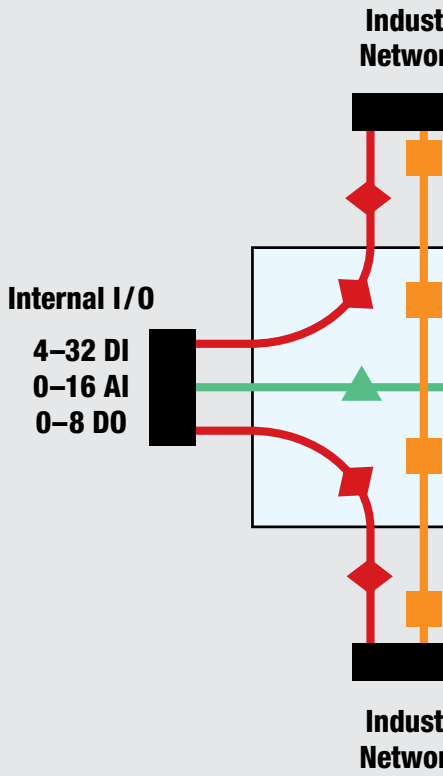
The Verbatim® Gateway

A Trusted, Field-proven Alarm Notification Solution for PLCs and PC-based HMI/SCADA Systems

Rockwell Automation
Encompass™ Product Partner
Americas

RACO's Verbatim Gateway keeps you in touch and in control, no matter where you are.



Verbatim® Gateway Commun

The Verbatim Gateway from RACO, the remote monitoring and alarm specialists, allows you to use touch-tone telephones anywhere as interactive, multifunctional operator interfaces. It's a unique breakthrough that provides convenient, inexpensive bidirectional communication with your PLC network via dialup phone lines. Call in and check the status of any channel. Modify alarm criteria and monitoring points. Alter process variables and setpoints. You can even be called and receive clear voice-message reports of alarm situations, with messages directed sequentially to as many as 16 phone numbers.

In a single, compact, ruggedly built system, the Verbatim Gateway delivers these important functions and more. And it does so without requiring the use of PLC outputs or modification of PLC control programs.

In short, whether tracking or controlling intricate manufacturing processes or a host of water/wastewater treatment operations, the Verbatim Gateway begins a new era by making remote communication with your PLC network easier and more affordable than ever.

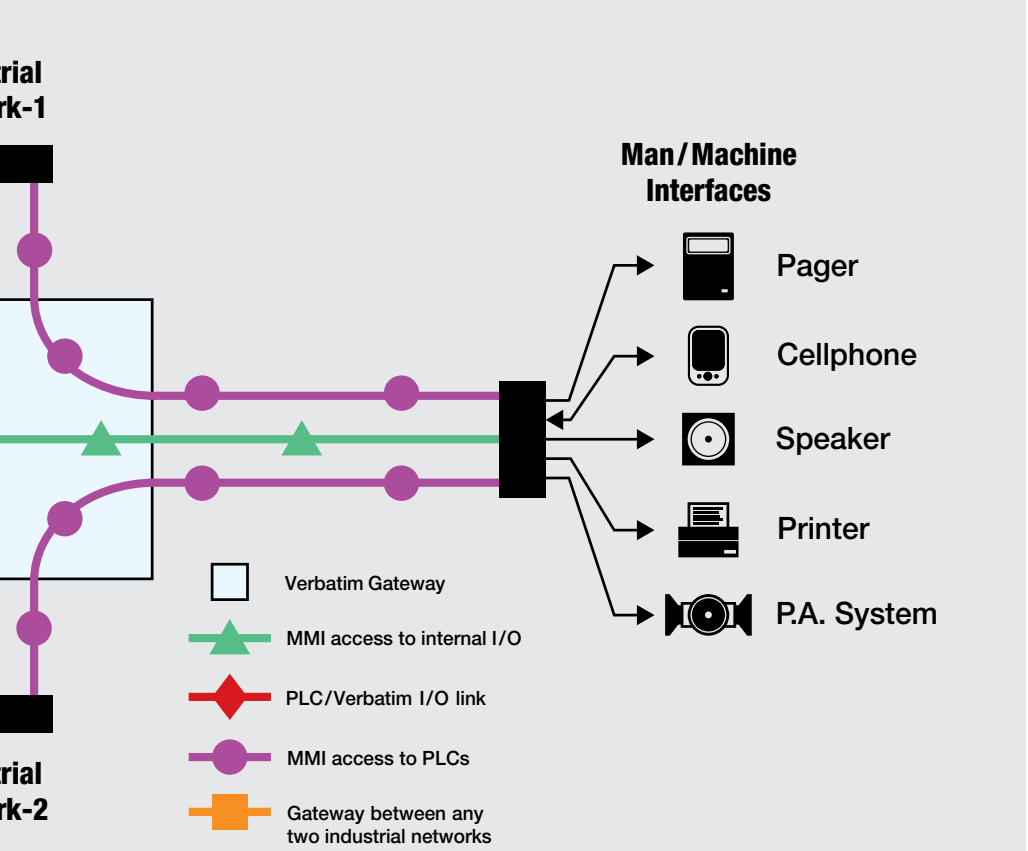
The Verbatim Gateway allows easy read and write access to PLC data tables via any telephone.

