Building technology

UNICOe - NTEP

Singlejet consumption meter
with electronic register
for cold/hot water
¾"

Your benefits

- Utility grade and sustainable technology (robust & high grade wear resistant materials with brass body):
  Excellent measuring stability and reliability over meter lifetime and awareness of using a recyclable product
- NFC Tap and go
  Simple commissioning process
- Plug & Play:
  Easy and fast activation in LoRaWAN (no programming required)
- Performance driven design:
  Range up to 10 miles (line of sight)
- Integrated monitoring of connectivity and reconnecting mechanism:
  Robust operation with automatic repair options, e.g. due to gateway failures

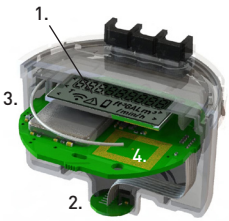
Features

- Singlejet dry-dial meter with magnetic coupling
- Inlet strainer
- Horizontal or vertical installation
- Sealed register for tamper resistance
- Typical battery lifetime up to 10 years
- 18 monthly volume key date values
- NTEP Approval CC 19-019A2
- NSF/ANSI 61-G & 372 certified and marked
- Meets AWWA C712 accuracy standards in horizontal and vertical position
- LoRaWAN transmission in license free 915 MHz frequency band
- Data security via AES-128-bit end-to-end encryption over 2 independent security layers
- ADR (adaptive data rate) support gives higher transmission intervals with consistent battery life

Application

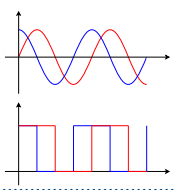
- Multi-Family residential and Retail/Commercial applications for consumption monitoring of water and identification of critical events

Electronic Register - Hybrid - Technology



1. LCD
2. Sensors
3. Communication antenna
4. NFC interface

Signal Processing:



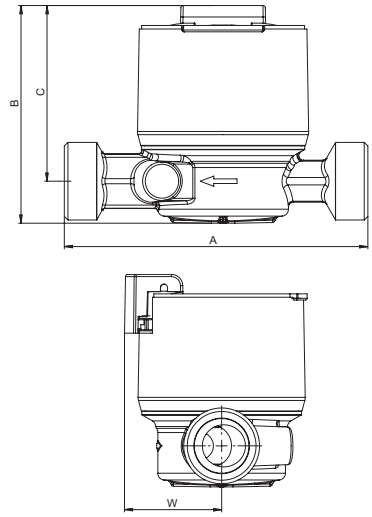
- The ERH register is designed to detect the rotations of either two or four-pole magnets. Its electronic filter protects it from external magnetic disturbances, while two sensors filter and digitally convert the magnetic field.
- A highly efficient microcontroller is responsible for determining the rate and direction of flow while also having the capability to detect a range of events and alarms, such as backflow. Furthermore, the LCD display allows for maximum flexibility when viewing the measurement data.
- Lastly, the ERH register is fitted with an energy-saving, access-protected NFC interface for parameterization and activation, as well as a wireless communication transceiver for LoRaWAN 915 MHz.

Installation

Pipeline: horizontal —
vertical up-flow
vertical down-flow |

Meter head: facing up ↑
sideways ←→

Dimension Diagram



Technical Data

Nominal pipe size		¾"
Max. operating pressure	psi	230
Connection thread on meter	Inch	1" NPSM
Permanent flow rate	gpm	11
Max. flow rate	gpm	22
Min. flow rate	gpm	0.5
Max. operating temperature	°F	194

Dimensions and weights			
Length without couplings	A	Inch	5.12"
Height	B	Inch	3.7"
Height from pipe centre line	C	Inch	3.0"
Installation depth from pipe centre line	W	Inch	1.7"
Weight without couplings		lbs	1.5

