TESLA-SOLO

Description

Tesla Solo (Solo) AMI / AMR water endpoints transmit meter data over a point-to-multi-point Licensed Private Network (LPN) in the 450 – 470 MHz band for smart water applications. Tesla Solo endpoints can be used in AMI and AMR applications.

Functionality

Operation: Tesla Solo endpoints communicate with an encoder register to capture and relay interval read data and meter status information over 450 MHz point-to-multi-point Licensed Private Network. Two-way communication provides for time synchronization, on demand reads, over the air firmware updates, and remote shut off valve control. Solo endpoints are designed for AMI fixed network reading while offering AMR drive-by reading with no programming. Solo endpoints can be used in Hybrid AMR / AMI systems and can easily migrate from AMR to AMI.

Activation: Tesla Solo endpoints are shipped in an inactive, non-transmitting state. After installation, the endpoints begin communicating data once the encoder indicates water has been used. Alternatively, a magnet can be used to manually activate the endpoints and verify the encoder connection.

Data Storage: Tesla Solo endpoints store 120 days of hourly data for local data log retrieval.

Output Message: Tesla Solo AMI / AMR endpoints communicate a unique serial number, meter reading data, and applicable status indicators such as flags and alarms.

Application

Read Strategies: Tesla Solo AMI / AMR endpoints can be utilized in a drive-by AMR, fixed network AMI or combination of the two read strategies simultaneously with no programming needed.

Configurations: Tesla Solo water endpoints can be installed in indoor, outdoor and pit lid applications. As with all radio frequency (RF) endpoints of any manufacturer, mounting through or under a metallic pit lid has a negative impact on antenna propagation. Polymer meter pit lids are highly recommended for optimal performance. The electronics and battery assembly are fully encapsulated in epoxy for environmental integrity. The endpoint is available with a connector assembly for ease of installation.

2912 South Access Rd.
Longview, TX 75602
PH: 903-753-3456
Fax: 903-753-5678
RG3METER.COM

Specifications

Approvals	FCC part 90 and part 15
Battery	Non-replaceable D-Cell lithium thionyl chloride with HLC capacitor for extended life
Battery life	20 years[1]
Connection to register	Bare wire (splice), RG3, Nicor or other industry-standard connectors
Data resolution	4–8 digits[2]
Encoder disconnect	An alarm is sent if communication with the encoder is interrupted as in the case of theft or vandalism
Endpoint to endpoint synchronization	< 1 min
Firmware updates	Over the air (OTA) firmware updates can be performed remotely via the LPN or on-site through Tesla Drive software
Inputs	Single or dual port
Installation Locations	Interior or exterior wall mount, pit/vault, through-the-lid[3]
Meter encoder compatibility	All RG3 meter and encoders as well as most major manufacturers of water meters[4]
Meter flags and alarms	Back flow, Tamper, Leak, Major Leak, Diagnostic and Battery Status flags as well as supporting extended flags and alarms from multiple meter manufacturers[4]
Meter interface	Pulse or Encoder
Network compatibility	Tesla Net
Network type	Two-way[5]
Network topology	450 - 470 MHz Licensed Private Network (point-to-multi-point)
On-board storage	120 days of hourly readings – per port
Operating humidity	0%-100% non-condensing
Operating temperature	-40˚ to 185˚F (-40˚ to 85˚C)
Physical characteristics	Height 6.5″ Width of Threads 1.8″ Width of Cap at Threads 1.98″ (2-1/8″ pit lid hole required) Dimensions of Base 3.2″w x 3.1″ d Weight: 1 lb Color: black
Remote shut-off	Open, close, partially closed – controlled from Tesla MDM or Tesla Drive software[6]
Security	AES 256 encryption and authentication
AMI read transmission resolution	Hourly
AMI read transmission interval	15 minutes
AMI Major Leak alarm transmission	Immediate
Warranty	20 years[1], [7]

[1] Battery life warranty invalid if product is stored more than 1 year before installation and activation
[2] Reports all digits that are electronically available from register
[3] Pit/vault installation best performance under non-metallic lid
[4] Contact factory for specific meters and flags/alarms supported
[5] Two-way communication for time synchronization, remote configuration, on-demand reads, historical data log retrieval, valve control, and firmware over the air (OTA) updates
[6] Contact factory for specific valves supported
[7] Refer to RG3 standard warranty for details

2912 South Access Rd.
Longview, TX 75602
PH: 903-753-3456
Fax: 903-753-5678
RG3METER.COM