



*Verbatim*<sup>®</sup>

by **RACO**<sup>®</sup>  
REMOTE ALARMS AND CONTROLS

*... Clearly a step ahead in remote monitoring systems*



# Verbatim®

## *...the interactive alarm autodialing, monitoring, reporting, and control system.*

RACO Verbatim, the long-standing first choice of the industry, offers pace-setting functionality and expandability—Its an autodialer alarm system, a remote monitoring system, a supervisory control system, a SCADA system, and a PLC network interface—in one compact package.

With an expandable, modular bus architecture and up to 32 digital inputs, 16 analog inputs, and 8 digital control outputs, the system can monitor flow, level, pressure, temperature, pH, and other types of sensors, as well as control remote electrical devices.

### ■ Alarm Autodialing

The system is designed to continuously monitor preset alarm points. If an alarm condition is sensed at a monitored point, the Verbatim System will automatically dial a list of 16 pre-programmed emergency telephone numbers, calling until it gets an answer. When the call is answered and acknowledged, the system reports the alarm location and status via pre-recorded voice messages.

Communicating over standard land-line or wireless telephone networks, the Verbatim delivers alarm messages to standard phones, cell phones, numeric or voice pagers, and voice mail systems, and talks just as easily with computers.

### ■ User-Recorded Messages

The voice messages are digitally pre-recorded by the user. Anything that can be spoken is accurately stored in memory—from names and numbers to technical terms and detailed instructions. Messages are delivered with maximum clarity, lessening the chance for misunderstanding or error. And, you can easily enter or change your messages over the phone or at the front panel.

### ■ A Fully Interactive System

With Verbatim, you're never out of touch with your monitoring system. With any standard touch-tone phone, you can call in for a status report, review and change programming, or control a remote device. With the touch of a key, you can listen to local sounds or talk to personnel using the unit's built-in speakerphone.

When calling for status report you hear a comprehensive summary of all conditions monitored by the system, including internal power. Hard copies of event data—alarms, acknowledgements, inquiries, and programming changes—can be printed out at any time using the system's data logging capabilities.



Controls and indicators are provided on the Verbatim's front panel for on-site programming and review of system operation, alarm status, and battery condition.