Extended functionality and versatility — at minimal cost.
Continuous real-time communication between the Verbatim Gateway and the PLC network is performed using the protocols supported by specific PLC models. Any PLC's I/O points and data table locations can be manually altered. In addition, the system provides automatic monitoring of as many as 96 points — points reflecting any combination of discrete, analog, timer, counter or other PLC data objects.

Further, the Verbatim Gateway uses only a single cable connection to deliver its extensive functionality. You avoid the burdensome costs of complex wiring, additional PLC outputs and relays. You add monitoring points at costs that are about 40 percent less than those associated with traditional PLC-to-input configurations. As a result, you're able to fully utilize the potential of your PLCs — easily and inexpensively.

Simultaneous monitoring of multiple PLCs on multiple networks — even on networks with dissimilar protocols.
The Verbatim Gateway is designed for use with popular network protocols — including the Modbus® RTU, Modbus TCP and the Allen-Bradley EtherNet/IP™, DH485 and DF1. Operating at selectable communication speeds up to 100 Mb, it's even capable of simultaneously monitoring PLCs on networks using different protocols. And all protocol-specific error detection techniques and retransmission methods are fully maintained. You can also use the Verbatim Gateway as a bridge between incompatible networks, so that data can be exchanged between them.

Fast access from any touch-tone phone using brief four-digit codes and easy programming guided by clear voice prompts.
Accessing any of the 96 points that are automatically controlled by the Verbatim Gateway requires only a brief four-digit sequence. Users can quickly perform functions that range from ordinary status checking and message recording/review/revision to reading/writing of data registers at any network address and selection of global commands applying to all channels. Responses are always in voice format; data register numeric values, for example, are converted to spoken voice messages. If a



ication Pathways

programming sequence is not recognized by the Verbatim Gateway or if an invalid parameter is entered, the system responds with the appropriate voice message.

The clear voice guidance simplifies entry of dialout phone numbers, recording of alarm messages and setting of trip delays. The system's preprogrammed operating parameters streamline setup, yet they may be easily altered to meet specific needs.

The Verbatim Gateway makes certain no alarm condition goes unheeded or unacknowledged.
When an alarm condition occurs, the Verbatim Gateway automatically dials up to 16 field-programmable phone numbers — with as many as 60 digits each. The system then reports the station identification and the specific alarm condition.

Acknowledgment of an alarm phone call is effected by the simple touch of a button on the called phone during the alarm notification — or by calling the reporting unit after the call has been received.

Complete status reports — always at your fingertips.
Wherever there's a telephone, there's instant access to status reports on all conditions monitored via the Verbatim Gateway. Similarly, the touch of a telephone key lets you review and alter programming, alarm criteria, monitoring points, process variables and setpoints. Further, the system's built-in microphone permits listening to on-site sounds, and a built-in speakerphone allows convenient communication with on-site personnel.

