

PRODUCT INFORMATION

AIR LEAK TESTER

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



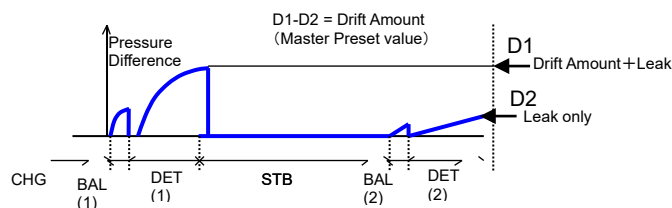
LS-1866 Air Leak Tester

Features

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

Master-Preset

Removes drift and noise components from the value being measured and extracts only the true leak component.



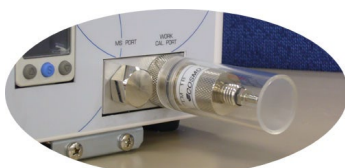
Intelligent 1 Pneumatic Circuit

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 operation and sensor sensitivity. The leak tester is equipped with a function that prevents water, oil, and foreign matter adhering to the works from entering the measurement circuit.



Leak Calibration

Calibration port is provided for easy setting and checking of leak rate. Leaks can be easily checked with a Leak Master.



Quick Mounting Brackets

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



■ Functions

High Resolution 0.1 Pa	Minimum resolution 0.1 Pa (When the unit is differential pressure unit)	Data Output	Serial communication port (RS-232C)
Multi-Channel	16 channels	Two-Level Limit Setting	The small leak limit and the large leak limit can be set for DET stage.
Master-Preset	Shortens test time and improves accuracy by removing drift components from the detected value. Only one master is required even when testing multiple works with a different volume.	Self Check	Checks differential pressure sensitivity automatically by blockage check in every test.
NR mode (Noise Reduction)	Removes noises by repeating measurements, allowing for tighter limit settings.	Pneumatic Circuit Cleaning	Prevents water, oil, and other foreign matter from entering by Air Blow in Exhaust.
Leak Rate Display	Converts the differential pressure into the leak rate to display in units of mL/min, by calibration using Leak Master (LM-1C)	Pressure Monitoring	Enable/Disable pressure monitoring with the upper and lower pressure limits.
Exhaust Interference Prevention	Prevents interference noise due to differences in exhaust timing when multiple testers are used on the same machine.	Quick Mounting Brackets	Allows installation and removal of the main unit from the front, requiring no space on either side.
		Leak Calibration	Allows easy calibration and judgment check by connecting the Leak Master to the Calibration port
		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.

■ Model Classification

LS-1866-(A)(B)-(C)

(1) Pneumatic Circuit	A1	Intelligent 1 Pneumatic Circuit
	AS01	Small-volume Intelligent 1 Pneumatic Circuit
(B) Test Pressure	L	Low pressure: Max. 95 kPa (with Regulator) (10 kPa to 95 kPa)
	M	Medium pressure: Max. 800 kPa (with Regulator) (50 kPa to 800 kPa)
	V	Vacuum: Max. -100 kPa (with Regulator) (-5 kPa to -100 kPa) (Limited depending on atmospheric pressure)
	H10	High pressure: Max. 990 kPa (with Regulator) (100 kPa to 990 kPa)
	H15	High pressure: Max. 1.5 MPa (with Regulator) (0.5 MPa to 1.5 MPa)
(C) Option	D4	Wide range: DPS range 10 kPa

■ Specification

DPS	Minimum Reading	Standard: 0.1 Pa
	Display Range	Standard: ± 999 Pa
	Proof Pressure	5 MPa
	Reading Accuracy *1	$\pm 2.5\%$ of rdg ± 1 Pa, For 50 Pa or lower: ± 2 Pa
Leak Rate Display Range		0.00 to ± 999 (Pa, mL/min) (Auto Range)
Limit Setting Range		0 to ± 999
Number of Channels		16
Timer Setting Range		0 to 999.8 s (999.9 s means no time limitation)
Power Source		100 to 240 VAC $\pm 10\%$, 50/60 Hz, Power consumption 70 VA
Pressure Source		Clean air sufficiently higher than the test pressure.
Pilot Pressure Source		Clean air regulated between 400 and 700 kPa
Port Size		Rc1/4 (pressure source, WORK and MASTER ports), 6 mm one-touch joint (pilot pressure source) (The pilot pressure source of the range M and L is connected to the pressure source by 6 mm piping.)
Communication Function		RS-232C serial communication port (Print mode available)
Ambient Temperature and Humidity		5 to 40°C, 80 % RH or less, No dew condensation
Weight		Approx. 6.3 kg (H Type: Approx. 8 kg)
Standard Accessory		(Standard) Regulator, Oil-mist separator, Filter regulator for pilot pressure (Accessory) Quick Mounting Brackets, Inspection Record, Operation Manual
Power Cord		VA : 125 VAC 3 m, VE : 250 VAC 2 m, VK : 250 VAC 2 m (Only for Chinese customers)

*1 For the option D4: DPS 10 kPa, the reading accuracy is 5% of rdg ± 0.01 kPa. However, ± 0.02 for 0.2 kPa or lower.

