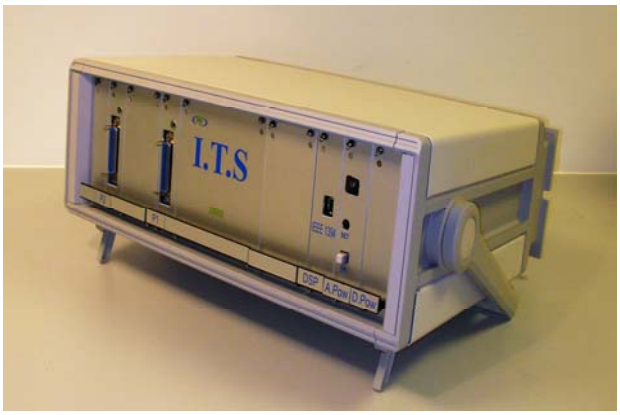
Product Sheet

INDUSTRIAL TOMOGRAPHY SYSTEMS plc

z8000 Electrical Resistance Tomography



Electrical Resistance Tomography:

Parameter	Conductivity
Process Environment	Conducting (solutions)
Typical Processes	Multi-phase, slurry transportation
Sensor	Internal
Reference	Single (mean)
Also sensitive to	Temperature

z8000

The z8000 is essentially a resistance tomography instrument that can also measure impedance; phase and reactance. Impedance can measure real and imaginary parts, which gives another set of data to understand complex materials and how they are distributed in the course of a process.

The z8000, can capture data 1,000 dual frames per-second, which enables it to measure rapid flows or any process which is fast moving.

In contrast to many systems-based measurement techniques, tomography sensors are able to rapidly sense throughout a volume. Thus providing a dynamic picture of what is going on inside a pipe or vessel, e.g. whether a system is homogeneous.

Product Characteristics

Single modality (ERT)
Max No of electrodes: 32; 16 x 2 planes arranged in 1 and 2 planes

Sensor Geometry:

- Circular

Applications

- Multiphase flow characterisation
- Interface Detection
- CFD Validation
- Hydraulic Conveying
- Filtration

Industries:

- Oil & Gas
- Nuclear
- FMCG
- Mining
- Others...

Benefits to users are:

- Measurement of rapid flows
- Increased process understanding
- More effective process development
- Improved and more consistent product quality

Industrial Tomography Systems plc
Speakers House, 39 Deansgate
Manchester
M3 2BA
Tel: +44 (161) 832 9297
Fax: +44 (161) 839 5195
sales.support@itoms.com

Specification Sheet

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z8000 EIT

Operation

Measurement Principals:	Fast EIT
Number of electrodes:	32; 16 x 2 planes planes or 8 x 16 planes
Image reconstruction algorithm:	Linear back projection

System performance

Accuracy:	± 1% @ 80 Khz, ± 0.5% @ 10Khz
Stability:	< 1.3% deviation @ 80 Khz, 2 hours
Frame acquisition speed:	20 ms/frame
Spatial resolution:	5%
Online measurement speed:	45 frames/ S 16 elec trodes

Hardware

Input:	Current Non-conducting adjacent /
Range:	00H-FFH (ad-ad) ad)
Injection frequency:	10Khz - 80Khz
Output:	-10 V to +10 V
Memory :	8MB RAM
Max no. measurement frame:	8000 16 electrodes
Mode of measurement:	Parallel

Power Supply

Power input:	100-240 V a/c, 50/60 Hz 1.5A
Consumption:	DC 24 V 45W

Software

GUI:	VC++ Class
Data display:	Online view and manage tomo-graphy data Tomograms images
Output:	P2k file, which can be analysed using the ITS toolsuite and Cross Correlation software

Computer Requirements

CPU:	Pentium 3 (1.6 GHz or higher) or equivalent
RAM:	512MB
Operating System:	Windows 2000/ XP
Serial Ports:	IEEE 1394 Firewire

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