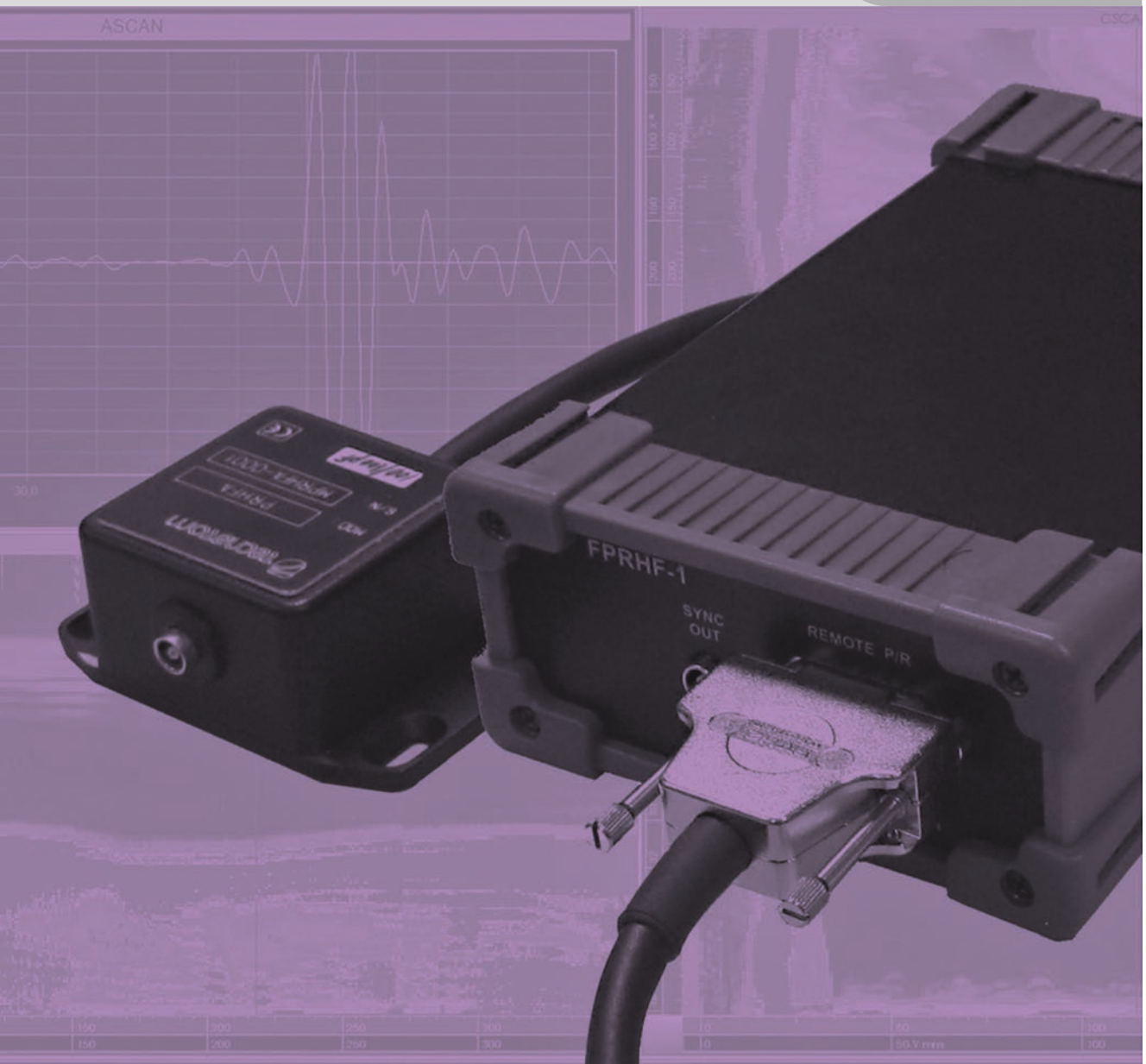
Ready for the future,
caring for the customer



Ultrasonic Products

SONIA®

An Advanced
Ultrasonic System

FPRHF-1

1 high frequency
UT channel module

tecnatom

www.tecnatom-ndt.com

CE

FPRHF-1 1 High Frequency UT channel module

FPRHF-1 is a ultrasonic module compatible with SONIA architecture designed to drive high frequency probes. This module has 1 UT channel with high bandwidth, intended for applications in the field of inspection of thin components, ultrasonic microscopy, materials characterization, etc…

MAIN FEATURES

- 1 UT channel, single crystal probe.
- Pulse-echo technique.
- Bandwidth from 4 to 200 MHz (probes from 10 to 150 MHz).
- High speed negative spike pulser with two energy levels (low & high).
- High digital signal processing capabilities (filters, gates, signal types, etc…).
- 2 different electronic units: main unit and remote pulser-preamplifer, able to work underwater. The maximum cable length is 3 meters.
- Small size that permits to minimize the length of the transducers cables, digitizing the UT signal very close to the transducer. This implies lower UT signal distortion, attenuation and noise.
- Replace the analog communication lines by digital ones, immune to electromagnetic interferences (fiber optic), which means no signal distortion and/or noise in the transmitted signals and performance independent of installation layout.
- Low power consumption. The electronic boards are sealed in non ventilated rugged enclosure.

FPRHF-1 TECHNICAL SPECIFICATION

GENERAL

Electronics	Compatible with SONIA architecture
UT channels	1High Frequency channel, single crystal probe
UT techniques	Pulse-echo (immersion)

PULSER

Type	Negative spike
Voltage	Two levels: -60V (low energy), -210 V (high energy)
Width	7 ns ±2ns (LE) 10 ns ±2ns (HE)
Maximum PRF	10 KHz
Fall time	5 ns ±2ns (LE), 4 ns ±2ns (HE)
Rise time	<3 ns (LE), 6 ns ±2ns (HE)
Impedance	<25 Ω

RECEIVER

Amplifier type	Linear
Input range	240 mVpp
Bandwidth	4 to 200 MHz @-3dB
Gain range	0 to 80 dB, 0.1 dB steps

DIGITAL FUNCTIONS

A/D sampling rate	2 GSPS, 8 bits Sampling decimation factor: 1 to 16
Gates	8 gates, max + 8 first echoes per gate. 1 gate for interface echo synchronization.
Signal modes	RF, Rectified (full, +/-)
A-scan length	32 Ksamples
Noise reduction filters	Averaging Anti-impulsive noise
Post-Rectsmoothing filter	0 to 100% smoothing level control
Other digital functions	Real time alarms associated to echoes in gates. Signal inversion. Signal compression factor up to 64.

OTHERS

UT connectors	1 x LEMO 00 coaxial connector
General I/O	4 digital inputs, 2 digital output (up to 24 V) optocoupled.
Fiberoptic port	LC-Duplex optical connector (1 Gbit full-duplex)
Dimensions (DxWxH)	Remote P/R: 50 x 50 x 32 mm (weight 150g) Main unit: 175 x 115 x 64 mm.mm (weight 950 g)
Power	24 Vdc, 1 A max (11W typ)

Tecnatom S.A.
Av. Montes de Oca, 1
28703, San Sebastián de los Reyes / Madrid- Spain

www.tecnatom-ndt.com