



## SRI Dbrix Brix Transducer

**Sugar Research International manufactures a range of brix transducers - essential components for the automation of batch and continuous vacuum pans, seed conditioning units and remelters in sugar factories.**

The SRI Dbrix digital RF brix transducer measures radio frequency impedance changes (from which conductivity and therefore brix can be inferred), and was developed for brix control in sugar mills and sugar refineries. It works best for high and low purity materials above 50°Bx such as refinery liquors, massecuite, syrups and molasses.

- ❑ Dbrix transducers are supplied as a set (probe, exciter and cables) so that sensitive electronic components can be housed away from high temperatures.
- ❑ Dbrix transducers are available in long, short or heated variants to suit all installations.
- ❑ Heated transducers minimise the impact of fouling and require little or no cleaning, even in low-grade syrups.
- ❑ A single 12 bit 4-20mA analogue output is provided, and each transducer may be calibrated for up to four digitally-selectable calibration ranges.



## SRI Dbrix specifications

### What's in the box:

SRI Dbrix transducer sets are securely packed in a 620mm x 180mm x 100mm box, and include:

- 420mm heated RF probe, OR 445mm unheated RF probe, OR 280mm unheated RF probe;
- Printed user manual (English);
- Dbrix RF exciter;
- 300mm RF cable;
- 2m heater power cable (heated RF probe only)

### SRI Dbrix RF exciter:

- Inputs - 2 x digital (calibration range select), 1 x RF (probe), 1 x RS485(calibrator);
- Power - 15-35VDC (nominal at 70mA at 24VDC );
- Protection class IP65;
- Outputs - 1 x 4-20mA (load resistance <600Ω, at 24VDC), 1 x digital (heater power cutout);
- Ambient operating temperature 0-50°C;
- Measurement range 50-96°Bx.

### SRI Dbrix RF probes:

- Stainless steel and Teflon construction;
- Stem diameter 40mm;
- Mount via 50NB BSP socket in pan body;
- Insertion depth - 225mm (short unheated probe); 390mm (long unheated probe); 305mm (heated probe);
- Operating frequency 6 MHz nominal;
- Maximum probe temperature - 100°C (continuous), 120°C (10 minutes maximum);
- Heated probe surface temperature 75-100°C;
- Heated probe power - 24VDC/ AC, 4.1A (100W into 5.9Ω).

### Probe calibration:

SRI Dbrix probes should be calibrated (using the SRI Dbrix calibrator) in-situ for best operation, on production massecuites/ liquors. Temperature compensation may be required (using DCS) for true brix indication.

More information at our website:  
<http://www.sri.org.au/dbrix-brix-transducers>.



Outside Australia, SRI products and services are available through a selected group of strategic partners:

Image courtesy of Bundaberg Sugar Ltd.