OVERVIEW:

WGD series detector is a complete standalone system with integrated lithium-ion battery. It works on GSM / GPRS system, it can also interface with Oxygen, Methane, Combustible & Toxic Gas sensors. Features Highlighted for the device (WGD Series) such as battery and solar powered, cloud connectivity, SMS and Email alert/notification, cloud base data storage.

FEATURES:

- 1+ year battery life(1 Transmission/ Day)
- Internal lithium battery or Solar panel option
- Suitable for using in remote & hazards locations
- 2G GSM/GPRS Global Transmission
- Redundancy system with auto service provider or network switching in case if network failure
- Transmits Gas reading, Battery status, & alert status to 2 wireless central units and 10-users
- Low, High Configurable Alarms with SMS and Email alerts
- Wireless remote central unit for relay operations and data collection over MODBUS
- User programmable sensor locations
- Continuous gas monitoring with no sleep mode
- Graphical LCD with backlight
- Display sensor reading, Alarm status and battery level

APPLICATIONS:

- Refineries & Petrochemical plants including offshore drilling & plant shutdowns...
- Waste water Treatment plants
- Tank Farms
- Leak detection & alerts
- Emergency response to off-site leak detection
- Leak detection in Gas Pipelines
- Process or Emission gas analysis
- Sewage plant
- Coal Mines
- Fire & security panels
- Heat treatment plant
- Access control
Technical Specifications for Wireless Gas Detector Series

**POWER**
- Normal Mode: Up to 10mW during detection (WGD2MSB)  
- Up to 288mW during detection (WGD2MSP)
- During Data transmission: Up to 300mW (WGD2MSB)  
  - Up to 2W (WGD2MSP)
- Power Supply: i) 7.4V Rechargeable, Li-ion battery  
  - ii) 6-24V DC Input  
  - iii) Solar System

**SENSOR**
- Sensor Technology: NDIR technology - Sensor Life-8 Years
- Response time: < 30 Secs
- Range & resolution:

<table>
<thead>
<tr>
<th>SR. NO</th>
<th>GASES</th>
<th>RANGE</th>
<th>UNIT</th>
<th>RES</th>
</tr>
</thead>
<tbody>
<tr>
<td>N4</td>
<td>Methane (CH₄)</td>
<td>100</td>
<td>%LEL</td>
<td>1</td>
</tr>
</tbody>
</table>

**ENVIRONMENTAL SPECIFICATIONS**
- Temperature Range: -10°C to 50°C
- Relative Humidity: 10% to 90% RH, Non-Condensing

**NETWORK**
- Modem: 2G GSM/GPRS (Optional 3G/LTE) Global Transmission
- Dual SIM card
- Antenna: Up to 3.0 dBi Internal / External (in low network area)

**ALERTS AND DATA CONNECTIVITY**
- Modes: SMS/MQTT/TCP/IP*
- Alarms: 2 settable alarms, sensor fault, open, over.
- Healthy Alerts: Daily Multiple SMS notification of device status
- Details: Battery status, sensor fault and alarm status

**HOUSING FOR DETECTOR**
- Protection class: IP-66 for GAS Gr. IIC CMRI Approved
- Cabinet Material: Cast Aluminium, LM-6
- Dimension: 247mm (W) x 213mm (H) x 120mm(D) - FLP  
  - 666mm (W) x 366mm (L) x 25mm(D) - SOLAR
- Mounting: Wall Mounting / Stand Mounting / Pipe Mounting
- Weight: Approx 4.9 kg - FLP

**USER INTERFACE**
- LCD display: 128 x 64 pixel Graphical display
- Keys: 3 keys (SHIFT key, SET Key, INCR key)
- LED’s: 4 LED Indications (Healthy LED, Alert LED, Communication LED, Network LED)

**Note:** Marked points available only on request/ under development / in externally powered /Solar Devices.
Comprehensive Solution for Wireless Gas Detection & Control

- Up to 32 configurable nodes
- Any channel can be used in comparison with setpoints
- Alarm actions may include:
  - Alarm status on display
  - Relay activations
  - Buzzer activation
  - LED Indication

ETHERNET/RS-485/RS-232
- MODBUS RTU
- MODBUS TCP-IP
- MODBUS Over TCP-IP

ST: OK
GC: 0 %LEL
BT: 100%
TM: 18:19
DT: 14 FEB 19
UID: 919191
LOC: MUM-ANDI
RSSI: 055

Safe SMS Format

ST: AL-2:HIGH
GC: 49 %LEL
AL2: 30 %LEL
BT: 100%
TM: 18:27
DT: 14 FEB 19
UID: 919191
LOC: MUM-ANDI
RSSI: 055

Alarm SMS Format
Solar Setup:

- WGD2MSS-FLP (Solar)
  - Solar panel with battery
  - Pole mounted

The Solar Module:

- The Solar panel used in this system is 30W~50W, 12V~18V, 2A~3A.
- The charge controller protects over charge & over-discharge of battery so battery doesn't damage.
- The battery charges from the solar module via charge controller. This charged battery can be used at night or in bad weather conditions. This battery is of 7.4V 20Ah.
- Wireless gas detector module can be operate on both solar panel (in day) & then with charged Li-ion battery (in night).

Note: Above application may change as per indoor & outdoor requirements.