# **Transmitter for Electrical Power Generation Equipment Monitoring**



REMOTE WIRELESS (CELLULAR) MONITORING

- **Temporary Portable Generators and**
- **Standby Permanent Connected Generators**

The Notifact GGR-9 transmitter offers an economical means to provide 24/7 monitoring for a wide range of electrical power generators. The unit can be wired to existing equipment that is currently deployed in the field or located at the service depot. The Notifact design provides great flexibility to monitor different equipment diagnostic information that can be adapted to the particular model of generator that is monitored.

# **System Operation:**

When an alert is triggered, the GGR-9 sends an alert message over the cellular GSM system. The alert message is received at the Notifact messaging center and relayed to pre-selected message recipients within minutes by pager (alphanumeric, numeric), fax, e-mail, XML to another computer, PCS or telephone (voice delivery).

As part of the monitoring system, the user is issued an ID and password for utilizing the website to configure which individuals are designated to receive alert messages and by what delivery method. Each message contains the alert message that was triggered and the make/model/ location of the generator. Each alert message can create message deliveries to multiple persons by multiple modes of delivery. Alert messages can also be programmed for non-delivery, i.e. stored at website for future reference.

#### **Heartbeat:**

Every 24 hours, the GGR-9 transmitter also sends an equipment heartbeat which is stored for 90 days at the Notifact website for viewing by the user. If a heartbeat is not received, an alert message is generated. The following data is collected in the daily heart beat:

- Generator Runtime Counter ◆
- **Number of Generator Cycles Counter**
- Fuel level (if analog sensor is installed)
- Generator battery voltage
  - ♦ (Continuous counter can be reset at website)

# Remote Start/Stop:

Any time the generator starts or stops, the GGR-9 sends a message. The generator can also be started and stopped remotely by sending commands from the Notifact website.

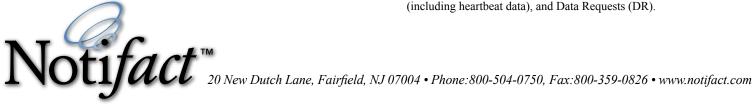
# Data Request (DR):

At any time, the user can send a Data Request ("DR") to the Notifact transmitter to report the following data:

- Battery voltage.
- Fuel level (if analog sensor is installed)
- Min and Max Frequency in last Run-Cycle
- Frequency in present Run-Cycle
- Generator status (i.e. On/Off)
- **Generator Runtime counter**
- **Number of Generator Cycles counter**

# Website:

The Notifact website shows the history of alert messages, heartbeats (including heartbeat data), and Data Requests (DR).





# **SPECIFICATIONS**

**POWER INPUT** The Notifact transmitter can be powered by either (or both) of the following:

85-120VAC
 Generator battery (12VDC or 24VDC)

#### POWER CONSUMPTION

15VA

#### **BATTERY BACKUP**

If powered only by 85-120VAC, a NiCad battery is also provided to generate an alert message on loss of 120VAC.

#### **OPERATING TEMPERATURE**

-40 to 140°F (-40 to 60°C)

#### STORAGE TEMPERATURE

-40 to 160°F (-40 to 70°C)

#### **MONITORED INPUTS:**

Analog 3 inputs
Digital 4 dry contact closures and 4 binary voltage

#### **CONTROL OUTPUTS:**

1 Relay output rated 8Amps at 120VAC

## ENCLOSURE:

Type:

NEMA-4 suitable for outdoor mounting

#### Dimension:

7-1/8"W x 9-5/8.H x 3-1/2"D (18 x 24.5 x8.9cm)

Material: UV resistant ABS Gray

Knockouts:

3 bottom, 3 rear (1/2", 3/4" concentric)

#### RADIO

Frequency: 850/1900 MHz Output: 2 watts

# ANTENNA (50 Ohms):

Standard: 3" direct enclosure mount

**Optional Accessories:** 

Remote mount up to 50 feet from transmitter

# The Notifact GGR-9 Transmitter has the following input capabilities:

1) Analog input capability and reporting. Alert set points for analog inputs are pre-established.

- Battery voltage (12VDC or 24VDC batteries)
- Alert set below 11.5VDC, Alert reset at 12.0VDC for 12VDC battery
- Alert set below 23.5VDC, Alert reset at 24.0VDC for 24VDC battery
- Propane or oil tank fuel level\* (If analog sensor is installed)
- Alert set at 30% fuel level
- Min/Max generator output frequency for most recent cycle\*\*
- Low Alert set below 58.5Hz, Alert reset at 60Hz
- High Alert set above 61.5Hz, Alert reset at 60Hz
- \*Propane or oil tank level sensors sold separately. Consult factory.
- \*\*Max 110 volt input, requires step-down transformer for higher voltages.

# 2) Input capability. All inputs except #1AC input create an alert transmission:

- Four (4) switch inputs accept dry contact closure. Hard wire as desired and tag input name at website.
- Three (3) AC/DC digital inputs accept 24 to 120VAC or 5-48VDC, 3mA. Hard wire as desired and tag
  input name at website.
- One (1) AC input tied to a runtime counter. #1AC input is pre-configured at website for this input.

Typical points monitored with the 7 digital inputs (4 dry contact, 3 AC/DC Inputs) include the following. Points available to monitor depend upon local annunciation of specific generator that is monitored.

- Generator on/off status [#1 AC input tied to generator runtime counter]
- Fuel tank level low switch [For oil tanks]
- Fuel tank level high switch [For oil tanks]
- Fuel spill basin wet switch [For oil tanks]
- Main circuit breaker closed/open load side
- Fuel delivery push button switch
- · Over crank
- · Low oil pressure
- High coolant temperature
- Any other local equipment annunciated alarms (i.e. door entry)

### 3) Other monitored conditions:

• Generator Runtime [from generator on/off digital input]. See heartbeats

**DISTRIBUTED BY:** 

- Number of Generator Run-Cycles in past 24 hours. See heartbeats
- · Cellular signal strength to Notifact Transmitter
- Loss of power to Notifact transmitter (Loss of power alert)
- Service button activation (Triggers alert message to provide notice of arrival of the service provider)

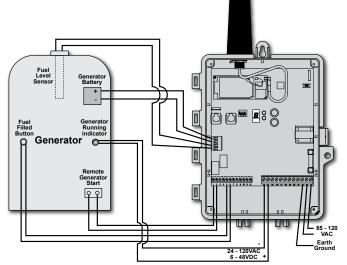
# 4) Remote control:

The Notifact GGR-9 Transmitter has one output relay that may be remotely activated from the Notifact website (i.e. to start/stop the generator). The output relay is rated at 8 Amps.

# 5) Optional (purchased separately):

• Fuel level analog sensor (0-5VDC)







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