- I/O Port

● **Input** NO: Normally Open / NC: Normally Closed

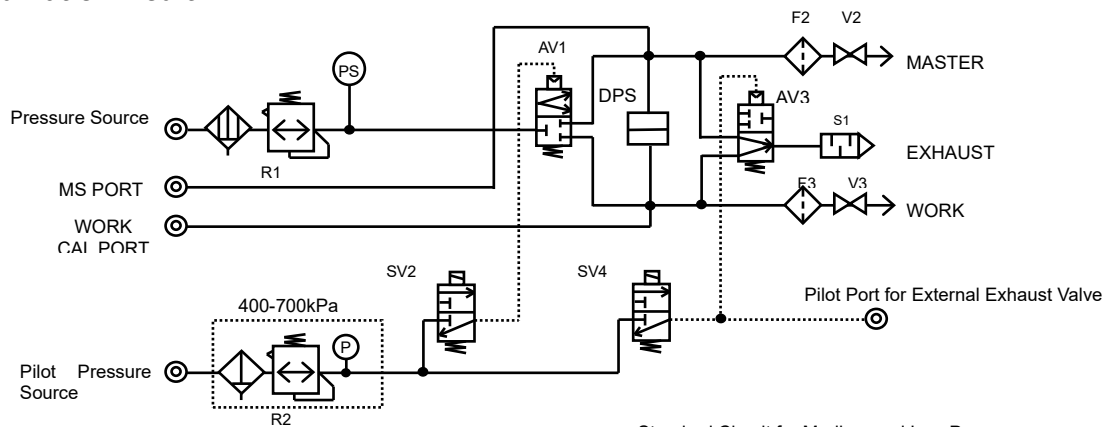
Name	PIN#	Signal Type
Start (START)	2	NO Pulse
Stop (STOP)	3	NO/NC Pulse
Charge Hold (CHG HOLD)	4	NO Hold
Master-Preset	5	NO Pulse
External Power Input	10	
Channel #3	21	NO Pulse
Channel #2	22	NO Pulse
Channel #1	23	NO Pulse
Channel #0	24	NO Pulse

* NPN, PNP both available for I/O

- **Output** (Open Collector)

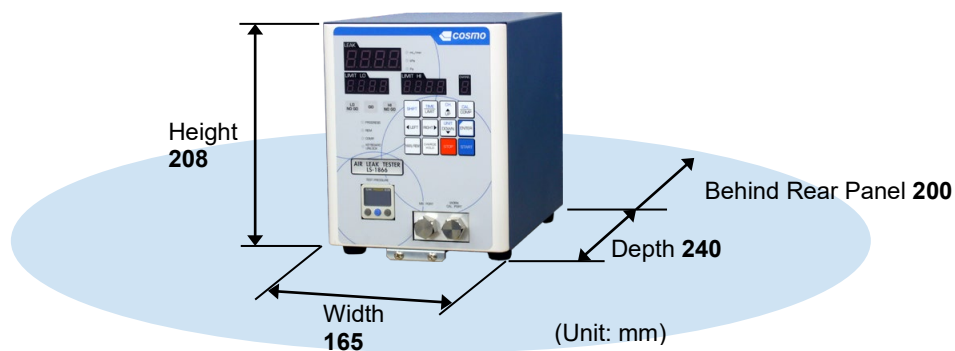
Name	PIN#	Signal Type
Busy (BUSY)	36	NO Pulse/Hold
End (END)	35	NO Pulse
OK (GO)	14	NO Pulse/Hold
MASTER NG (Lo-NG)	32	NO Pulse/Hold
MASTER NG (LL-NG)	33	NO Pulse/Hold
WORK NG (Hi-NG)	13	NO Pulse/Hold
WORK NG (HH-NG)	31	NO Pulse/Hold
Error (ERR)	16	NO Pulse/Hold
Output Common	19	
Stage #1	17	NO Pulse
Stage #0	18	NO Pulse
Time Extension	34	NO Pulse

■ Pneumatic Circuit



Standard Circuit for Medium and Low Pressures

■ External Dimension



* Behind rear panel, a space of approx. 200 mm is required for installation of air filter and regulator etc.

Peripheral Equipment

MC Master Chamber

Standard master that can be adjusted according to work characteristics. Compact, airtight, and easy to maintain. Master Chambers specialized in Mastering purpose also available



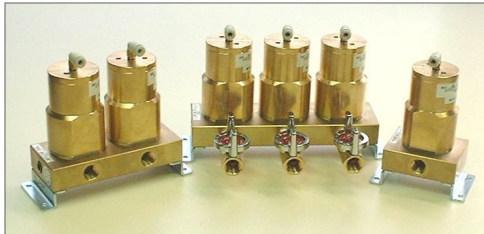
LM-1C, LM-1AH Leak Master

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



NL NL Select Valve

Dedicated switching valve for leak test circuit that minimizes the effects of leak, temperature, and small volume changes on the measurement.



Cosmo Super Gel

Cosmo Super Gel was developed in the process of researching sealing technology for leak test. Extremely flexible gel with excellent elasticity. Its thermoplasticity allows it to be molded into a variety of shapes.



G3-ME External Exhaust Valve

Install the External Exhaust Valve between the leak tester and the work to prevent water/oil etc. from entering the leak tester. It can be driven directly by the leak tester.



LC Leak Calibrator

QLC Quick Leak Calibrator

Generate differential pressure by volume change to check tester sensitivity and measure equivalent internal volume. QLC is activated by one-touch action.



LC

QLC

RC Remote Control BOX

Compact external remote controller. Select the model according to the required function.



RC-16

RC-12B

KS Machine (Base Machine Type)



The KS series is designed to be easily connected to air leak testers to fully demonstrate the various functional capabilities of the testers. This machine reflects our long-standing expertise in jig clamping methods and sealing technology. We offer this machine in a reasonable price so that customers can take advantage of it.

The contents in this Product Information are as of March 2022. The specifications are subject to change without prior notice.

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