

WIRELESS GAS DETECTOR + CENTRAL UNIT

OVERVIEW:

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

FEATURES:

- 1+ year battery life(1 Transmission/ Day)
- Internal lithium battery or Solar panel option
- Suitable for using in remote & hazards locations
- 2G/3G/4G GSM Connectivity
- Dual SIM card slots for Redundancy with Auto SIM switching in case of network failure
- Transmits Gas reading, Battery status, & alert status to 2 wireless central units and 05-users
- Two configurable alarms with Low, High Logic for SMS alerts.
- Wireless remote central unit for relay operations and data collection over MODBUS RTU/MODBUS TCP/IP
- User programmable sensor locations
- Continuous gas monitoring with sleep mode
- Graphical LCD with backlight
- Display sensor reading, Alarm status, GSM status, Date & Time and battery level
- User Friendly Multifunctional keypad & GLCD display for easy Man Machine Interface
- Password Protected Display Function Menu
- Front LED indicator for Device status

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



WGD4MSB-FLP

(Flame-Proof)

Suitable for use in Hazardous Locations
Protection Class- IP-66 for
Gas Gr. IIC CMRI Tested

Technical Specifications for Wireless Gas Detector Series

POWER

Normal Mode	: Up to 10mW during detection (WGD2MSB)
During Data transmission	: Up to 300mW (WGD2MSB)
Power Supply	: i) 7.4V Rechargeable, Li-ion battery ii) Solar System (Optional)

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 Optional)

ENVIRONMENTAL SPECIFICATIONS

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

SENSOR

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

SR. NO	GASES	RANGE	UNIT	RES
NDIR SENSOR TECHNOLOGY				
N4	Methane (CH ₄)	100	%LEL	1

NETWORK

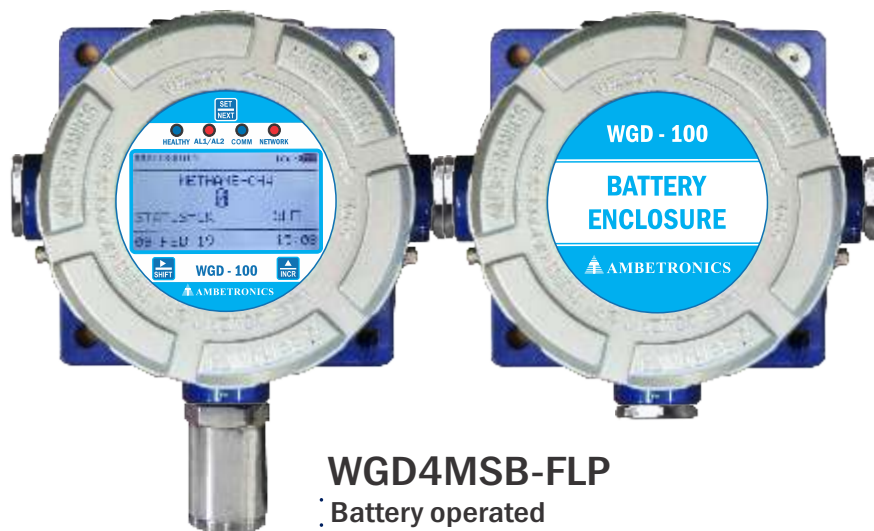
Modem	: 2G /3G/4G GSM Connectivity
	: Dual SIM card
Antenna	: Up to 3.0 dBi
	: Internal / External (in low network area)

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



WGD4MSB-FLP

Battery operated
Protection Class- IP-66 for
Gas Gr. IIC CMRI Tested

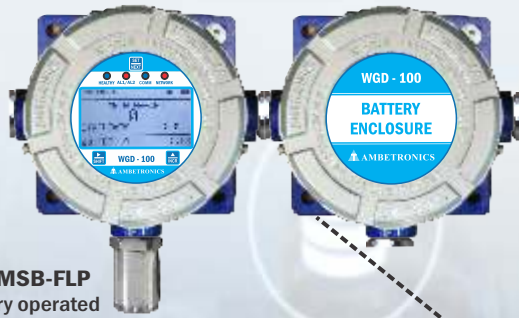


WGD4MSS-FLP (Solar)

