Compact & Specialized in Small-volume Products
Big LCD Screen Displays Wealth of Information

LS-1813
AIR LEAK TESTER

Features
- Pneumatic Circuit Specialized in Small-volume Products
- Big LCD screen
- Mastering Drift Compensation
- Intelligent Pneumatic Circuit
- Graphic Display of Max. 1000 Data
- NR (Noise Reduction)
- Auto Self-Diagnosis
- Automatic Measurement of Equivalent Internal Volume
- Serial Communication Port

Display
- Fulldot LCD screen with backlight
- Data automatically saved when turned OFF (uses nonvolatile RAM)

Intelligent Pneumatic Circuit
- Sensitivity check, Air valve operation check

Charge Hold
- Keep pressurizing in order to find out leakage spot

Alarm Setting
- 2-step alarm setting: Work Large/Small NG (HH/Hi-NG), Master Large/Small NG (LL/Lo-NG)

Noise Reduction
- In Hi-NG to HH-NG range, conduct re-detection. Setting of extended detection times. Signal output during operation (For cycle over release)

Calibration
- Measurement of Leak coefficient K(Ve) (Equivalent internal volume)
- DPS offset and span calibration
- Test Pressure offset and span calibration

Drift Compensation
- Mastering, Auto drift compensation

Self Diagnosis
- Check of Air valve operation, Sensor offset, CPU operation etc

Sensor protection
- Air blow at exhaust time
- Automatic cleaning of pneumatic circuit at every test
- External exhaust valve

Exhaust Interference Control
- External control of exhaust timing after each test

Graphic Display
- Mastering data, Sampling data

Selection of Unit
- Leak: mL/min, mL/s, Pa, kPa
- Test Pressure: kPa, MPa (Non SI unit: kg/cm², PSI, mmHg etc)
- Equivalent Internal Volume: ML, L (Non SI unit: in³, ft³)

Number of Channel
- 32 (0~31), Channel copy

Judgment Mode
- Judge when detection finish/Judge when setting value met/Others

Serial Communication
- Format selection ([I/D/T/P]), Baud rate change

Other Display
- Error comment, Index, Help, I/O monitor, HSI of leak DP (analog bar), Work No# & OK-NG counter

Mastering Setting
- Date, Interval & number of times, Waiting time, Number of limit over time, Default of compensation, Mastering limit, Number of loops, Auto drift compensation limit, Number of samples

Other Setting
- Test pressure limit (Upper & Lower), Counter clear
- Stop signal (Normal open/Normal close)
- Draft clear
- NG start command (Stop command unnecessary before test/Necessary)
- Countermeasure of Exhaust interference (With/Without)

※Underline indicates the standard setting at delivery time
## Specification

<table>
<thead>
<tr>
<th>Differential Pressure</th>
<th>Display Range</th>
<th>Reading Accuracy</th>
<th>Allowable Pressure</th>
<th>Test Pressure</th>
<th>Leak Rate</th>
<th>Display Digit</th>
<th>Leak Rate Limit</th>
<th>Number of channels</th>
<th>Timer Setting</th>
<th>Power Supply</th>
<th>Test Pressure Source</th>
<th>Pilot Pressure Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard: 0.1 Pa</td>
<td>±0.001kPa</td>
<td>±0.001kPa</td>
<td>5 MPa</td>
<td>100 to 800kPa</td>
<td>mL/min, mL/s, m³/min, Pa, kPa</td>
<td>3 digits (floating-point), Sampling rate 100/800 times/sec</td>
<td>Standard: ±999.999Pa Max</td>
<td>32ch (0 to 31)</td>
<td>999.9 sec (Resolution 0.1sec)</td>
<td>AC100 to 240V±10%, 50/60Hz, 100VA max</td>
<td>Clean air whose pressure is sufficiently higher than test pressure</td>
<td>Clean air regulated from 300 to 700kPa</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tubing Port</th>
<th>Inner Diameter</th>
<th>Rs1/4 (Test pressure source, WORK and MASTER ports) 6mm One-touch joint (Pilot pressure source) (Tubing connected to Pressure Source in advance with M.L.MR type.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>16 BIT CPU</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>5 to 40 °C</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Humidity</td>
<td>80 %RH or less, no condensation</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 9.5 kg</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Pneumatic Circuit</th>
<th>AS1: Intelligent I pneumatic circuit for small-volume WORK (Standard)</th>
<th>AS01: Pneumatic circuit for minute-volume WORK (Option)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Range</td>
<td>L: 10 to 80kPa, M: 50 to 700kPa, V: -5 to -100kPa, H10: 100~990kPa*1</td>
<td>50 to 900kPa*1</td>
</tr>
<tr>
<td>Option</td>
<td>W: Stop valve check switch</td>
<td>Q: CE-compliant model</td>
</tr>
</tbody>
</table>

*1: Pneumatic Circuit will be A1 or A01 for Pressure Range H10 & H9R, different from that of AS1 and AS01.

### External Appearance

*Contents of this catalog is correct as of June 2010. Please note that any details shown above are subject to change without notice.*