asset management) in order to enhance their capability by the addition of AE based monitoring. To do this the host instrument must be capable of accepting DC analogue voltages as inputs.