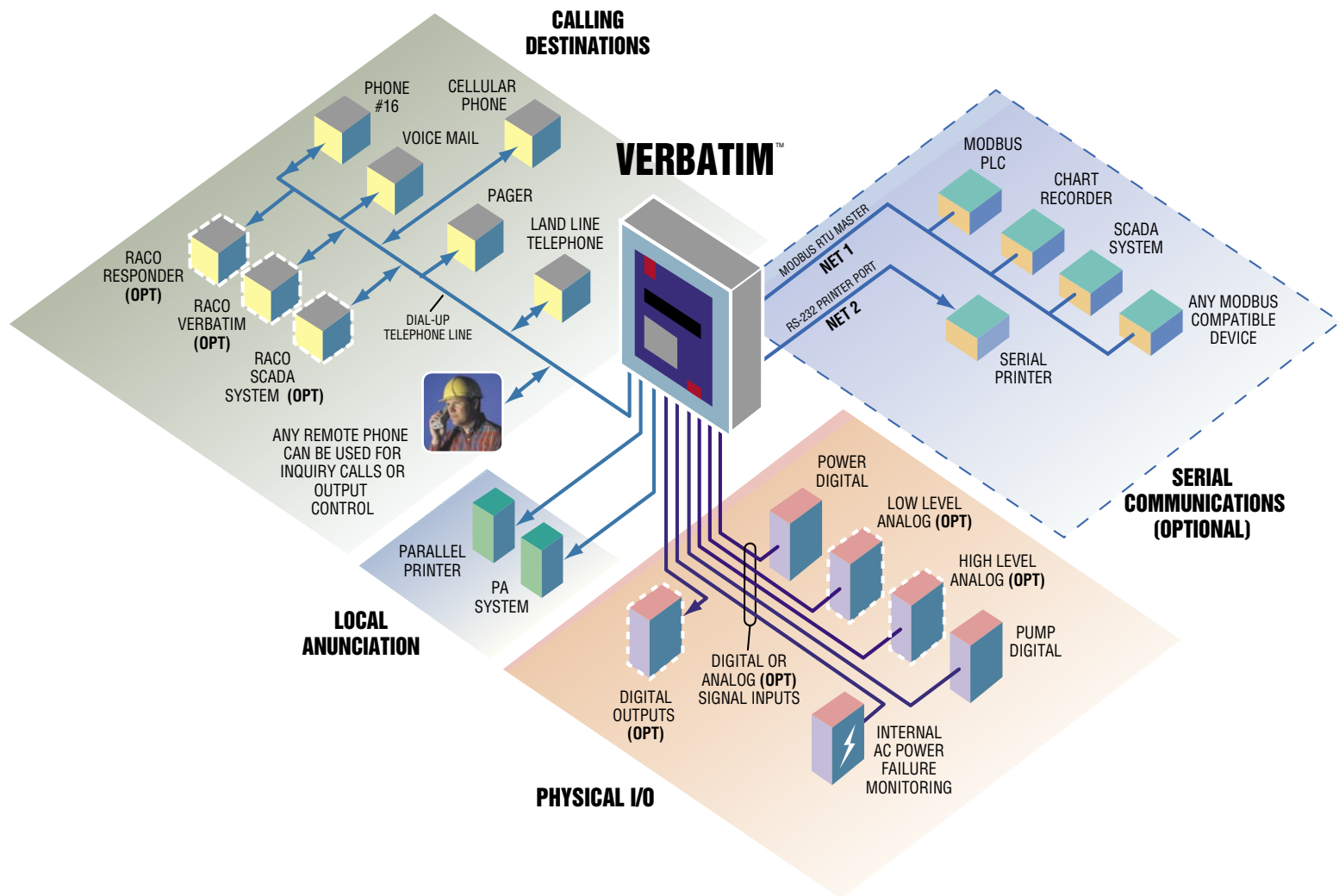
### ■ Supervisory Control System

A Verbatim System can be equipped with up to 8 digital control outputs to remotely actuate HVAC systems, pumps, compressors, and other electrical devices from a standard phone, the Verbatim front panel, or a PC.

### ■ SCADA System

RACO MMI/SCADA Systems provide monitoring and control of up to 200 RACO Verbatim Remote Terminal Units (RTUs) over the standard dial-up telephone network. Each RTU has full alarm monitoring, reporting, and autodialing capabilities, and because Verbatim systems report by exception, they do not need to be polled. When an alarm is sensed, the RTU reports to the central computer. If the computer operator does not acknowledge the alarm, the RTU will commence autodialing.





## ■ PLC Network Interface

Offering alarm and monitoring for as many as 96 remote channels, the Verbatim can use RS232 communications to work with any PLC or other device using Modicon's Modbus protocol.

## ■ Take Control of Remote Equipment

A Verbatim System can be used with a RACO Responder or another Verbatim to actuate pumps, compressors, gates, or other electrically operated equipment over the dial-up telephone network. Upon receipt of an alarm signal—low water level, for example—the Verbatim issues a command to activate an output relay in the Responder or other Verbatim unit, which initiates an action such as turning on a pump motor.

## ■ Memory Retained During Power Failure

Verbatim systems incorporate a non-volatile memory. Recorded alarm messages and user-entered programming is retained indefinitely in the event of a power loss.

## ■ Battery Backup for Safety

A rechargeable gel-cell battery provides up to 20 hours of continuous operation in the event of power loss. And because the system uses a precision regulated charger instead of the traditional “trickle” charger, the time required for charging is minimized and battery life is significantly extended.

## ■ Built for Long Term Survival in the Toughest Environments

Verbatim is designed and built for superior performance—year after year. The system's rugged durability is evident in its heavy-duty metal enclosure, carefully selected and proven solid-state components, and sealed membrane keyboard. Heavy-duty solid-state and gas tube surge protection is provided on all power, phone, and signal lines.



