

Overview

In 1967, Reynolds Equipment Company began building mechanical chart recorders one at a time, by hand. Things have changed considerably. Since then we have established a leadership position in the supply of state of the art electronic gas metering equipment. Supplanting tried and true mechanical recorders has been one of our toughest challenges. But now the ever-advancing procession of low power electronics technologies has finally caught up with it! Introducing the all new RECOR 325 CDR family of Chartless Data Recorders: a simple yet powerful alternative to natural gas pressure monitoring.



Flexibility

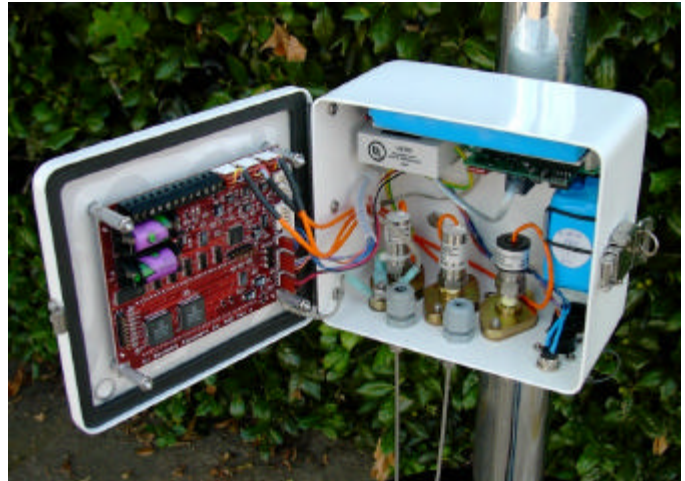
The 325 CDR covers a wide range of electronic process monitoring needs; from the simplest stand alone mechanical instrument replacement to a full-blown three pressure, two temperature, four pulse recording, alarming, notifying and SCADA compatible system suitable for everything from hydrostatic testing, PUC compliance, regulator performance, low point monitoring and load surveys!

Highlights

- Up to three pressures and two temperatures (plus ambient)
- Assignable pulse input and outputs
- Remote communications ready (internal modem available)
- Non volatile memory
- Local display
- Massive data storage capability
- Three independent high resolution event capture logs
- Extensive alarm capability with report by exception
- Single PC Board design simplifies troubleshooting and repair
- 1.5 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
- User friendly software provides for configuration, calibration and data processing
- Free license to native protocol and resident Modbus

Packaging

The 325 CDR is available in a variety of mounting configurations including stem, pedestal, wall, pipe and portable. The lightweight yet rugged housing features corrosion resistant materials and a locking hasp. Pressure sensors of 1psi through 10,000 psi are available in either gauge or absolute. The 325 CDR can be equipped with level, load, temperature and barometer sensors. Internal dial up telephone modems and wireless modems are optionally available.



Windows Operating Software

The Windows version of CDRHOST continues the standard of excellence in man machine interface design and implementation that Reynolds has become renown for. It's use of familiar Windows file management tools and data processing options seamlessly integrate into MS Office applications like Word, Excel and Access. Don't be confused however, CDRHOST for Windows is a stand-alone application that runs on laptops, desktops and networks and produces management style reports in the RECOR tradition. Read only security and expanded online CDRHelp round out this critical element.

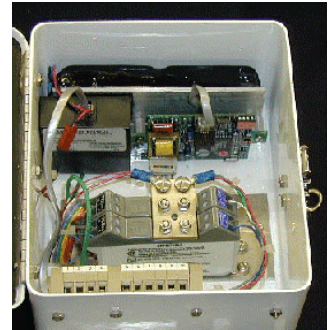
Check out these CDRHOST features:

