WGD-100 Series
Suitable for use in Hazardous Locations
Protection Class- IP-66 for Gas Gr. IIC CMRI Approved

WGD-100 Series
Protection Class- IP-65
Wireless Gas Detection and Control: A Total Solution

- **Antenna**: Wireless Gas Detector WGD-100 Series
- **Antenna**: Wireless Control Unit WCU Series
- **Antenna**: PC/PLC / SCADA System

**Oil and Gas and Refinery Industries**

- **Plant-1**: Wireless Gas Detector WGD-100 Series

**Tank Farms**

- **Plant-2**: Wireless Gas Detector WGD-100 Series

**Gas Pipeline**

- **Plant-3**: Wireless Gas Detector WGD-100 Series

**Waste water treatment plant**

- **Plant-4**: Wireless Gas Detector WGD-100 Series

**Central Monitoring Station**

- **WCU-100**: Communications
  - Mobile-1: SMS
  - Mobile-2: SMS
  - Mobile-3: SMS
  - Mobile-4: SMS
- **Antenna**: 230VAC Mains Supply
- **PC/PLC / SCADA System**
  - Ethernet
  - RS-485
  - RS-232
Comprehensive Solution for Wireless Gas Detection & Control

Solar Powered

Wireless Data

Wireless Gas Detector WGD-100 Series

ERS-232 CONVERTER

ERS-485 CONVERTER

OR

SMS Alerts

SMS

STATUS-OK
GAS CONC.: 20.9% VV
BATT: 80%
DATE: 10 JUN 18
TIME: 10:30
UID: 111111
LOC: PUNE

STATUS-AL-1-2: HIGH
AL1: 20% LEL
AL2: 40% LEL
GAS CONC.: 42% LEL
BATT: 100%
DATE: 21 JUN 18
TIME: 18:47
UID: 022222
LOC: ANDHERI

Manufactured by:

AMUNETRONICS ENGINEERS PVT. LTD.
17-B, Tarun Industrial Estate, Mogra Pada, New Nagardas Road, Andheri (E.), Mumbai - 40, India.
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E-mail: project@ambetronics.com • project4@ambetronics.com • sales1@ambetronics.com • Web: www.ambetronics.com

Dealers:

Version: WGD-100 series-R2-04-09-2018
WGD-100 Series works on GSM/GPRS system, it also interface with Oxygen, Methane, Combustible & Toxic gas sensors. Features highlighted for the device (WGD-100) such as battery percentage, status of the device, fault condition, GSM network status and also display's sensor reading. Easy to use and work's efficiently.

**Methane (CH₄)**

**POWER**
- **Normal Mode**: Up to 20mW during detection
- **During Data transmission**: Up to 5W
- **Power Supply**: i) 3.7V Rechargeable, Li-ion battery
  ii) 24VDC SMPS
  iii) 5V, 2A Adapter
  iv) Solar System

**SENSOR**
- **Sensor Technology**: Electrochemical - Sensor Life - 2 Years
  NDIR technology - Sensor Life - 8 Years
- **Accuracy**: ±5% of full scale
- **Response time**: < 30 Secs
- **Range & Resolution**:
<table>
<thead>
<tr>
<th>GASES</th>
<th>RANGE</th>
<th>UNIT</th>
<th>RES.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND5 Methane (CH₄)</td>
<td>100</td>
<td>% LEL</td>
<td>1</td>
</tr>
<tr>
<td>ND6 Methane (CH₄)</td>
<td>5</td>
<td>% V/V</td>
<td>0.1</td>
</tr>
<tr>
<td>ND7 Methane (CH₄)</td>
<td>100</td>
<td>% V/V</td>
<td>1</td>
</tr>
</tbody>
</table>

**DISPLAY**
- **LCD display**: 128 x 64 pixel Graphical display

**ALERTS AND DATA CONNECTIVITY**
- **Modes**: SMS
- **Alarms**: 2 settable alarms, sensor fault, open, over.
- **Healthy Alerts**: Daily fixed time notification for status alerts
- **Details**: Battery status, sensor fault and alarm status

