

RS485 Cellular Gateway

24/7 Online Remote Diagnostics and Troubleshooting
Level Monitoring and Control Via Secure Server



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Features

- Connects one RS232-type or up to eight RS485-type ABM Radar level sensors to the secure ABM server through a cellular network.
- Operates from 12 to 30Vdc supply.
- Sensor supply output for use with any ABM300 series radar sensor if required.
- Measurement intervals and reporting intervals are each selectable in 2 minute increments.
- Online access to the ABM server allows for monitoring, control, diagnostics and troubleshooting from any web browser.
- Email notification for up to 5 alarm types per sensor is available.



Applications

- Any liquids or solids that can be monitored by an ABM Radar Level Sensor.
- Any local or remote location where cellular coverage is available.
- Ideal for slow processes such as bulk storage, floodway monitoring, etc.

Mechanical

Enclosure

- Polycarbonate Box; 120 x 90 x 60.5mm (4.72 x 3.54 x 2.38”); NEMA 4/4X ingress protection.
- Polycarbonate mounting feet can be set for vertical (as shown above) or horizontal orientation.

Supplied Cables

- From Power Supply: Two-wire 24AWG shielded cable, minimum length of 1.5m (5ft).
- To Level Sensor(s): Four-wire 24AWG shielded cable, minimum length 1.5m (5ft).

Antenna

- Magnetic base antenna provided with 6’ (2m) cable with SMA connector (IP67 rated).
- Optional SMA mounted antenna available for both indoor (shown in photo) and outdoor applications.

Electrical

- Supply Input: 12V to 30Vdc. Minimum voltage is dependent on number of sensors supplied. See the RS485 Cellular Gateway Installation Manual for details.
- Maximum supply current: 0.5A @ 12Vdc, 0.2A @ 30Vdc (supplying single sensor).
- Sensor Supply Output: 18 – 30Vdc, maximum 0.6A.

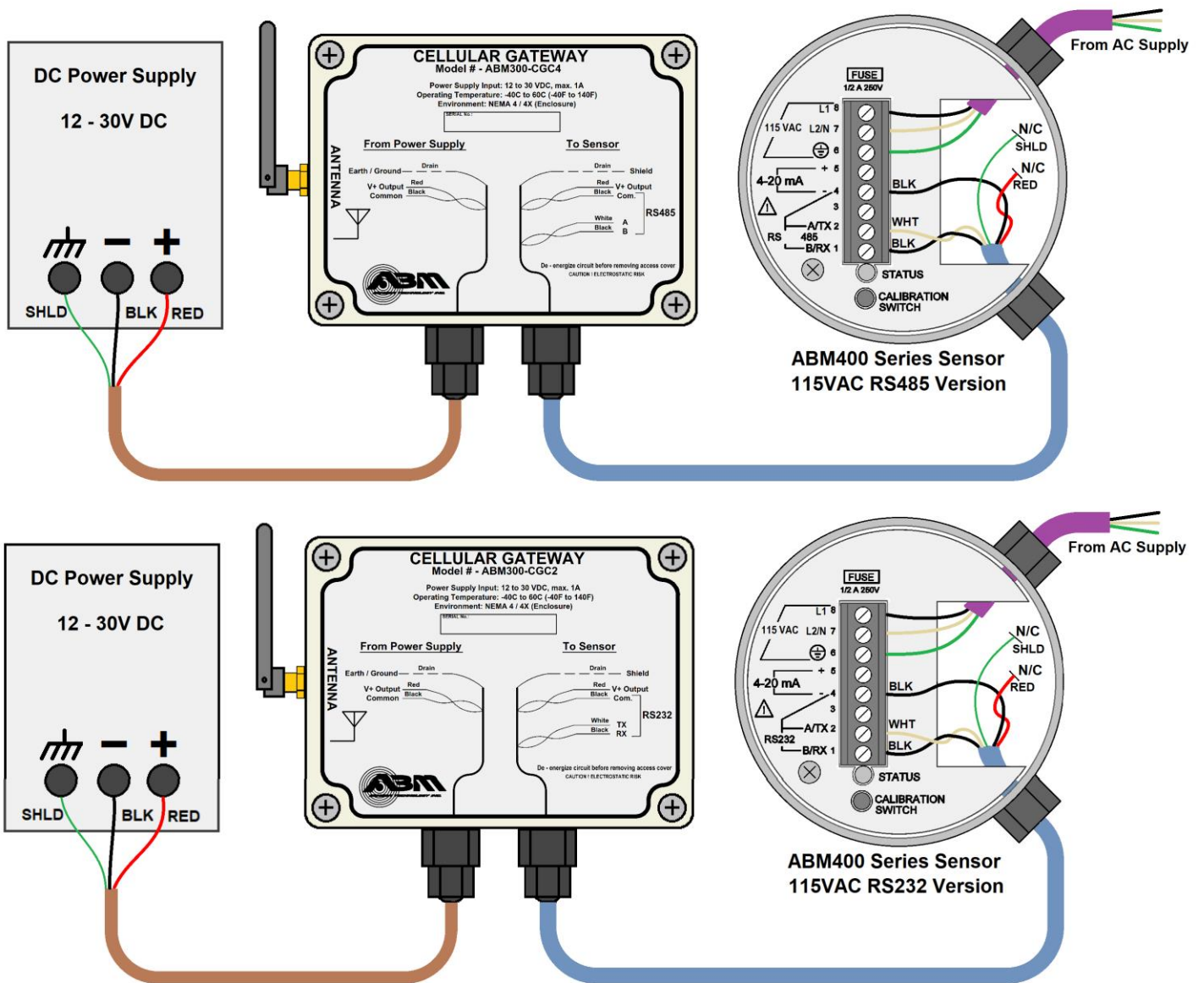
Approvals

- Radio Compliance: FCC Part 22, FCC Part 24

Environmental

- Temperature: -40°F to +140°F (-40°C to +60°C)

