

# SR11 Meters

## Specifications



### Pitlid Encoder Type Remote

#### ENCODER REGISTER AND REMOTES

Must conform to American Water Works Standard C-707 as most recently revised.

#### TOUCH READ PITLID (TR/PL) REGISTER AND REMOTE MODULE

The register must be of the straight reading type and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. It shall read in cubic feet, gallons or metric units and be capable of direct visual reading both at the meter and by remote reading utilizing a visual interrogation device that connects through to the water meter via a TouchPad located external to the meter, and/or by a Meter Interface Unit (MIU) for remote based Automatic Meter Reading (AMR). The direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.

The register shall be secured to the maincase by means of a tamper-resistant locking bayonet ring so that the register cannot be removed. The register must be field replaceable.

The meter register shall have three terminal connections. The connection between the meter register and the remote pitlid module shall be accomplished with the use of all three terminal connections by using a 3-conductor cable. This will permit the register to be converted to Automatic Meter Reading (AMR) in the future. The register shall transmit the register data directly to the pitlid when interrogated by the interrogation device. To ensure a reliable interrogation system in the moisture environment of a meter pit or vault, the pitlid-mounted module shall be housed in a separate enclosure with factory sealed connections consisting of an environmentally approved epoxy at both the pitlid module and register terminal connections. This shall be vendor provided to prevent moisture penetration and eliminate the need for field sealing requirements.

The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus an even parity bit. Upon interrogation with a TouchPad or AMR/AMI product, the register will transmit an odometer reading containing from 1 to 8 digits (field programmable) and a user defined alphanumeric identification of up to 12 characters (field programmable). The odometer reading is to be obtained from the register by "optical-sensing" technology to determine the rotational position of each odometer wheel. Encoders with a mechanical brush contact with the odometer wheel will not be acceptable. The register can also be programmed to output a factory set, non-programmable identification number, Customer Text of up to 20 alphanumeric characters (field programmable), a reading multiplier ranging from  $10^{-99}$  to  $10^{99}$  (field programmable), and/or a reading measurement unit indicator (for example, US Gallons – field programmable). Data is to be positive true. The register's ASCII digital output is to be capable of interfacing directly to an AMR/AMI transponder to transmit data via radio signal, or power lines to an AMR/AMI system.

The pitlid module shall be of a sturdy and tamperproof construction. The module shall allow for ease of installation on any pitlid (plastic, cast iron or concrete) by cutting an appropriately placed 1-3/4" hole in the lid. The entire pitlid module shall be constructed of a suitable synthetic polymer for long service life under normal operating conditions and be suitable for installation in vehicle traffic areas. The module shall be compatible with the TouchProbe, TouchGun, SmartGun, or AutoGun connected to a handheld or visual reader and be capable of reading when placed in any position on the pitlid module (i.e. without special alignment). The meter shall be capable of being interrogated through the pitlid module when the module is submerged in water or covered with up to 3/16" of debris.

#### CHANGE GEARS

Change gears will not be allowed to calibrate the meter. All registers of a particular registration and meter size shall be identical and completely interchangeable. Should meters arrive with registers containing more than one gear combination, the entire shipment will be returned to the manufacturer freight collect and the next responsible bidder will receive the award.

*Note: See additional specifications for meter hardware.*

