SPECIFICATION SHEET · WATER AMR / AMI ENDPOINT

Tesla Solo

450 MHz AMR / AMI Endpoint for Water

Transmits meter data over a point-to-multipoint Private RF Network in the 450–470 MHz band, with drive-by AMR built in.

Bid Ready | Hybrid AMR / AMI | Two-Way



OPERATION

Description

The endpoint reads the encoder for interval data and meter status and relays it over the Private RF Network. Two-way communication provides time sync, on-demand reads, over-the-air firmware updates and remote shut-off valve control.

ACTIVATION

Ships inactive

Endpoints ship in a non-transmitting state and begin reporting once the encoder shows water use. A magnet can activate the endpoint and verify the encoder connection.

READ STRATEGIES

AMR, AMI or both

Drive-by AMR, fixed network AMI, or both at once, with no programming. Migrates from AMR to AMI as collectors are added.

CONFIGURATIONS

Pit, vault or wall

Indoor, outdoor and through-the-lid installations. A polymer pit lid is recommended; any metal lid reduces RF range for every brand of endpoint.

SPECIFICATIONS

Network	Private RF Network, 450–470 MHz licensed, point-to-multipoint; drive-by AMR with Tesla Drive
Range to collector	Up to 3.5 miles to a Fixed Network Collector[8]
Read strategies	Drive-by AMR, fixed network AMI, or both at once, with no programming
Network type	Two-way[5]
AMI read resolution	Hourly
AMI transmission interval	Every 15 minutes
Major Leak alarm	Sent immediately
On-board storage	120 days of hourly reads, per port
Meter flags and alarms	Back flow, tamper, leak, major leak, encoder disconnect, diagnostic and battery status, plus extended flags from multiple meter brands[4]
Meter interface	Encoder (UI-1203 and extended protocols) or pulse; single or dual port
Meter compatibility	All RG3 meters and encoders and most major water meter brands[4]
Remote shut-off	Open, close or reduced flow, controlled from Tesla MDM or Tesla Drive[6]
Security	AES-256 encryption and authentication
Synchronization	Endpoint clock within 1 minute
Firmware updates	Over the air on the Private RF Network, or on site with Tesla Drive

SPECIFICATIONS (CONTINUED)

Battery	Non-replaceable D-cell lithium thionyl chloride with hybrid layer capacitor
Battery life	20 years[1]
Approvals	FCC Parts 15 and 90
Installation	Interior or exterior wall, pit or vault, through the lid[3]; 2-1/8 in pit lid hole
Connection	Bare wire (splice), RG3, Nicor or other industry-standard connectors
Data resolution	4–8 digits[2]
Environmental	IP68, fully potted solid state; -40 to 185 °F (-40 to 85 °C); 0–100% humidity
Physical	Height 6.5 in · thread width 1.8 in · cap at threads 1.98 in · base 3.2 × 3.1 in · 1 lb · black
Software	Tesla Drive (drive-by), Tesla MDM (office)
Warranty	20 years (10 full, 10 prorated)[1] [7]

SPECIFICATION

Tesla Solo specifications

SUGGESTED BID LANGUAGE

Item	Specification
Network	Each endpoint shall communicate over a utility-licensed 450–470 MHz point-to-multipoint private network and shall be readable by drive-by AMR, with no programming to change read method.
Range	Endpoints shall communicate with fixed network collectors up to 3.5 miles away under typical conditions.
Data	Endpoints shall store 120 days of hourly reads per port and transmit every 15 minutes; major leak alarms shall be transmitted immediately.
Two-way	Endpoints shall support on-demand reads, time sync, remote configuration, remote shut-off valve control and over-the-air firmware updates.
Security	All messages shall use AES-256 encryption and authentication.
Environment	Endpoints shall be IP68, fully potted solid state, with a non-replaceable lithium battery rated for 20 years.

[1] Battery life warranty is void if the product is stored more than 1 year before installation and activation.
[2] Reports all digits electronically available from the register.
[3] Best performance in a pit or vault under a non-metallic lid.
[4] Contact RG3 for specific meters, flags and alarms supported.
[5] Two-way: time sync, remote configuration, on-demand reads, data log retrieval, valve control and over-the-air firmware updates.
[6] Contact RG3 for specific valves supported.
[7] See the RG3 standard warranty for details.
[8] Typical range; actual range depends on terrain, buildings, antenna height and pit lid.