



CUTTING EDGE NUCLEONIC DENSITY GAUGE SOLUTIONS

- ✓ COMPLETE DIGITAL OPERATION
- ✓ AUTOMATIC GAIN STABILISATION
- ✓ LOW SOURCE ACTIVITY
- ✓ SCINTILLATION DETECTOR
- ✓ RUGGED CONSTRUCTION
- ✓ REPEATABILITY 0.0001 SG

FEATURES

Narrow Beam Geometry

A collimated narrow beam of gamma combined with a collimated NaI scintillation crystal ensures errors due to Compton Scattering through the pipe and slurry do not arrive indirectly at the scintillation crystal.

Decay Compensation

Decay compensation is built into the gauge to allow for the decay of the radioactive source. Each day the time elapsed between the last calibration and the present date is used to calculate a correction factor.

Deadtime Correction

The SIStec® Model SS200 maintains the deadtime precisely over the temperature range of the instrument, to a precision of ± 10 nanoseconds.

For this a well known statistical correction formula is used which requires the deadtime to be extremely tightly controlled.

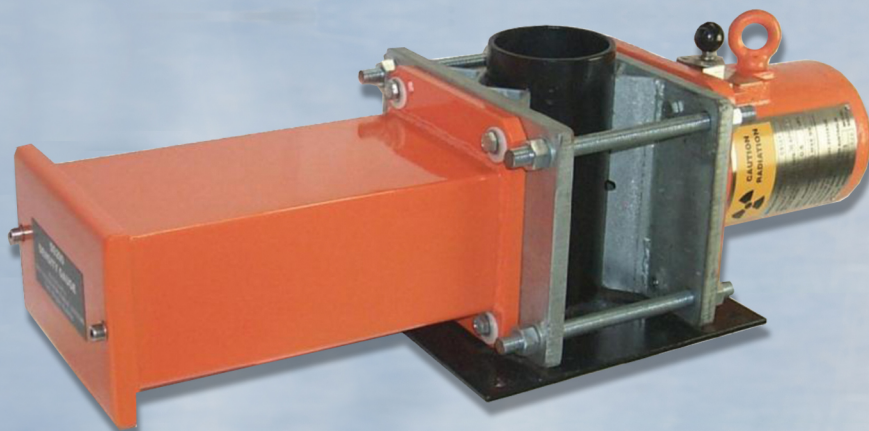
Gain Stabilisation

The SS200 employs a sophisticated control technique which monitors the count rate and compares it to a statistical model of the radiation and automatically adjusts the gain of the detector system accordingly, in effect an automatic gain control.



SIStec® SS200 DIGITAL DENSITY GAUGE

Accurately measures and determines the density of substances such as slurries, sewage sludge, and liquids, which is crucial for efficient separation and extraction in mining processes. Manufactured by SIS Technologies Pty Ltd, an Australian owned company driving mining innovation since 1985.



SIStec®
Specialised Industrial Systems

www.sistec.com.au

MES
McKavanagh
Engineering Services

216 Harbour Rd (B-08)
Mackay QLD 4740
Call 0486 046 213
Visit mckeng.com.au

QLD SIStec® Distributor

SPECIFICATIONS

Source Holder IP65

- Lead filled sealed ductile steel or 316 Stainless Steel
- Shielding meets or exceeds internationally accepted safety standards
- Rotary shutter with standardising absorber incorporated

Radioisotope

- Double encapsulated Cs137 or Co60

Detector Housing

- IP67 Rugged steel enclosure or 316 Stainless Steel
- Connects to Control Unit with instrumentation cable

Scintillation Detector

- Sodium Iodide with integral photo-multiplier

Control Unit

- IP66 316 Stainless Steel housing
- Switch mode power supply
- 110-240Vac or 24Vdc, 30 Watts
- No loss of data with power off
- Decay clock continues with power off
- Data transmitted by RS422 link
- May be up to 1000 metres from detector module
- Isolated 4-20 mA current output loops (1.5KV)
- Comms options: Modbus RTU, Profibus DP, Device Net, HART Protocol

OPERATION

Temperature Drift

- ± 0.000006 SG units per degree Celsius

Repeatability

- ± 0.0001 SG units typical
- ± 0.0002 SG units maximum

Operating Temperature

- 0 to 60 °C

Vibration

- 2G at 100 Hz

Humidity

- 5 – 95 % RH, non-condensing

Inputs

- 4 – 20 mA from volume flow gauge

Outputs

- Two 4 – 20 mA current loops for SG, per cent solids, mass flow
- Mass flow integrator with potential free contacts, one pulse per tonne

Mass (Kg)

- Source Holder – 39 Kg
- Detector Unit – 19 Kg
- Control Unit – 9 Kg

SIStec® SS200 DIGITAL DENSITY GAUGE

The advanced and extremely stable digital SIStec® SS200 clamp-on pipe density gauge features an onboard computer that integrates solids mass flow and total solids mass throughput measurements.



SIStec®
Specialised Industrial Systems

www.sistec.com.au

MES
McKavanagh
Engineering Services

216 Harbour Rd (B-08)

Mackay QLD 4740

Call 0486 046 213

Visit mckeng.com.au

QLD SIStec® Distributor