Electronic Register
Specifications

Electronic Register Encoder (ECR) Type Remote

ENCODER REGISTER AND REMOTES

Must conform to American Water Works Standard C-707 as most recently revised. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

TOUCH READ ECR REGISTER

The register must be of the straight reading type. 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 readings obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All components shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material, covered with a plastic lens.

The electronic register is available for all accuSTREAM and SR II meters. The LCD identifies the AMR digit with a bar above the digit. Rate of flow is viewable by closing and opening the lid. The display will remain on for 30 seconds then will turn off. Close and re-open the lid to view the display. A unique locking system prevents customer removal of the register to obtain free water. A special tool, available only to water utilities, is required to remove the register assembly. The register must be field replaceable.

For indoor installations, the register is to be of a one-piece configuration secured to the maincase with a locking ring as part of the register. For outdoor installations,the register shall be attached to the meter utilizing a plastic bonnet register box. The meter register shall be provided with three terminal connections. The connection between the meter register and the TouchPad shall be accomplished with the use of only two terminal connections. The connection between the meter register and the MIU shall be accomplished with the use of all three terminal connections. The register shall transmit the meter reading and register data directly to the interrogation device through the TouchPad or to the MIU when interrogated by an AMR/AMI system.

For installations where moisture is not a concern, the terminal connections shall be protected with a dust cover on the register. The dust cover will be of a snap-on configuration not requiring screws and be equipped with seal wire holes for security. When the meter is to be installed in a vault or pit set installation, the terminal connections shall be permanently factory sealed to three wire interconnecting cable with an environmentally approved epoxy 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 4 to 8 digits (field programmable) and a user defined alphanumeric identification of up to 12 characters (field programmable). Encoders with a mechanical brush contact or “optical-sensing” technology 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.

OUTSIDE TOUCHPAD

The outside TouchPad shall be of a sturdy and tamperproof construction. The TouchPad shall be compatible with the TouchProbe, Touch-Gun, SmartGun, or AutoGun connected to a handheld or Visual Reader. The remote TouchPad shall be protected from the environment with watertight seals. The remote TouchPad shall not require a plug-in or metal-to-metal contact to complete a connection with the interfacing gun or probe. The register data will be transmitted to the interrogation device by touching the interfacing gun or probe to the external cover of the remote TouchPad. The TouchPad will be provided with two terminal connections to accept the two-conductor cable that connects it with the meter register. The remote TouchPad will have provisions to cover and seal the mounting screws to prevent tampering.

CHANGE GEARS

Change gears will not be allowed to calibrate the meter. A single register type is used for any registration and all (5/8” - 1”) meter sizes.

Note: See additional specifications for meter hardware.

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