RECOR 323 SERIES ELECTRONIC GAS VOLUME CORRECTORS

Overview

In 1996, Reynolds Equipment Company recognized that 80% of its customers were only using 20% of the features available in its top of the line electronic volume correctors. So in 1997, we created the micro corrector class through the introduction of the RECOR 323 LVC. It is the instrument of choice by a growing number of gas companies worldwide. Today it is available in its original form, complete with multi resident protocol AND in two recently released versions we call the XVC (enhanced audit trail) and the DVC (non-audit trail).

Flexibility

The 323 Series addresses a wide range of electronic measurement needs; from the simplest (DVC) stand alone mechanical instrument replacement to a full-featured one (XVC) with audit trail, event log, contract management tools, alarms etc…

Highlights

- Single PC Board design simplifies troubleshooting and repair
- 6 volt alkaline pack provides up to four years of primary power
- On board lithium battery provides uninterrupted full function power for up to one year
- Compact packaging makes for easy transport and installation, even on small meter sets
- User friendly software interface
- Compatible with many established third-party data collection/management parties.

Packaging

The 323 series electronic volume correctors can be outfitted for volume, pressure, temperature or fixed factor applications.

In addition to the conventional universal meter mount (shown at left), the 323 series is available in a variety of input/output and mounting configurations. Remote pulse and high frequency volume inputs, wall bracket or pipe mounting. A variety of integral peripherals are for communications and pulse transmission.

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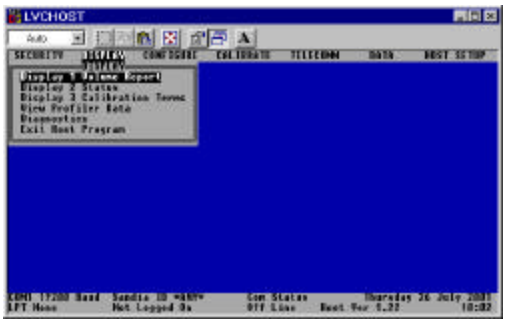
DOS Version Operating Software

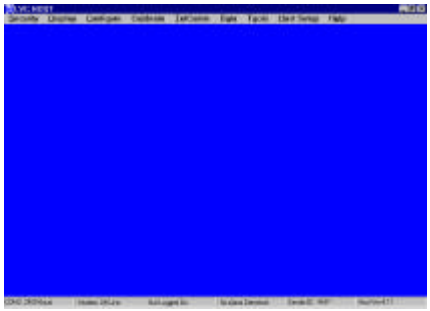
Reynolds was the first supplier of electronic gas measurement equipment to honestly use the words software and user-friendly in the same sentence. The original LVCHOST is preferred for its ease of operation. The "by design" high contrast color scheme, pull down menus, quick configuration screens and no mouse control make it a favorite for field operators. The LVCHOST DOS version is no lightweight however. You get all of this:



- Full configuration
- Calibration
- Interrogation
- Remote communication
- Data management and data processing
- Two levels of security

WINDOWS Version Operating Software

The Windows version of LVCHOST sets new standards for excellence in man machine interface design and implementation. It carries over the aspects that made the original DOS version an industry favorite but leaps ahead through the use of familiar Windows file management tools and with data processing options that seamlessly integrate into MS Office applications like Word, Excel and Access. It allows you to get the most out of the enhanced RECOR 323 XVC. Don't be confused however, LVCHOST for Windows is a stand-alone application that runs on laptops and networks and produces management style reports in the RECOR tradition. Add a powerful AMR feature, read only security and expanded online LVCHelp and everyone else in the corrector business is playing catch up again! Check out the advantages over our DOS version



- More detail and color coding of status-bar items.
- Quick and simple method of selecting date/ time for reports.
- Smart configuration prevents conflicting configuration selections.
- Active alarm values displayed and marked in red on configure 2 screen.
- The ability to independently configure instrument's time zone.
- Automatically adjust time zone when setting the instrument Real-Time-Clock.
- User selectable data file names; File names no longer restricted to instrument serial numbers.
- A wizard, making calibration even simpler to control.
- Enhanced site directory management.
- Historical data files are provided in a variety of formats. Export historical data to spreadsheet, database or third party hosts.
- Easy management of Instrument Event Log Files.
- Automatic Meter Reading with scheduler, audit trail, alarm log, unlimited number of groups, and an easy way to configure and use.
- Host setup is easier to use and provides greater flexibility.
- A very useful and easier to understand LVCHost Help.
- LVCHOST for Windows version 4.xx is required to take advantage of the enhanced feature set of the 323 XVC. This host also serves the original 323 LVC.

