Aclara RF 3400 Water MTU

On-Demand Meter Transmission Unit



The new 3400 On-Demand Meter Transmission Unit (MTU) for water uses the efficient, low-power, high performance two-way Aclara RF Network technology to transmit hourly, interval usage data to the utility. The MTU supports up to nine-digit registers and delivers time-stamped reads on a time-synchronized network, allowing for advanced water distribution management. Enhanced features such as on-demand reads, firmware over the air, on-board storage of readings, market leading security,meter-generated alarms and flags and remote shut-off valve control bring market-leading AMI capabilities to the Aclara RF Network.

OVERVIEW

Hourly, time-stamped reads from Aclara MTUs virtually eliminate estimated billing and errors, provide detailed water usage information, improve revenue management, and reduce customer service calls.

The 3400 family takes full advantage of the Aclara RF two-way network with enhanced features such as on-demand reads and firmware downloads over the air. Full market leading security – including AES 256 bit encryption - ensures that customer data is secure.

FEATURES AND BENEFITS

- Detailed, hourly, time-stamped reads provide water consumption data for accurate billing and identifying anomalies such as leaks and meter tampering
- The MTU transmits up to nine digits of meter-reading data guaranteeing the most accurate meter reads
- Use of FCC licensed 450- to 470-MHz radio frequencies improves propagation and reduces interference with other devices
- On-demand reads give utilities complete control over access to consumption data
- Two-way fixed network allows utilities to remotely update MTU configurations and push firmware upgrades
- Flexible installation configurations to fit all meter locations
- Time synchronization ensures a complete system read snapshot at a single point in time to reconcile the amount of water entering the system to the billable water consumed
- Redundant readings transmissions and collection paths assures the highest read success rate in the industry
- Battery powered MTUs and collectors means readings and collections continue even during power outages. Stored readings in the DCU are automatically uploaded to the head-end when power is restored, while readings stored in the MTU can be remotely recovered by request
- A 20-year lithium-ion battery offers long-lasting performance
- Market leading security for all communications including AES 256 encryption and authentication
- Optional remote shutoff valve controlled over the network eliminates truck rolls and simplifies turn-on/turn-offs
- Gain more insight into conditions at the meter through support for enhanced meter flags and alarms



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MTU SPECIFICATIONS

Network type	Two-way[1]
Transmit/receive frequency	450-470 MHz (FCC licensed)
Installation locations	Interior or exterior wall mount, pit/vault, remote antenna through-the-lid[2]
Scheduled read interval	Hourly top-of-the-hour readings (default, configurable)
Scheduled transmit interval	Four times per day (default, configurable)
Security	AES 256 encryption and authentication
Inputs	Single or dual port
On-board storage	96 days of hourly readings and alarms – per port
Connection to register	Bare wire (splice), or industry-standard connectors
Remote shut-off	Open, close, partially closed – controlled from head-end software[3]
Battery life	20 years[4, 5, 7]
End point to end point synchronization	< 1 min
Physical characteristics	6.38”w x 4.25”h x 1.44”d; 1 lb; color: gray
Operating temperature	-40°C to +70°C
Operating humidity	0%-100% non-condensing
Storage temperature	-40°C to +85°C
Approvals	FCC part 90; Industry Canada RSS-119
Warranty	20 years[6, 7]
Meter compatibility	All major manufacturers of water meters
Meter flags	Supports extended flags and alarms from multiple meter manufacturers[8]
Network topology	Network (point to multi-point)
Network compatibility	Aclara DCU II
Meter interface	Pulse or encoder
Data resolution	4–9 digits[9]

[1] Two-way communication for time synchronization, remote configuration, on-demand reads, historical data log retrieval, valve control, and firmware over the air downloads

[2] Pit/vault installation under non-metallic lid, or under metallic lid using through-the-lid remote antenna

[3] Contact factory for specific valves supported

[4] Battery life is stated at default settings

[5] Standard range MTU model

[6] Refer to Aclara standard warranty for details

[7] Battery life warranty invalid if MTU stored more than 1 year before installation and activation

[8] Contact factory for specific meters and flags/alarms supported

[9] Reports all digits that are electronically available from register

Specifications are subject to change without notice.

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