



## Features

- LTE and GSM connectivity
- 3 independent NO/NC outputs
- Opto-isolated Modbus RTU
- 2 opto-isolated digital inputs with SMS alert
- Astronomical timer
- GNSS for accurate time and location
- Internal website for configuration
- LAN with PoE
- Output control from server and by SMS
- Modbus archive data in internal memory
- Aluminium compact size casing
- DIN rail mounting

The AG-811 is a Gateway dedicated to work with central controlling and monitoring systems. It support two-way communication with server trough LTE/GSM or Ethernet. It has inbuilt timer with 10 ON/OFF schedule within 24h, auto configurable sunrise/sunset timer based on geolocation and has 3 independent relays with NO/NC outputs. Every output can be controlled by separate time schedule. Gateway has isolated Modbus RTU interface to communicate with energy meters, PLCs and other Modbus devices. Can be configured by: internal website, SMS, string from server and

configuration file loaded in predefine URL. For accurate time and location it has GPS and RTC.

Gateway is for use in street light control panels and other application where it is needed to control accurate on/off time with support of Modbus devices. It can be controlled remotely from server or via SMS or also work in stand alone mode.

The AG-811 has advance alert option with 10 mobile number list for SMS alerts. In superCap models there is power backup with power loss alert facility

Description	Parameter
<b>Serial Interface</b>	
Interface Type	RS485
Data Rate	1200bps ~ 460800bps
Signals	A and B
Data Length	7, 8 bits
Parity	Odd, Even, None
Stop Bits	1, 1.5, 2
Flow Control	None
Connector	Pluggable screw socket
Protection	Opto-isolated 2.5kV RMS per UL 1577 IEC 61000-4-2 level 4: - 15 kV (air discharge) - 8 kV (contact discharge)

Description	Parameter
	MIL STD 883C-Method 3015-6: class 3. (human body model) Fail-safe receiver for bus open, short and idle
<b>LTE/GSM Interface</b>	
Band LTE FTD	B1/B3/B5/B8
Band LTE TDD	B34/B38/B39/B40/B41
Band GSM	900/1800MHz
GPRS Slot	Multi-slot class 12/10
Link	GPRS class 12: max. 85.6 kbps (downlink/uplink)

Description	Parameter
Power	Compliant to GSM phase 2/2+ - Class 4 (2 W 900MHz) - Class 1 (1 W 1800MHz)
	MicroSIM, push-pull type holder
SIM card	3V/1.8V
Antenna Connector	SMA female
<b>GNSS</b>	
GNSS Systems	GPS, BAIDOU
<b>Ethernet<sup>1</sup></b>	
Number	1
Type	10/100M port
PoE	PoE class A (spare pare)
<b>Data to Server Protocol</b>	
Protocol type	TCP/IP and JSON
Authorisation	By authorisation key
Communication type	Dual way by TCP/IP
	MQTT (under development)
	One way in JSON (Gateway to server)
Encryption support	SSL on LTE and GSM, (TLS1.2)
<b>Digital Inputs</b>	
Input number	2
Input type	Opto-isolated 2.5kV
Configuration	Separate IN-GND
Connector	Pluggable screw socket
<b>Relay Outputs</b>	
Output number	3
Output type	NO/NC
Loadmax	3A 230V AC or 3A 30V DC
Connector	Pluggable screw socket
<b>System Functions Indicators</b>	
Indicators	PWR - power indicator
	ACT - activity
	TXD - data indicator
	RXD - data indicator
	Digital output indicators
	Digital input active indicator
<b>Configuration and System</b>	
Configuration method	SMS specific commands
	Internal website
	String from TCP/IP server
	Remote or local configuration file

<sup>1</sup> The current firmware version does not support SSL over Ethernet

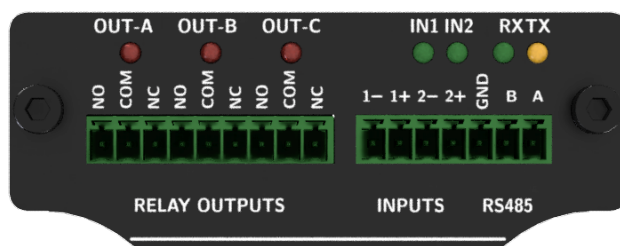
Description	Parameter
Access authorisation	Password protection
System protection	Watchdog, and configurable guard
OS support	Any latest internet browser
<b>Power Supply</b>	
Connector	3 pin (+, -, earthing) Pluggable screw socket
Power Voltage range	10-36V DC (12-36 in BAT models)
Power consumption	3W average
Protection	Reverse polarity
	Over voltage
<b>Battery backup<sup>2</sup></b>	
Battery type	LiOn
Battery voltage	7.4V
Backup time	4-5h (approx)
Charging type	DC/DC system
Battery protection	Over voltage, over temperature, low battery
<b>SuperCAP backup<sup>3</sup></b>	
Backup time	30 second
Charging time	10 minute (approx)
<b>Physical Characteristics</b>	
Installation	DIN-Rail
Housing	Aluminium
Weight	270g
Dimensions	88mm x 35mm x 87mm
<b>Environmental Specification</b>	
Operating Temp.	-25 ~ 75°C (-13 ~ 167°F)
Storage Temp.	-40 ~ 85°C (-40 ~ 185°F)
Ambient RH	5% to 95% (non-condensing)

<sup>2</sup> Selected BAT models only. These models are under development.

<sup>3</sup> Selected SC models only

## Ordering model selection chart

Models	Hardware Options		
Model	Mobile		Backup
AG-811	GPRS	LTE	SuperCAP
AG-811-GS	√		
AG-811-LT		√	
AG-811-LT-SC		√	√



## Copyright

Copyright © 2023 Atreyo Research and Development LLP. This technical specification is protected under national and international copyright laws. No part of this user manual may be reproduced, distributed, translated, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or storing in any information storage and retrieval system, without the prior written permission of Atreyo Research and Development LLP. Copy or use any part of this specifications is prohibited without the prior written permission from the Atreyo Research and Development LLP. Atreyo Research and Development LLP shall not unreasonably withhold or deny such consent but shall be entitled to receive additional equitable remuneration in connection with its grant of consent.

## Trademarks

Atreyo and the Atreyo logo are registered trademarks of Atreyo Research and Development LLP.

All other trademarks and copyrights are the property of their respective owners.

## Disclaimer

- All dimensions mentioned in the drawings are not to scale and may vary/differ due to construction contingencies and site conditions which are subject to change as may be decided by the company.
- The specifications and amenities mentioned in this document and promotional documents are only representational and informative. The descriptions in this specification are based on the default configuration of your device.
- Images used in this specification may differ in appearance from the actual product.
- The Atreyo Research and Development LLP reserves rights to make additions, deletions, alterations or amendments as and when it deems fit and proper, without any prior notice.

**Atreyo Research  
& Development LLP**

**+91 9727741417  
info@atreyo.in**

414, Sunrise Mall, Mansi Circle,  
Vastrapur  
Ahmedabad 380015, India