Sentinel I28
Leak and Flow Test Instrument

Instrument Features

Standard Test Types:
- Pressure/vacuum decay – leak standard
- Pressure/vacuum decay - $\Delta P$
- Pressure/vacuum decay - $\Delta P/\Delta T$
- Pressure/vacuum occlusion
- Pressure mass flow
- Pressure mass flow – leak standard
- Parent program linking

99 Test Programs:
Application flexibility including individual user programmed:
- Test types
- Timers
- Pressure limits
- Reject limits
- Calibration parameters
- Units of measurement
- Digital I/O
- Tooling control

Patented Auto Setup:
- Automated optimization of test program based on maximum user allowable cycle time
- Significantly simplifies instrument test programming and setup

32-bit Processor & 24-Bit A/D Converter:
- Exceptionally fast, high resolution test processing
- Stable yet extremely responsive pressure/flow measurements

Absolute Pressure Transducer:
- Eliminates test variations from barometric pressure changes
- Uncertainty 0.05% full scale (all ranges)

Pressure Range:
- Standard from vacuum to 500.0 psig
- Option - above 500 psig

Standard Mass Flow Ranges:
- Standard ranges from 0.5 to 3,000 sccm
- Above 3,000 sccm available
- Uncertainty 0.5% full scale (standard ranges)

Transducer Verification/Recertification:
- Easy pressure or flow transducers
- 6-point standard pressure calibration
- 2-point standard flow calibration

Available Pneumatic Manifolds -Optimization
- Standard flow
- Low volume
- High flow

Test Ports:
- Standard single test port
- Dual, triple and quad test ports available for sequential or zone specific testing

Test Ports:
- Choice of:
  - 1/4” FNPT or 3/8” FNPT
  - Other sizes available

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Pressure Control
- Standard high precision manual regulators
- Two standard regulators for mass flow
- Select up to two precision electronic regulators for automatic pressure changes unique to test part or test sequence
- Six point regulator Calibration
- Optional internal vacuum generator for vacuum applications

Units of Measure:
- All standard industrial units of measure are easily selectable per part program

Self -Test Functions:
- Internal leak detection process
- Program calibration verification

Leak Standards:
- Internal Leak Standard on the valve manifold for pressure decay with orifice configurations

RS232 Communication Ports:
- 2-Way Telnet communication
- Test result data transmission with definable fields
- Pressure streaming for curve storage
- Email of reports, test data, and alerts
- Barcode unique part identification

USB Port:
- Backup/Restore
- Cloning
- Report storage
- Test result data storage & result synchronization

Automatic Calibration
- Easy to perform
- Permits manual edits if averaging multiple parts is required
- Calibrates to master part

Ethernet Port:
- 2-Way Telnet communication w/Email of reports, test data, and alerts
- EtherNet/IP™ Option
- 26 Inputs/25 Outputs
- Test result data transmission with definable fields
- Test Program Selection

Environmental Drift Correction:
- Automatically maintains calibration accuracy to compensate for changes in environmental conditions including temperature

Quick Test Function:
- Shortens test cycle when it is obvious and imminent the monitored pressure curve will result in a reject or accept
- Analyzes test results in real time
- Provides projected final test results

24 Volt Digital Inputs/Outputs
- 12 User configurable inputs
- 12 User configurable outputs
- Tooling control – up to five tooling motions with feedback - eliminates the need for a PLC in some cases

Key or Password Security:
- Select menu items to secure or unsecure

Standard Selectable Menu Languages:
- English
- Spanish
- Chinese
- Korean
- Portuguese

Help Button:
- On-screen popup help window
- Minimizes dependency on the manual
Data Management & Storage:
- More than 5,000 tests stored on internal memory
- Infinite - Expandable Storage Via USB
- Statistic Data Tracking
- Tracks Percent of Accept and Rejects
- Provides Average Accept and Reject
- Standard Deviation on Accepts
- Allows definable Sample Size
- Resettable counters:
- Test Results Including Malfunction
- Data Viewable on Display

3-Color Light-Bar Indicator:
- Unique panel mounted light indicators provides clear feedback of each test
- Eliminates stack lights
- White: In Test
- Green: Accept
- Red: Reject
- Adjustable brightness
- Adjustable lighting duration:

Compact Enclosure Design:
- Dimensions: 9.25” high x 12” wide x 8.75” deep

Utility Requirements:
- Electrical: 90-260VAC, 50/60 Hz
- Pneumatic:
  - Pressure Input = 20 psig above maximum test pressure, clean dry compressed air or nitrogen
  - Pilot Input (if required) = 60 psig, clean dry compressed air or nitrogen