Solar panel with battery
Pole mounted

Comprehensive Solution for Wireless Gas Detection & Control

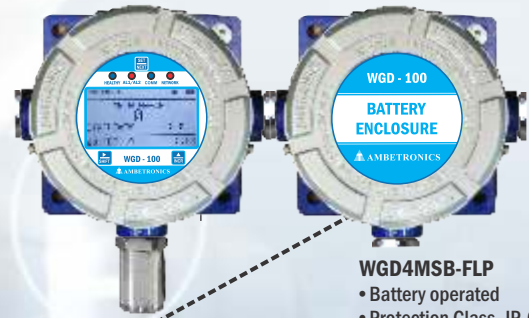
NODE-1



WGD4MSB-FLP

- Battery operated
- Protection Class- IP-66 for Gas Gr. IIC CMRI Tested

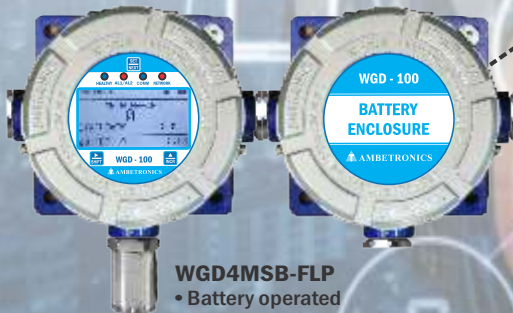
NODE-2



WGD4MSB-FLP

- Battery operated
- Protection Class- IP-66 for Gas Gr. IIC CMRI Tested

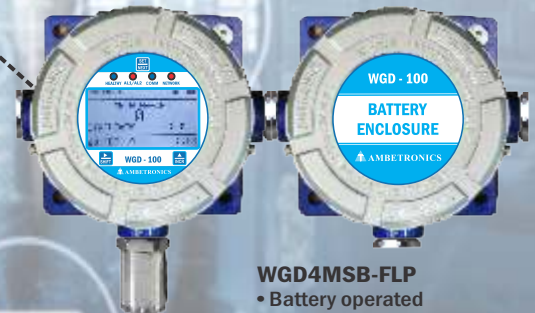
NODE-3



WGD4MSB-FLP

- Battery operated
- Protection Class- IP-66 for Gas Gr. IIC CMRI Tested

.....NODE-32



WGD4MSB-FLP

- Battery operated
- Protection Class- IP-66 for Gas Gr. IIC CMRI Tested



**CENTRAL UNIT
(SIG4RCV-WP)**

ETHERNET/RS-485/RS-232

- MODBUS RTU
- MODBUS TCP-IP