Unlimited flexibility in stored messages — each delivered with maximum clarity.
Free of the restrictions imposed by built-in vocabularies, the Verbatim Gateway memory can store anything that can be spoken — from names and numbers to technical terms and detailed instructions.

The system's advanced digitized voice technology accurately replicates the original speaker. So there's less opportunity for misunderstanding or error. And messages can easily be changed or entered via the front panel or remotely from any touch-tone telephone.

Designed and built for reliable operation in the harshest industrial environments.
The Verbatim Gateway's heavy-duty metal enclosure, carefully selected and proven solid-state components, and sealed membrane keyboard are an assurance of problem-free performance year after year. In the event of a power failure, a rechargeable gel-cell battery maintains full and continuous operation for up to 13 hours. Further, because a precision-regulated charger is used instead of a traditional "trickle" charger, battery charging time is minimized and battery life significantly extended.

The Verbatim Gateway also employs non-volatile memory, so no reprogramming is needed following power outages. Alarm messages and user-entered programming are retained for years, even in the total absence of power to the system.

Continuous self-diagnostics and automatic alarming in the event of a PLC communication problem.
The Verbatim Gateway is self-testing and provides complete diagnostic information. Should it detect a communication failure, the unit automatically initiates an alarm. In addition to generating voice-message calls, alarm situations are also indicated by the system's LED display panel.

With startup and operation made quick and easy through default settings and voice prompts, the Verbatim Gateway places comprehensive PLC monitoring and control capabilities as close as the nearest touch-tone telephone. Based on the Verbatim autodialing remote monitoring system — field-proven by thousands operating worldwide — it's the "single-package" solution for keeping your fingers on the pulse of your PLC-controlled processes, by accessing and altering those processes from anywhere in the world.

1. Digitally recorded user messages — over 10 minutes of recording time.
2. Verbally reported status checking.
3. Visual display of input status.
4. Simultaneous monitoring of multiple networks.
5. Easy voice-prompted programming via the front panel or telephone.
6. 13-hour battery backup.
7. Built-in microphone allows listening to local sounds from remote locations.
8. Built-in speakerphone permits operator to place phone calls and communicate with remote callers.

Other Features:

- Expansion slots for plug-in modules.
- Extensive surge protection.
- Network monitoring supported by a robust set of diagnostic, status and alarm capabilities.
- Network gateway for transfer of data between PLCs or other devices using incompatible protocols.
- User-recorded alarm and normal messages for each monitored point.

The Verbatim Gateway delivers clear voice messages via telephone, cellphone, radio, pagers and PA systems.

Both parallel and serial printer ports are provided for local data logging.

Built-in microphone allows listening to local sounds from remote locations.

Programmable Features

Alarm Call Grouping
- Alarm calls to up to 16 phone number groups

Alarm Criteria
- Alarm on open circuit
- Alarm on closed circuit
- Status only
- High/low setpoint
- Runtime meter
- Totalizer

Alarm Reset
- On/off

Alarm Reset Time
- 0.1–99.9 hours

Alarm System Enable/Disable
- Local and remote enable or disable

Alarm Trip Delay
- 0.1–999.9 seconds

Autocall Test
- On/off

Autocall Time Interval
- 0.1–99.9 hours

Call Back/Call Forward
- Separate unique phone number

Dialing Format
- Touch-tone or rotary pulse

Number of Message Repetitions
- 1–20 repetitions

Phone Numbers
- 16 phone numbers up to 60 digits each

Read/Write Data Registers
- Any discrete or integer data register

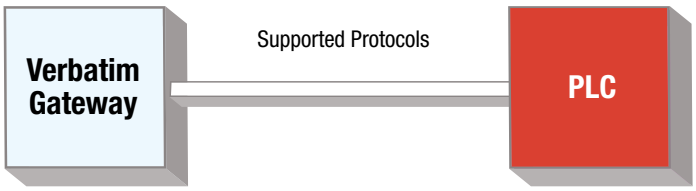
Ring Delay
- 1–20 rings

Security Code
- 6 digits

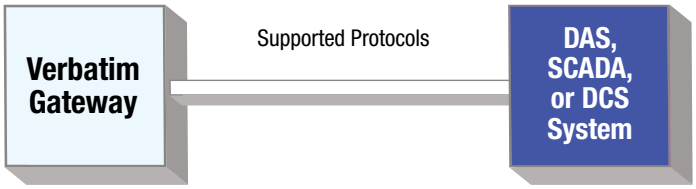
Station ID & Message Recording Time
- User variable