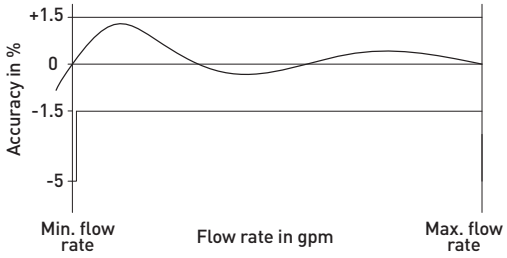
Ambient conditions	
Ambient temperature	+ 41 °F to + 131 °F
Transport & Storage temperature	-4 °F to + 158 °F
Register protection class	IP67

Power supply	
Lithium/Mangan battery (not replaceable)	3 V DC
Typical battery lifetime (depending on environment and configuration conditions)	Up to 10 years

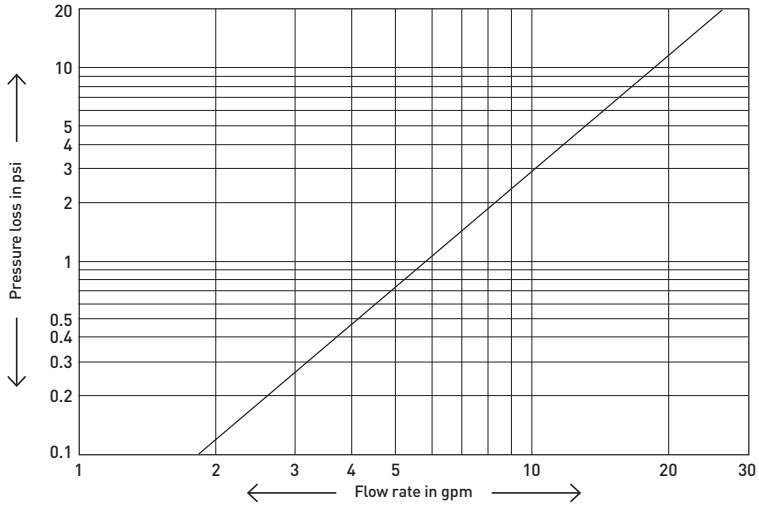
Approval	Unico2e
NTEP cold/hot No. CC 19-019A2	■
New York Certificate No. 10766	■
FCC ID: 2A4F7-ERH	■

Certifications	Unico2e
NSF/ANSI 61-G & 372 D-Hot / incl. cold	■
LoRa Alliance Certification (1.0.4 spec.)	■

Accuracy chart



Pressure loss chart

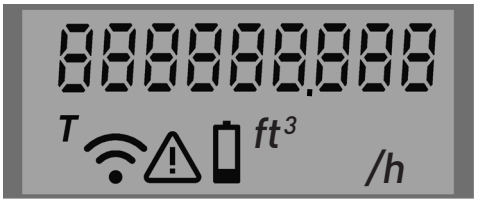


Technical Data

Display	
Volume unit	GAL or ft^3
LCD	9 digits
Volume resolution	0.01 GAL or 0.001 ft^3
Flow rate unit	GAL/min or ft^3/h
Test bench mode	T
Low battery Icon	
Alarm Icon	
Radio indicator (On/Off) and LoRaWAN connectivity status	

GAL

ft3



LoRaWAN specifications	
Regional parameters (Frequency band)	US902-928 MHz ISM Band (902 - 928 MHz)
Transfer protocol (payload)	GWF specific
Radiated power	max. 20 dBm (100 mW)
Class	A
ADR (Adaptive data rate)	Yes
Activation type	OTAA

Information data package	
DevEUI	70B3D538700000AB
Meter manufacturer	GWF
Medium	Water
Meter S/N	23132356
Absolute meter reading (down to 15 min values)	359.76 GAL
Remaining battery life	Semester
Alarms	Meter alarms, Low Battery, Burst pipe, Potential leak, Backflow, No Usage, Max. flow rate exceeded, Min./Max. temperature

GWF AG
Obergrundstrasse 119
6005 Lucerne, Switzerland

T +41 41 319 50 50
info@gwf.ch, www.gwf.ch

Technical support:
T +41 41 319 52 00, support@gwf.ch

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