## Features:

- Monitors 4 channels plus internal AC power
- Solid-state message recording
- Expandable modular design
- Superior surge protection on all inputs
- Alarm call grouping
- Low cost
- Remote programming
- Nonvolatile memory
- 20 hour battery backup
- 5 year warranty

## Typical Monitoring Applications:

- Boilers
- Chemical Plants
- Computer Rooms
- Facility Security
- Fish Hatcheries
- Frozen Food Storage
- HVAC Systems
- Hydroelectric Power Stations
- Pipeline & Compressor Stations
- Remote Pump Stations
- Storage Tanks
- Telephone Switchgear
- Unattended SCADA Systems
- Water & Wastewater Treatment Plants

## Typical Sensors:

- Flow
- Leak
- Level
- Motion
- pH
- Power
- Pressure
- Temperature
- Vacuum

## Standard Specifications:

### ELECTRICAL

- **Power requirement:** 105-135 VAC, 50/60 Hz, 15 watts maximum or 8-14 VDC at 500 mA maximum.
- **Battery charging:** Precision voltage controlled, including automatic rapid recharge after drain.
- **Battery backup:** 20 hours
- **Input sensing:** Four unpowered contact inputs standard. Open contacts see 5 volts DC; closed contacts see 10 ma DC.
- Standard Centronics parallel printer port.

### PHYSICAL

- **Surge protection:** Integral gas tube and solid-state protectors on all phone, power, and signal lines. Accommodates field-installed upgrades. Rugged metal indoor enclosure.
- **Weight:** 8 lbs (3.6 kg).
- **Dimensions:** 11-7/8" H x 9-3/4" W x 5" D.
- **Mounting Centers:** 11-3/8" vertical x 6" horizontal.

### ENVIRONMENTAL

- **Temperature range:** 20° to 130°F.
- **Humidity:** 0 to 95%, noncondensing.

### TELEPHONE

- Rotary pulse or tone dialing, keyboard selectable.
- Dials up to 16 different numbers, each up to 60 digits long.
- Allows programming of PBX delays in 1 second increments.
- FCC Registered Part 68, "Ringer Equivalence": 0.3A.
- Alarm Acknowledgement is by TouchTone key or by calling back.
- Built-in speaker phone allows two-way conversation.
- Compatible with most cellular telephone systems.

### SPEECH MESSAGES

- Users record their own messages. Also includes resident vocabulary for programming guidance and for default "alarm/normal" speech if no user messages are recorded.

### UL STANDARD

- Verbatim complies with UL Standards: 1459, 1950.

### WARRANTY

- Five year parts and labor warranty. See our separate warranty card for details.

### MODULAR OPTIONS

- **Channels.** Upgradeable to 8, 16, 24 or 32 contact channels.
- **Analog.** Custom scaled in the units of measurement required for your job. Analog alarms on a high and a low alarm setpoint. Upgradeable to 1, 4, 8 or 16 analog channels.
- **Remote Supervisory Control.** The operator can turn equipment on or off via any telephone. Upgradeable to 4 or 8 outputs.
- **Modbus Interface.** In addition to physical inputs, the unit is upgradeable to 32, 64 or 96 additional alarms of any type via RS232 and Modbus RTU master protocol.
- **Cellular Telephone.** Our Cellarm™ System provides temporary or permanent alarm autodialing over the cellular telephone network when conventional telephone lines are disabled or unavailable. Furnished in a rugged, weather-resistant housing that's easy to transport and set up.

### FACTORY OPTIONS

- **Enclosure.** System available in NEMA 4X enclosure, which is corrosion proof and sealed against 12 feet of water.
- **Environmental.** Thermostatically controlled heater available, suggested for operation below 20°F or where condensation may occur.
- **Local Alarm Relay Output.** Relay activates during unacknowledged alarm conditions.
- **Secure Front Panel.** Verbatim System furnished without front panel programming controls and indicators. Restricts access to unsupervised or remotely located units, as well as reducing the initial purchase price.
- **Solar Electric Generator Systems.** Ideal for remote location applications where conventional power and telephone services are not available or too costly. Provides steady, clean power and has sufficient storage capacity for overcast and inclement weather conditions.



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