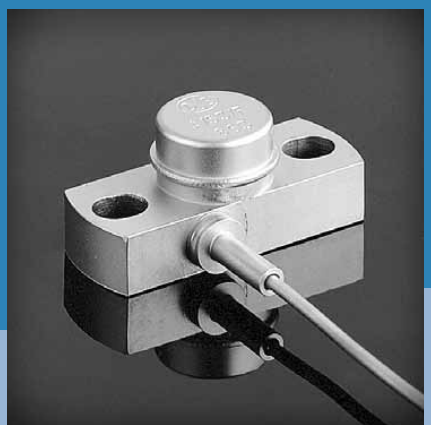


Industrial piezo-electric accelerometer

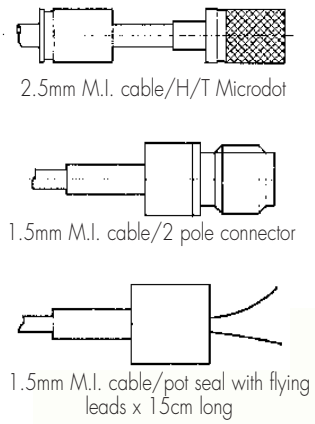
A/53/F
A/53/F/HT

12pC/g, 300°C max (/F) • 2pC/g, 400°C max (/F/HT)
20gm wt. (ex cable) • isolated output hermetic, integral hardline cable

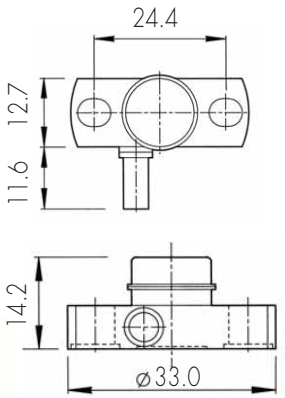
Miniature, rugged, industrial grade accelerometer with integral hardline cable, suitable for long term vibration monitoring in adverse environments.

These transducers are hermetic and are proof up to 100bar fluid pressure @ 20°C. Isolated signal minimises ground loop interference, however the 2 core cable termination option, being unguarded viz à viz spurious ground loop induced voltage, may need a differential charge amplifier interface. The alternative triaxial cable guards signal transmission external to the accelerometer. Choice of cable is somewhat subjective and involves physical and cost tradeoffs. High temperature operation (A/53/F/HT) is accompanied by significant reduction in insulation resistance and by increased low frequency pyro-electric noise content. This may impose a minimum frequency constraint. A/53's have seen extensive long term service in a variety of hostile environments. We recommend thermal burn-in and proof pressure tests where appropriate. KONIC sensing element, all welded construction, and welded cable termination maximises measurement integrity and reliability.

FIG. 1



A/53/F - A/53/F/HT

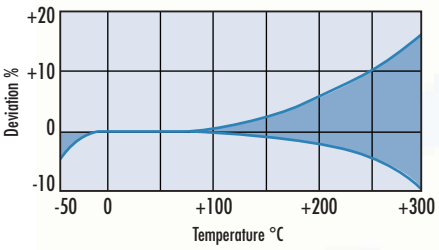


dims. mm

Cable min. bend rad II		
1.5 mm	temp. radius 9 mm	perm. radius 4.5 mm
2.5 mm	temp. radius 15 mm	perm. radius 7.5 mm

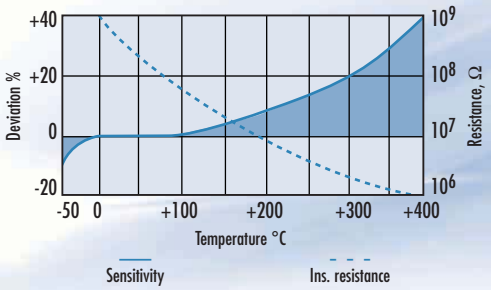
TEMPERATURE RESPONSE

A/53/F



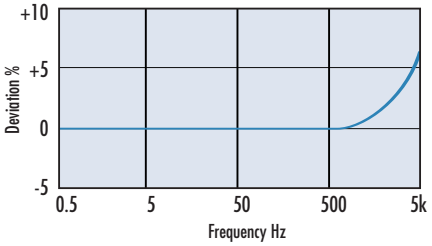
TEMPERATURE RESPONSE

A/53/F/HT



FREQUENCY RESPONSE

A/53/F and A/53/F/HT



options

- close tolerance output
- temperature calibration to 400°C (/HT)
- proof pressure testing to 100bar
- cable/connector options are shown in Fig .1

CONVERSION MODE	KONIC	
	A/53/F	A/53/F/HT
Charge sensitivity pC/g	10/15	1.7/2.6
Capacitance pF (ex cable)	1400/1800	400/900
Resonant frequency kHz	15	
Cross axis error % max	5	
Temperature range °C	-50/+300	-50/+400
Charge sensitivity deviation re 20°C	-5% @ -50°C +15% @ +300°C	-5% @ -50°C +40% @ +400°C
Pyro-electric output, g/°C	0.1	0.1
Pyro-electric corner freq. Hz	0.01	0.01
Base strain sens. g/μ strain	0.002	0.002
Max continuous accn. g sine	1000	
Case material	s/steel 303 S31	inconel
Mounting	2 x 5.2mm ø holes @ 24.4mm ctrs	
Weight gm	20	
Case seal	welded, hermetic	