Configuration Example 1 – Single Sensor With Separate Supply – RS232 or RS485:

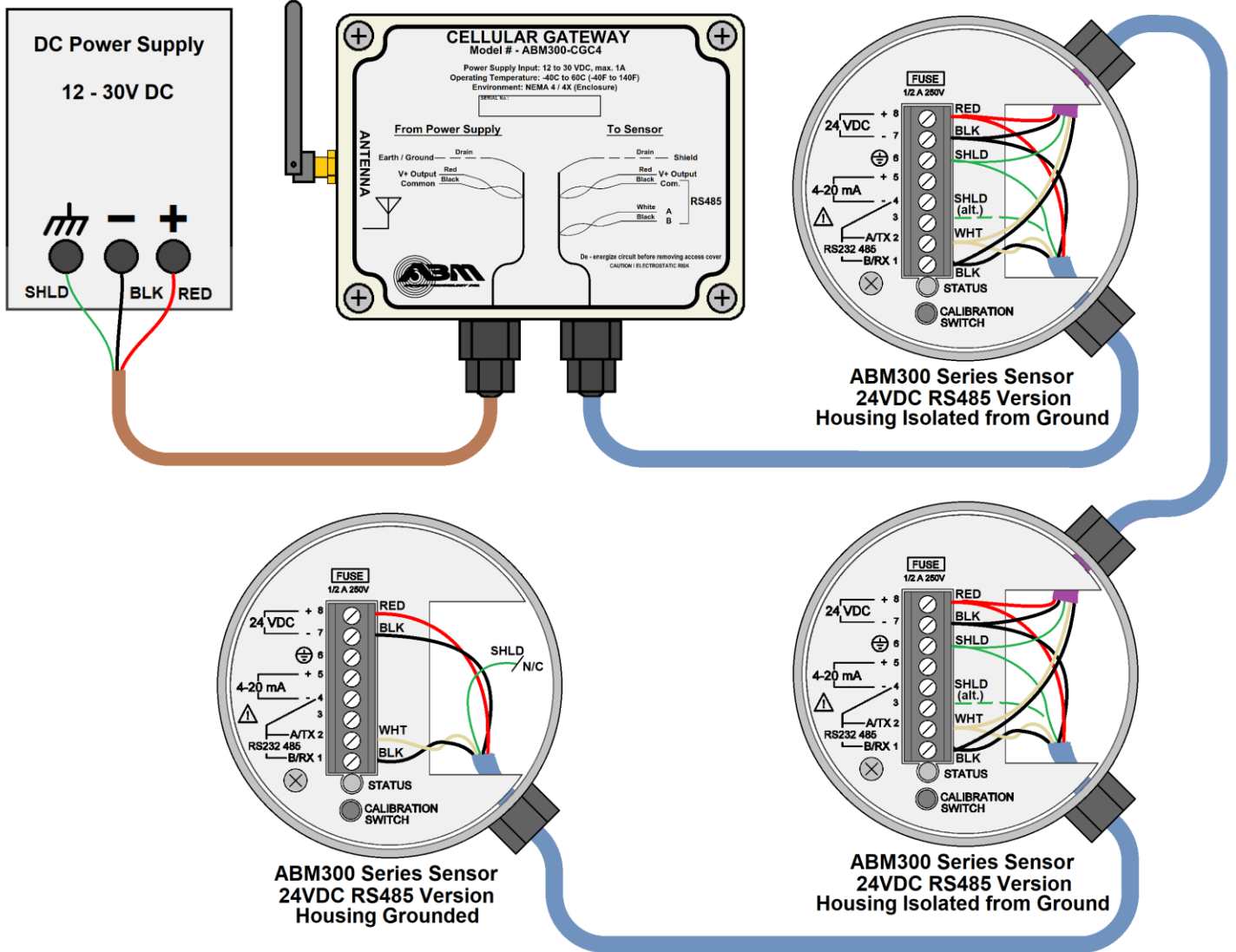


Notes:

- As the sensors are separately powered, (in this case, an AC-powered sensor), the red power wire from the Gateway is left unconnected in the Sensor. It should be cut off or insulated with tape.
- Similarly, like some radar installations, the sensors as shown are internally connected to earth-ground, so the Shield connection of the cable is left unconnected to avoid a ground-loop through the power supply.

Each sensor's current output (4-20mA) is shown unconnected. An external junction box would be required to implement the wiring of both the current and RS232 or RS485, as each sensor allows only two cable entries (one per cable gland).

Configuration Example 2 – Multiple DC Sensors With Single Supply – RS485 Only



Notes:

- The above example shows the RS485 Cellular Gateway supplying multiple DC-powered sensors.
- The Shield wire is only connected to the sensors with isolated housings.
- RS485 is designed for multi-drop (daisy-chain) configurations and not generally suitable for star-configurations.
- Sensor current loop connections are not shown. If current loops are required, junction boxes would be required for each sensor due to the limited number of cable entries.

Please refer to the Cellular Gateway Installation Manual for further connection considerations such as shielding, minimum voltage requirements, etc.