- MODBUS Over TCP-IP

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

- SCADA
- PLC
- PC
- ANY MODBUS MASTER

CONTROL ROOM



SMS Alerts

STATUS- OK
GAS CONC- 0 %LEL
BATT- 70%
DATE- 09 MAR 21
TIME- 12:00
UID-293042
LOC- AEPL

STATUS-OK -SMS

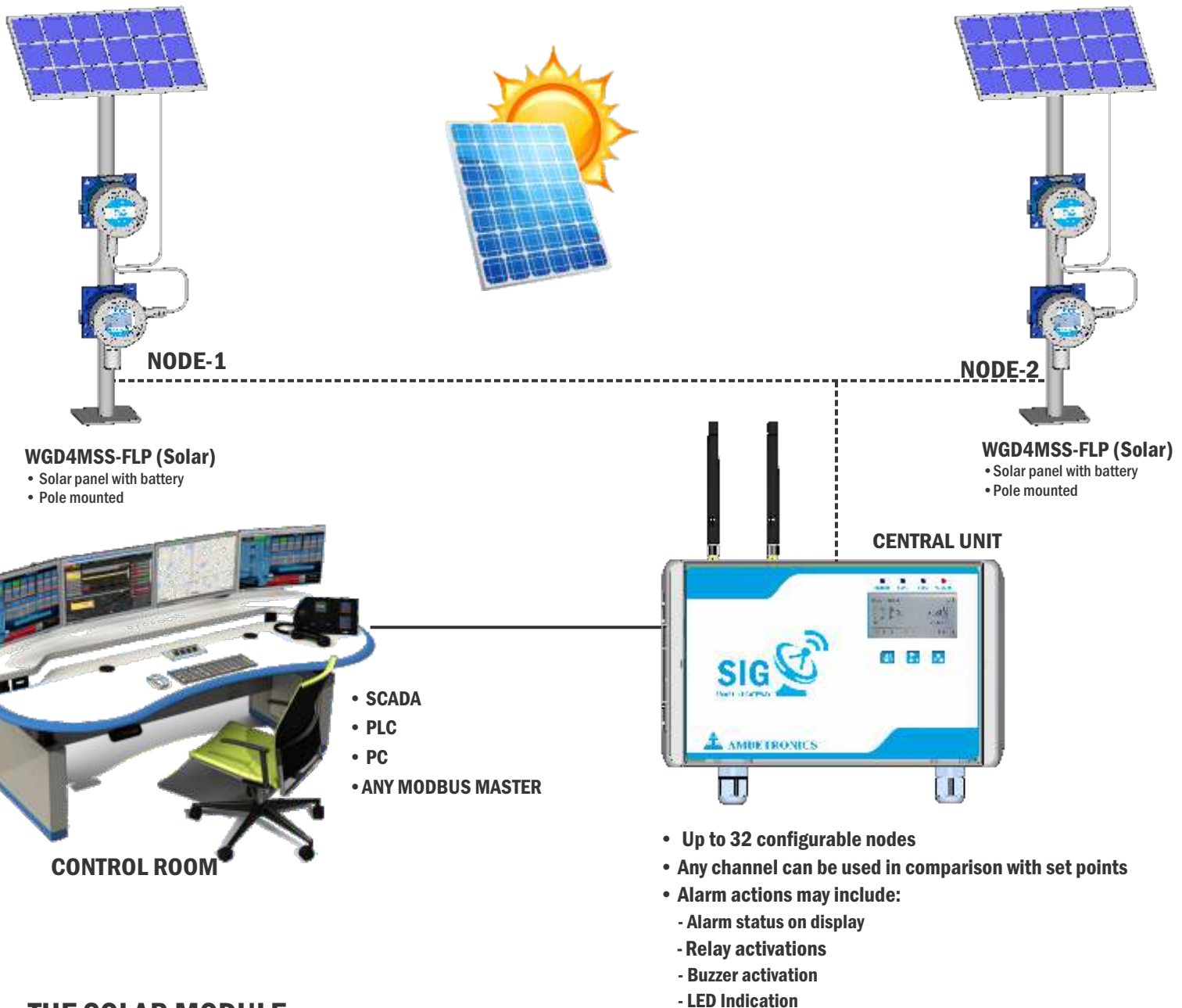
STATUS- AL-1:HIGH
AL1- 20 %LEL
GAS CONC- 37 %LEL
BATT- 70%
DATE- 09 MAR 21
TIME- 15:38
UID-293042
LOC- AEPL

STATUS-AL-1 HIGH

STATUS- AL-1-2:HIGH
AL1- 20 %LEL
AL2- 40 %LEL
GAS CONC- 43 %LEL
BATT- 70%
DATE- 09 MAR 21
TIME- 15:39
UID-300466
LOC- AEPL

STATUS-AL-1-2 :HIGH

Solar Setup:



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.

Manufactured by :

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