

ICE Registers



The Sensus ICE Register, first introduced in 2000, provides virtually error-free readings. Any need for visual meter-reading verification is eliminated. This absolute encoder offers enhanced features and provides greater reliability than its predecessors. It is fully compatible for use in existing Sensus automated meter reading systems including TouchRead™, RadioRead™, and FlexNet™.

There are also 4 programmable fields which include units of measure, reading multiplier, customized 12-character identification field and an additional text field of 20 characters to enter information such as account numbers, installation date etc.

Low-friction, Non-contact Wheel Position Sensing Provides Greater Reliability

The ICE Register utilizes “magnetic-field position-sensing” technology to determine the rotational position of each odometer wheel and its numerical value. The electronic reading of data for TouchRead and AMR applications is derived directly from the rotational position of the register’s odometer wheels, thereby insuring a totally-accurate reading value. The design eliminates mechanical wipers and contacts which are a source of friction that can result in wear that can cause malfunctioning. Also eliminated are snap-action spring mechanisms that add a load to the meter’s measuring element.

Through “magnetic-field position sensing”, each of the eight odometer wheels is fitted in the hub area with a very small coil winding connected in parallel with a capacitor.

The odometer assembly is located within a wire cage, to which an alternating magnetic field is applied when the register is being interrogated for a reading. When the alternating magnetic field is applied, the coil / capacitor on each wheel resonates at a different frequency, depending on the capacitor value used with that coil. The resonance value is detected and processed to determine the angular position of each wheel, and is converted into a numerical value that is the basis for the reading.



Permanent, Factory-set ID Number

As with its predecessors, ICE Registers incorporate a unique, never duplicated identification number that is factory-set into the register’s non-volatile electronic memory. The exclusive ID number can be used to identify a particular meter and link it in a utility’s billing computer to the customer served by that meter.

Utility Programmable

A unique feature, the Sensus ICE Register has four data fields that can be programmed by a utility for incorporating and gathering useful information. One field could be used to identify the register’s unit of measurement. Another to identify a reading multiplier. A third, 12-character field could be used to incorporate a unique ID number. Its 20-character alphanumeric data field could be used to indicate meter size, a customer account number or address, or to identify the utility to protect against inadvertently picking up readings from an adjoining utility’s meters.

Two or Three-wire Register Interrogation Technology

The Sensus ICE Register can be interrogated in either two-wire mode or three-wire AMR mode, which makes it totally compatible for incorporation into existing systems such as two-wire TouchRead or three-wire RadioRead, PhoneRead or fixed based systems. This feature makes it easy and economical for a utility that starts out with a TouchRead System to easily upgrade to a more-advanced AMR system without having to replace the registers on its meters.

**Ask your Team EJP Representative
for a Meter Demonstration**