Time Between Alarm Calls
- 0.1–99.9 minutes

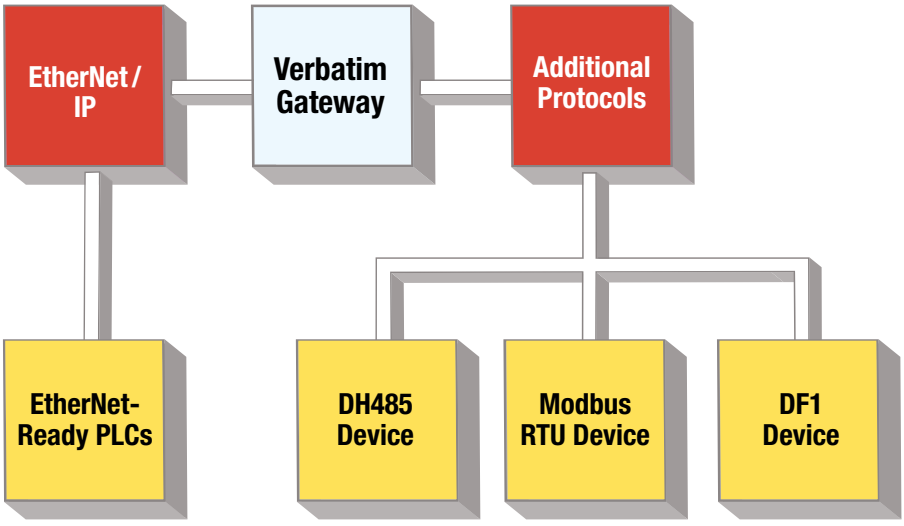
Monitoring a single PLC



Monitoring a system with a compatible protocol



Monitoring a PLC network



Standard Specifications

PLC COMMUNICATIONS

- **Fully Compatible:** Requires no modifications to existing network configuration, PLC wiring or programs.
- **Remote Data Table Access:** Monitor or alter any data table location on demand via front panel or telephone.
- **System Security:** Access protected by security codes.
- **Alarm Monitoring:** Continuously monitors 32, 64 or 96 PLC addresses.
- **Gateway Function:** Provides for exchange of data between PLC devices on incompatible networks.
- **I/O Export:** Able to continuously transfer internal I/O and alarm data to PLCs.
- **Supported Protocols:** Modbus RTU, Modbus TCP, Allen-Bradley EtherNet/IP, Allen-Bradley DF1, Allen-Bradley DH485 (programming port). Contact factory for others.
- **Latency:** Depends on configuration and other network traffic. Typical range from 1–10 seconds.

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:** 13 hours.
- **Current Draw:**
  Without Ethernet:
  Standby: 300 mA. Operational: 460 mA.
  With Ethernet (Optional):
  Standby: 660 mA. Operational: 760 mA.
- **PLC I/O Point Sensing:** Two ports, RS232/RS485 and Ethernet (optional).
- **Internal Input Sensing:** Four unpowered contact inputs standard. Open contacts see 5 VDC; 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:** 20–130° F.
- **Humidity:** 0–95%, noncondensing.

TELEPHONE

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

SPEECH MESSAGES

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

WARRANTY

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

INTERNAL I/O OPTIONS

- **Dry Contact Inputs:** Upgradeable to 8, 16, 24 or 32 dry contact channels.
- **Analog Inputs:** 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.

FACTORY OPTIONS

- **Power Supply:** UL Class 2 120 VAC 50/60 Hz adapter.
- **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.
- **Cellularm® Cellular Communication System**

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