



STAR® Network 3000 Series Gas MTU

METER TRANSMISSION UNIT

At the heart of the STAR Network for gas utilities is the Series 3000 line of MTUs, which offer accurate and timely meter data to support a myriad of operational functions.

Hourly, time-stamped reads from Aclara's Series 3000 MTUs virtually eliminate estimated billing and errors, improve revenue management and reduce customer service calls. What's more, Series 3000 MTUs signal the utility if tampering is suspected and will notify of reverse flow conditions or unauthorized programming.

Technical Highlights

Meter readings every 60 minutes are transmitted to the utility four times per day.

Utilities can program shorter intervals over the air.

Each of four daily uploads include the 12 most recent stored readings, ensuring no missed reads.

Devices transmit up to eight digits of meter-reading data and offer a resolution of one pulse per revolution of the proving dial.



Residential Meters

Aclara supports all major residential gas meters with specifically designed MTUs, offering utilities the flexibility to choose a solution that works best for them and minimizing installation times. MTUs are designed to install at original equipment manufacturers or to easily retrofit to existing meter installations.

Residential Meter Specifications	
Range	Standard, extended
Installation (Mount)	Direct, remote
Inputs	Mechanical interface
Tamper Detection	Magnetic, reverse flow, tilt, index cover, configuration change and cut wire ¹
Data Resolution	4 – 8 digits ²

Notes

1: Cut wire only for remote mounted

2: Reports all digits electronically available from register



Commercial Meters and Volume Correctors

Aclara designs its MTUs to tightly integration with commercial devices and take advantages of their unique capabilities. Our MTUs provide both corrected and uncorrected readings and we support major commercial meters including the Dresser Series B3 as well as volume correctors and pulse input devices. Gas utilities can use hourly, time-stamped data from Series 3000 MTUs to facilitate revenue assurance and advanced distribution management. Plus, remotely monitoring devices can help utilities quickly and efficiently respond to problems and emergencies.

Commercial Meter Specifications	
Range	Standard, Extended
Installation (Mount)	Direct
Inputs	Single port
Tamper Detection	Magnetic, reverse flow, tilt, index cover, configuration change
Data Resolution	4 – 8 digits ¹

Pulse Input Device/Volume Corrector Specifications	
Range	Extended
Installation (Mount)	Remote
Inputs	Single or dual port
Wire length	12 feet
Tamper Detection	Configuration change, cut wire
Data Resolution	4 – 8 digits ¹
Output Compatibility	Open collector, open drain, reed switch
MTU Count	Increments at the OFF to ON transition

Notes

1: Reports all digits electronically available from register



Benefits of a Two-Way Fixed Network

Series 3000 MTUs deploy on the high-performance STAR® Network system, transmitting hourly interval data over FCC-licensed 450- to 470-MHz radio frequencies without disruptive interference. The high-performance MTU is a third-party certified, intrinsically safe device designed to be an exact match for a gas utility's existing meter population.

The high-performance Aclara two-way network allows gas utilities to remotely update MTU firmware. In addition, a signal from the utility can set off a synchronized read of all system MTUs, collecting the data needed to reconcile the amount of gas entering the system to the billable gas that is consumed.

Battery Life

MTU lithium-ion batteries in Aclara gas MTUs are guaranteed for 20 years under standard operating conditions. Extended range and specially programmed MTUs may have shorter battery lives, depending on configuration.

MTU Specifications

Aclara offers Series 3000 MTUs to fit any utility requirement for residential or commercial meters, as well as volume correctors and pulse-input devices. MTUs may be remote- or direct-mounted. In addition to standard-range MTUs, Aclara provides an extended-range version for when topology or obstructions pose challenges for transmitting radio frequencies.

General Specifications	
Network type	Two-way
Transmit frequency	450-470 MHz (FCC licensed)
Antenna	Internal
Read interval	Hourly
Transmit interval	Four times per day default
Battery life	20 years ^{1,2}
End point to end point time difference	< 1 min
Operating temp range	-40°C to +60°C
Operating humidity	5% - 95% Non-condensing
Tamper detections	Magnetic, reverse flow, tilt, index cover, and configuration change
Security	Data encryption
Approvals	FCC part 90, Intrinsically Safe (Class 1, Div. 1, Group D) per Factory Mutual (FM)
Warranty	20 years ³
Network topology	STAR Network
Network compatibility	Aclara DCU IIJ
Handheld interface	STAR programmer 2.0.6.27



Notes:

1: Battery life is stated at default settings

2: Standard range

3: Refer to Aclara standard warranty for details

Specifications are subject to change without notice



Aclara

945 Hornet Drive, Hazelwood, MO 63042 | P: 800.297.2728 | F: 314.895.6543
 info@aclara.com | www.Aclara.com