

# Integral HOT ROD®

**Mueller** SYSTEMS

## Features

**APPLICATIONS:** The Integral HOT ROD® is a high performance, transmitter designed for mobile AMR. It is compatible with all current 5/8" through 2" Hersey Positive Displacement and 3/4" through 2" MVR and RFM Meters utilizing the Translator® Positional Encoder Register. The primary function of the Integral HOT ROD module is to transmit an encoded serial number, water consumption, leak detection information and status data via radio frequency. When combined with the STREET MACHINE™ Mobile Receiver and EZ Reader™ Software, it provides the basis for high speed, high performance meter reading.

**INSTALLATION:** Integral HOT ROD modules are available in two options; metal and standard variant. The metal variant is a high power version for installation in a metal box and the standard version is a low power version for installation in a plastic meter box. Each meter is shipped with the Integral HOT ROD preprogrammed and permanently attached to simplify installation, eliminate exposed wires and mounting hardware in all installation environments. The HOT ROD is also available with exposed wire lengths appropriate for installation on Hersey meters not listed above.

**PERFORMANCE:** The Integral HOT ROD module utilizes the 902MHz to 928MHz ISM band which are FCC license exempt frequencies and translates to lower initial start up costs. The Integral HOT ROD module transmits or "bubbles up" every 3 seconds on multiple frequencies without the need of a "wake up call" insuring a continuous information stream for absolute data collection. Each transmission lasts only 2.5 milliseconds. That equates to almost 11 million opportunities per year to read each Integral HOT ROD module and unparalleled performance.

**CONFORMANCE TO STANDARDS:** FCC compliance: Part 15 certified. The Integral HOT ROD complies with Standard C707 for Encoded Remote Reading Systems. No FCC License is required for operation.

**CONSTRUCTION:** The Integral HOT ROD module consists of a compact printed circuit board which is encapsulated to provide complete protection against shock and water intrusion. The enclosure is made of UV stable, high density thermoplastic and is completely waterproof. All modules are integrally mounted to the meter for all installations. One C size lithium battery provides plenty of power for reading the register and sending RF data. The battery is sealed within the module and is not replaceable. There are no customer serviceable parts inside the HOT ROD.

**INSTANT DATA LOGGING ALARMS:** Along with the standard meter reading the HOT ROD modules also transmit any instant data logging alarms for a specific account identifying a potential problem or issue with that account. The instant data logging alarms can be viewed on the Mapping screen of EZ Mobile™ and trigger the meter reader to stop and take action; such as leaving a door hanger or downloading the hourly consumption data for further investigation of the issue. The types of Instant Data Logging Alarms that can be communicated along with the meter reading are: small and continuous leak, reverse flow, no flow, and register disconnect. These instant data logging alarms can also be viewed with the Extended Data report from EZ Mobile.

**HOURLY CONSUMPTION DATA:** The HOT ROD modules come standard with the ability to log and store up to 170 days of hourly consumption data that can then be downloaded by a meter reader/technician using the same Street Machine™ Mobile Receiver that is used to read meters. The meter reader would just start up EZ Profiler™ Software and swipe a magnet over the top of the Hot Rod module to begin the process. The monthly, daily or hourly consumption profiling data can then be displayed on a bar graph that can be supplied to the customer to help justify the amount being charged and resolve high water bill disputes/complaints. This information can also be used to monitor and address water conservation initiatives, such as, odd-even watering restrictions.



Integral HOT ROD®

## Materials and Specifications

RADIO FREQUENCY	Operates on 902 to 928MHz
MODEL	Integral HOT ROD® Standard and Metal Pit Options
POWER SOURCE	C Cell Lithium Battery
TYPICAL RANGE	Up to 1200 feet
TRANSMIT FREQUENCY	902 MHz – 928 MHz
DATA INTEGRITY	Verified with every data message
TEMPERATURE RANGE	Operating Temperature: -40°F to + 158°F (-40°C to + 70°C) Storage Temperature: -40°F to + 158°F (-40°C to + 70°C) Humidity: 0% - 100% condensing
OPTIONS	Wired Hot Rod Devices

## FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## WARNING – Changes or Modifications

Any changes or modifications not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment.

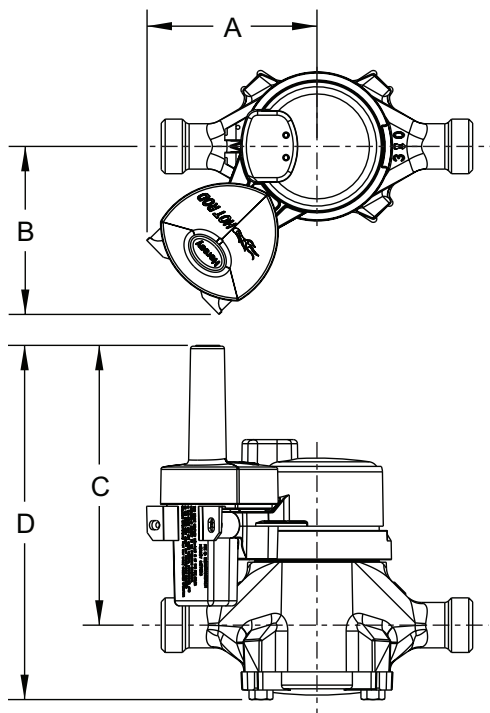
## Caution: Exposure to Radio Frequency Radiation.

The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device shall be used in such that the potential for human contact during normal operation is minimized.

For devices having the following FCC ID: SSDHOTRODMETALV1

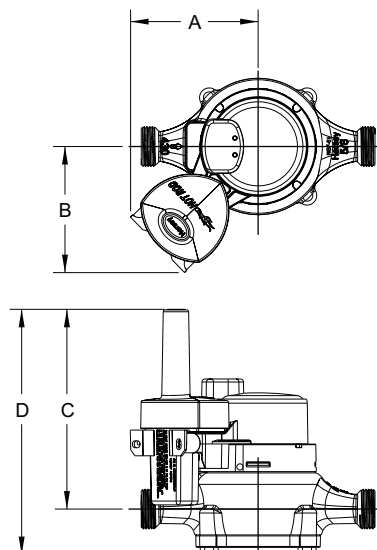
Such devices are authorized for use only in water pit installations using metal enclosures comparable in mechanical construction to the type specified in the filing and is only for below ground use. Professional installation is required. Installation instructions provide appropriate details for the installation of the transmitter in the pits and specify the types of pits and lids that can be used and provide information about any materials necessary to comply with the conditions of the grant.

## MVR Meter



Meter Size	3/4"	1"	1-1/2"	2"
Model	MVR 30	MVR 50	MVR 100	MVR 160
Dimensions				
A	4-1/8"	4-1/8"	4-1/8"	4-1/8"
B	4-1/8"	4-1/8"	4-1/8"	4-1/8"
C	6-5/8"	6-31/32"	6-15/16"	7-1/64"
D	8-5/8"	9-9/32"	9-13/32"	10-1/4"

## PD Meter



Meter Size	5/8"	5/8"	3/4"	1"	1-1/2"	2"
Model	420	430	442	452	562	572
Dimensions						
A	4-1/8"	4-1/8"	4-1/8"	4-1/8"	4-1/8"	4-1/8"
B	4-1/8"	4-1/8"	4-1/8"	4-1/8"	4-1/8"	4-1/8"
C	6-3/8"	6-7/16"	7-3/16"	7-5/8"	8-13/16"	8-15/16"
D	7-7/8"	7-7/8"	8-7/8"	9-3/8"	11-1/4"	11-15/16"