- Informative Status Bar indicates proper connection and alarm detection.
- Reports are clear and legible, no function codes, just plain English.
- Quick and simple method of selecting start date/ time for reports.
- Profile up to 22 operating parameters with resolutions of 1 minute to 1 hour.
- Enable up to 16 alarms, each configurable for high, low and delta set point.
- Alarm actions independently configurable: pulse out, call out, log.
- Three event capture logs provide 1 second resolution based on high, low or delta reads.
- Historical data files are provided in a variety of formats.
- Export historical data to spreadsheet, database or third party hosts.
- Cut and paste historical data to word processing applications.
- Easy access of Instrument Alarm/Event Log Files.
- Straightforward configuration is a snap; smart configuration prevents conflicting selections.
- Automatically adjust time zone when setting the instrument Real-Time-Clock.
- Calibration Wizard makes full two point or single point adjustments easy; records date/time of calibration.
- Pulse inputs and outputs are easy to configure and connect.
- Phone home (RBX) to host or pager on alarm condition.
- Host setup is easy to use and provides a high degree of flexibility to suit mobile or desktop application.
- A very useful and easy to understand CDRHelp.

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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 325 CDR recorders to be daisy chained to a single telephone line. Local area network LAN cards allow for remote access via hard line connections; ideal for in plant/campus monitoring. For connecting to Class 1 Division 1 located equipment the LPM 2400 stand-alone modem with intrinsically safe barriers is the ideal solution.



The SS2400-232 spread spectrum radio modem uses advanced digital signal processing (DSP) to provide the ultimate in performance and reliability. The SS2400-232 operates in the license-free 2.4 GHz ISM band and can be used throughout the world with no site licenses or monthly leased line / wireless service fees. Designed to operate in high interference environments, the SS2400-232 combines advanced frequency hopping with outstanding receiver sensitivity and antenna diversity resulting in exceptional noise and interference rejection and peace of mind for you.

Pressure, Level and Load Transducers

Pressure transducers are available in ranges from 1 psig to 10,000 psig (absolute ranges also available). Standard pressure transducers are temperature compensated for optimum +/- 0.25% accuracy between -40' F and 170' F. Non compensated "economy" 2% pressure transducers are also available. The 325 CDR may be equipped with either level or load (weight) sensors. Pressure, level and or load may be combined in a common instrument. Certificate of Accuracy available upon request.



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). All probes are constructed of stainless steel and corrosion resistant materials. Leads are protected by flexible stainless steel armor.

Mounting Kits



Mounting kits can be assembled to any specification. The basic mounting kit consists of everything you need including tubing, fittings, needle valve and gauge adapter. Pipe riser, leveling saddles, flexible high pressure hoses, thermowells and cabling are also available.



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325 CDR 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: approximately 5 pounds (one transducer, including battery)
- Mounting: wall/panel, 2" pipe collar, wall/panel, stem (single pressure only), portable
- Pressure Connection: ¼" NPTF
- Temperature Probe: ¼" O.D. x 6" probe x 6' armor; ¼" NPTM slip fitting (others available)
- Security: stainless steel padlock hasp
- Coating: snow white powder coat

Electrical

- Primary Power pack: 1.5 volt; 1 each D alkaline heat shrink with fuse card
- Back Up Power: 3.6 volt field replaceable lithium cell
- Circuit: 3 volt, 40 microamp; 4" x 5" four layer PCB; 95% surface mount construction
- Transducer: 10 millivolt per volt excitation; 6th order polynomial compensation
- Temperature Sensor (gas and air): integrated circuit type
- 1 Pulse input
- 2 Pulse outputs each form A
- Display: eight digit LCD
- Communication: two RS 232, multidrop addressable
- Scroll: push button switch

Performance

- Accuracy: +/- .3% of reading inclusive of linearity, hysteresis, repeatability, long term drift & temperature
- 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

Available Pressure Ranges

1, 3, 6, 15, 30, 60, 100, 150, 200, 300, 500, 1000, 1500, 2000, 5000, 10000 psi (not all ranges available in absolute)

Options

- Internal 2400 baud POTS modem
- Modem surge protector
- Internal LAN card
- License free spread spectrum radios
- Multidrop harnesses
- Mounting kits
- Pipe saddles and risers
- Flexible hoses
- Custom Cabling

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