**NETWORK**
- **Modem**: 2G/4G network compatible
- **Antenna**: upto 2db

**ENVIRONMENTAL SPECIFICATIONS**
- **Temperature Range**: -20°C to 50°C
- **Relative Humidity**: 10-90% RH, Non-Condensing

**HOUSING FOR DETECTOR**
- **Protection class**: IP-65 for GAS Gr. IIC CMRI Approved
- **Cabinet Material**: Cast Aluminium, LM-6
- **Cable Entry**: Double Compression Cable Gland (Ex-Proof)
  M20 x 1.5P
- **Dimension**: 215mm (W) x 190mm (H) x 125mm (D) (with one gland)
  261mm (W) x 190mm (H) x 125mm (D) (with two glands)
- **Mounting**: Wall Mounting / Stand Mounting / Pipe Mounting
- **Weight**: i) Display GSM unit : Approx 2.6 kg
  ii) Battery pack unit : Approx 5 kg

• Supply 3.7V Li-on Battery
• Battery life 6 to 8 months

• Solar Unit
Technical Specifications for Wireless Gas Detector-WGD-100

WGD-100 Series works on GSM/GPRS system, it also interface with Oxygen, Methane, Combustible & Toxic gas sensors. Features highlighted for the device (WGD-100) such as battery percentage, status of the device, fault condition, GSM network status and also display's sensor reading. Easy to use and work's efficiently.

Oxygen ($O_2$)

**POWER**

Normal Mode : Up to 20mW during detection
During Data transmission : Up to 5W
Power Supply : i) 3.7V Rechargeable, Li-ion battery
               ii) 24VDC SMPS
               iii) 5V, 2A Adapter
               iv) Solar System

**SENSOR**

Sensor Technology : Electrochemical - Sensor Life - 2 Years
                    NDIR technology - Sensor Life - 8 Years
Accuracy : ±5% of applied gas / ± 0.2% V/V
Response time : < 30 Secs
Range & Resolution:

<table>
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<tr>
<th>GASES</th>
<th>RANGE</th>
<th>UNIT</th>
<th>RES.</th>
</tr>
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<tbody>
<tr>
<td>Oxygen ($O_2$)</td>
<td>25</td>
<td>% V/V</td>
<td>0.01</td>
</tr>
</tbody>
</table>

LCD display : 128 x 64 pixel Graphical display

**ALERTS AND DATA CONNECTIVITY**

Modes : SMS
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Mounting : Wall Mounting / Stand Mounting / Pipe Mounting
Weight : i) Display GSM unit : Approx 2.6 kg
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WCU-100 series is universal Receiver for our all wireless Detectors and Indicators. Displays last synced device details, time, GSM status & RTC

**POWER**

- Power Supply:
  1. 230VAC
  2. 24VDC
  3. 5V, 2A SMPS Adaptor
  4. Solar System

**DISPLAY**

- LCD display: 128 x 64 pixel Graphical display
- Status: Healthy LED, Fault LED for Network indication (SIM fail etc.) last synchronised device Serial No. & time
- No. of detectors: upto 100 Nos. supported
- Message storage capacity: upto 100 Nos. (in failure of Modbus communication)

**NETWORK**

- Modem: 2G/4G compatible modem
- Antenna: upto 2db

**SUPPORTING PROTOCOLS**

1) Modbus RTU
2) Modbus over TCP/IP
3) Modbus TCP/IP

**CONNECTIVITY**

- i) RS-485
- ii) RS-232
- iii) Ethernet Port

**SOFTWARE**

- i) PLC
- ii) SCADA

**ENVIRONMENTAL SPECIFICATIONS**

- Temperature Range: -20°C to 50°C
- Relative Humidity: 10-90% RH, Non-Condensing

**HOUSING FOR RECEIVER**

- Protection class: IP-65
- Cabinet Material: Polycarbonate, grey colour
- Cable Entry: Thermoplastic cable gland (IP 68)
- Dimension: 160mm (H) x 240mm (W) x 90mm (D)
- Mounting: Wall Mounting / Stand Mounting / Pipe Mounting
- Weight: Approx 600 grams

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**Manufactured by:** AMBETRONICS ENGINEERS PVT. LTD.

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**Version:** WQ0-100-Methane-RO-14-07-2018