

**AIR LEAK TESTER** 

# PRODUCT INFORMATION

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Compact body with excellent features. Differential pressure Air Leak Tester specialized in operability and cost performance



LS-1866 is a compact, lightweight, easy-to-handle differential pressure air leak tester. The Master-Preset and Noise Reduction improve detection and reduce test time. The latest enhanced features such as multi-channel, direct reading of leak volume are available.

## Main Features

### Master-Preset

Removes drift and noise components from the value being measured and extracts only the true leak component. Improves the yield and reduces measurement time.



### Leak Calibration

Calibration port is provided for easy setting and checking of leaks. Leaks can be easily checked with a Leak Master (LM-1C).



### Functions

High Resolution	Down to 0.1 Pa can be displayed in differential pressure display.
Multi-Channels	16 channels
Leak Display	Converts the differential pressure into leak rate to display in units of mL/min by calibration.
Exhaust Interference Prevention	Prevents interference noise due to differences in exhaust timing when multiple testers are used on the same machine.
Noise Reduction (NR)	Removes noises by repeating measurements, allowing for tighter limit settings.
Compensation	Master-Preset, Fixed Value Comp

### Intelligent 1 Pneumatic Circuit



The leak tester's air-operated valves ensure reliable sealing and high flow rates. The basic circuit is the Intelligent 1 Pneumatic Circuit with excellent performance and reliability that checks valve operations and sensor sensitivity. The leak tester is also equipped with a function that prevents water, oil, and foreign matter adhering to the works from entering the measurement circuit.

### **Quick Mounting Brackets**

The main body can be easily installed and removed with two screws on the front.



Two-Level Limit Setting	Small Leak Limit and Large Leak Limit can be set for DET
Self Check	Checks differential pressure sensitivity automatically by blockage check in every test.
Air-Blow	The pneumatic circuit is cleaned at the end of every leak test.
Pressure Monitoring	Enables/Disables pressure monitoring with the upper and lower pressure limits.
External Exhaust Valve	Prevents water/oil from entering. The External Exhaust Valve is separately required.
NPN-PNP Common I/O Port	NPN and PNP available for I/O.

### **Specifications**

Resolution		0.1 Pa	Pressure	Use clean air. Sufficiently higher than the test pressure and the pilot pressure.	
Display Range		±999 Pa	Source		
Accuracy *1 Proof Pressure		±2.5% of rdg ±1 Pa, For 50 Pa or less: ±2 Pa	Pilot Pressure	Filter regulator for pilot pressure	
		5 MPa	Setting	Setting range 400 to 700 kPa	
Leak	Display Range	Differential pressure unit: 0.00 to ±999 Pa Flow unit: 0.00 to ±999 mL/min	Timer Setting Range	0 to 999.8 s (Resolution: 0.1 s) 999.9 s means no time limitation	
Numb	per of Channels	16 channels (#0 to #15)	Port Size	Rc1/4 (pressure source, WORK and MASTER ports), 6 mm one-touch joint (pilot pressure source)	
Timer Setting Range		0 to 999.8 s (Resolution: 0.1 s) 999.9 s means no time limitation	Control I/O port	Open collector port (NPN- PNP)	
Power Source		100 to 240 VAC ±10% at 50/60 Hz, 70 VA max	Communication Function	RS-232C serial communication port Print mode available	
Ambie	ent Temperature	5 to 45 °C			
Humidity		80 %RH or less / no dew condensation	Standard	Oil-mist separator <sup>*2</sup> and regulator, Filter regulator for pilot pressure, Quick Mounting Brackets, I/O	
Weight		Test pressure is M, L or V: Approx. 6.3 kg Test pressure is H10 or H15: Approx. 8.1 kg	Standard Accessories	connector, Power cable, Inspection Record of the product, Calibration Certificate of the standard, Operation Manual CD	
*1 For the option of DPS Range +10 kPa:					

\*1 For the option of DPS Range ±10 kPa:

±5% of rdg ±0.01 kPa. However, for 0.2 kPa or less, ±0.02 kPa.

\*2 Not provided for Vacuum.

### Model Classifications

Mode	bdel LS-1866(ABC.D) Model codes A, B, and D are mandatory.		
Α	Pneumatic Circuit	A1: Intelligent 1 Pneumatic Circuit, AS01: Micro Volume Circuit	
в	Test Pressure Range	M: 50 to 800 kPa, L: 10 to 95 kPa, V: -5 to -100 kPa <sup>*1</sup> , H10: 100 to 990 kPa, H15: 0.1 to 1.5 MPa	
С	Options	G: External Exhaust Valve Ready <sup>*2</sup> , F1: Blow Orifice Φ1.2 <sup>*3</sup> , D4: Differential pressure range ±10 kPa	
D	Power Cable VA: 125 VAC 3 m, VE: 250 VAC 2 m, VK: 250 VAC 2 m (Only for Chinese customers)		
*1 For [Vacuum (V)], the standard air-operated valve is the vacuum guard type.			

\*2 Standard specification. Not selectable for [Vacuum (V)].

Standard specification for [Micro Volume Circuit (AS01)]. Also, select when the test pressure is -10 to -4 kPa. \*3

# Pneumatic Circuit

### Standard Pneumatic Circuit: Intelligent 1 Pneumatic Circuit



### External Appearance

Dimensions (W165 x H208 x D240 mm)





### **Common Peripherals**

### LM-1C Leak Master

Micro-leak generator that stably generates a constant leak. Use it to check tester sensitivity and to measure equivalent internal volume.



### MC Master Chamber

In the master comparison method, a nonleaking work is used as a master. The Master Chamber can be used instead as a master.



### G3-M External Exhaust Valve

Install between the leak tester and the work to prevent water/oil etc. from entering the leak tester when exhausting.



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