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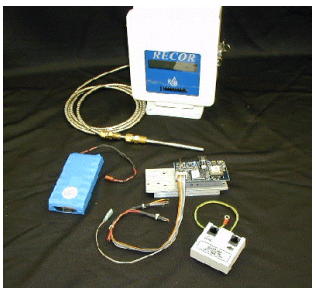
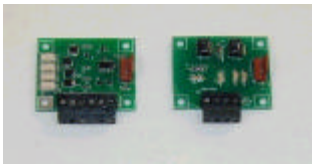
Communications



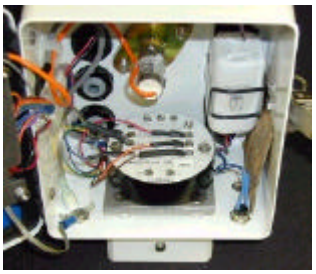
Internal Modems can be installed at the factory or in the field. Suitable for Class 1 Division 2 electrical classifications, the 2400-baud low power modem includes its own 12-volt alkaline battery pack (providing up to two years of operation based upon two minutes per day poll time). Optional surge protectors are also available. Multidrop harnesses allow for any number of 323 series correctors to be daisy chained to a single telephone line. LAN (local area network) cards allow for remote access via hard line connections; ideal for plant measurement.

Pulse Signal Conditioners



In addition to the standard form A uncorrected and corrected volume pulse outputs, the 323 series correctors may be equipped with a form C splitter board and/or an optical pulse isolator to protect your equipment from uncertain customer connections.

Remote Volume Inputs

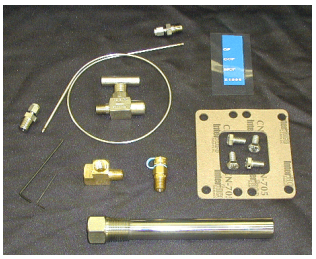


The 323 series correctors are compatible with meters not equipped with mechanical drive outputs. In these cases, the mechanical pulse generator is replaced with either a low frequency input signal conditioner or a high frequency preamp depending on available signal. As equipped, a variety of mounting solutions are offered; wall bracket, pipe mount or yoke mount.

Temperature Probes

To ease installation and satisfy site requirements or preference, temperature probes are offered in a variety of sizes and configurations including the “micro probe” designed to fit into a “Pete’s Plug” (for installations of 100psig or less).

Mounting Kits



Mounting kits can be assembled to any specification. The basic “large” mounting kit consists of everything you need including tubing, fittings, needle valve, gauge adapter, mounting screws and gaskets.

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323 Series Specifications

Physical

- Housing: Deep drawn aluminum
- Dimensions: Overall 8.5” x 7.25” x 5.25” (enclosure 7.25” x 6.25” x 4.25”)
- Weight: 6 pounds (including battery)
- Mounting: Universal rotatable base plate (others available)
- Pressure Connection: ¼” NPTF
- Temperature Probe: ¼” O.D. x 6” probe x 6’ armor; ¼” NPTM slip fitting (other available)
- Security: Stainless steel padlock hasp
- Coating: Snow white powder coat

Electrical

- Primary Power pack: 6 volt; 4 each AA alkaline heat shrink with fuse card
- Back Up Power: Twin 3.6 volt field replaceable lithium cells
- Circuit: 3 volt, 60 microamp; 4” x 5” four layer PCB; 95% surface mount construction
- Transducer: 3 millivolt per volt excitation; 12 point polynomial compensation
- Temperature Sensor (gas and air): Integrated circuit type
- Flow Detector: 90 degree opposed dual optical interrupt switch (remote and hi freq. available)
- Display: Eight digit LCD
- Communication: Two RS 232, multidrop addressable

Mechanical

- Drive Mechanism: Universal drive dog, reversible mechanical gear train
- Display: Odometer style eight digit uncorrected volume counter
- Scroll: Push button switch

Performance

- Accuracy: +/- .3% of reading inclusive of linearity, hysteresis, repeatability, long term drift & temp.
- Temperature: -40 to + 170 degrees Fahrenheit
- Humidity: 5 – 95 % condensing
- Primary Power Pack Life: Up to 48 months based on 1 minute wake up interval
- Back Up Power Life: Up to 12 months based on 1 minute wake up interval

323 Model Feature Matrix

Feature	323 DVC	323 LVC	323 XVC
Profiler (Audit Trail)	No	35 days/Hourly	130 days/Hourly
Event Log (200 + lines)	No	No	Yes
System Alarms (P, T and Battery)	Yes	Yes	Yes
Contract Management (hrs, days, mos)	No	No	Yes
Contract Alarms	No	No	Yes
Remote Communication Ready	No	Yes	Yes
Phone Home/pager	No	No	Yes
Flow Rate (hrs, diagnostics)	Yes	Yes	Yes
Prior Month End Volume to Local Display	No	No	Yes
Modbus (co-resident with Sandia)	Yes	Yes	No
Pulse Outputs	Yes	Yes	Yes
Metric Units	Yes	Yes	Yes

Options

- Inputs: Remote low frequency; high frequency
- Outputs: Optical isolator; form “C” splitter
- Communication: Internal 2400 baud modem; internal LAN card; multidrop harnesses

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