

Cylinder Speed Checker (Built-in Magnet Cylinder)

IN574-95/-73/-98 Series



3
measurement
modes

Speed (mm/s)

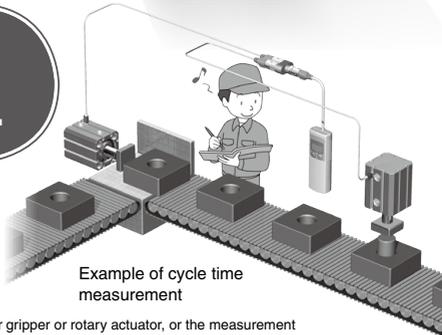
Time required for stroke (s)

Operation count (Times)



Realizes increase in efficiency with visualization of air cylinder operation.

- Quantification of cycle time improvements
- For reduction of numerical management/adjustment labor when starting up equipment
- For reduction of numerical confirmation/inspection labor during periodic maintenance

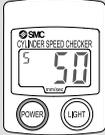


⚠ Caution The measurement may not be performed with an air gripper or rotary actuator, or the measurement deviation may increase. Please contact SMC for more information.

3 Measurement Modes

Speed (mm/s)

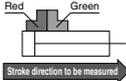
Measures the speed of cylinders.



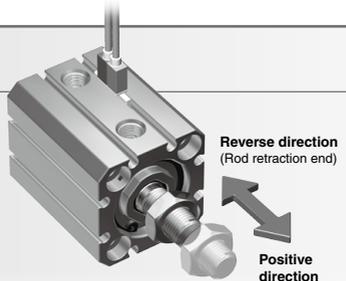
Rated measurement range
-1999 to 1999 mm/s

Note) Minus (-) is added to the measured value to distinguish the extension and retraction of a cylinder.

Rod extension end: Positive direction
Rod retraction end: Reverse direction (-)

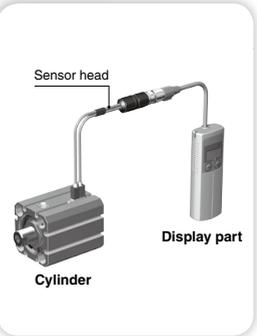


* Although a measurement can be done even when the sensor is mounted in the reverse direction, the display direction is also reversed.



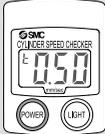
Reverse direction
(Rod retraction end)

Positive direction
(Rod extension end)



Time required for stroke (s)

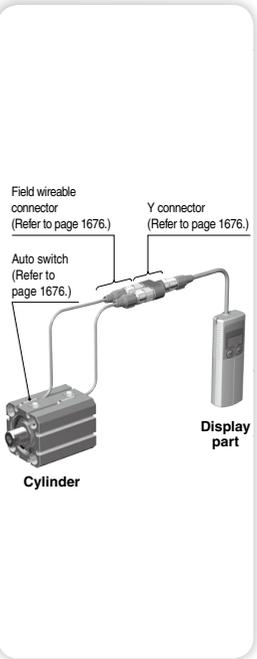
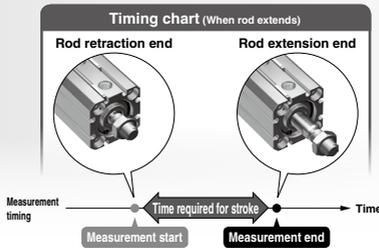
Measures the time required for the stroke of the cylinder (rod retraction end to rod extension end).



Rated measurement range
-999.9 to 999.9 s

Note) Minus (-) is added to the measured value to distinguish the extension and retraction of a cylinder.

Rod extension end: Positive direction
Rod retraction end: Reverse direction (-)

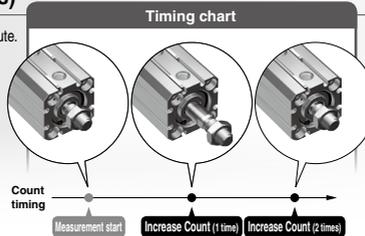


Operation count (Times)

Measures the operation count of a cylinder for 1 minute.



Rated measurement range
0 to 999 times



- Compact: 40 (Width) x 110 (Height) x 20 (Depth) mm
- Lightweight: Approx. 65 g (Body)/25 g (Sensor)
- Battery powered: 2A dry cell battery x 2, continuous use for 15 hours or more.
- With backlight
- With auto power-off function*
* If a button is not operated for 15 min. or more, the power supply will turn off automatically.





RoHS

Cylinder Speed Checker

IN574-95/-73/-98

How to Order

Sensor head + Display part **IN574-95**

Sensor head **IN574-73**

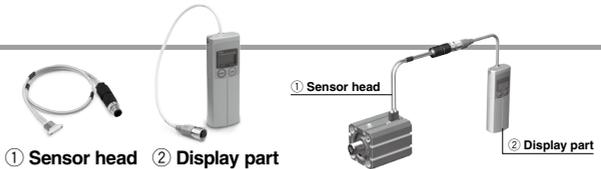
Display part **IN574-98**



Speed Measurement Type

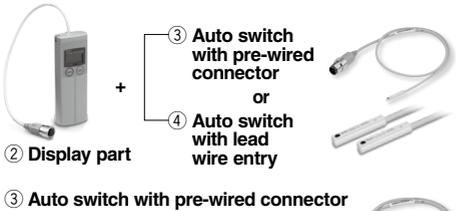
Model **IN574-95**

(1) Sensor head + (2) Display part



Application example

Time Required for Stroke/Operation Count Measurement Type



(3) Auto switch with pre-wired connector

D-M9N S A PC

Connector model

A	M8-3 pin
D	M12-4 pin

Lead wire length

S	0.5 m
M	1.0 m

Applicable auto switch

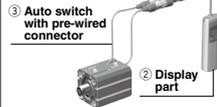
Output type	Function	Electrical entry	Applicable model
NPN type	—	Grommet (In-line)	M9N
		Grommet (Perpendicular)	M9NV
	2-color indicator	Grommet (In-line)	M9NW
		Grommet (Perpendicular)	M9N WV
PNP type	Water resistant	Grommet (In-line)	M9NA
		Grommet (Perpendicular)	M9NAV
	—	Grommet (In-line)	M9P
		Grommet (Perpendicular)	M9PV
2-color indicator	Water resistant	Grommet (In-line)	M9PW
		Grommet (Perpendicular)	M9P WV
	Water resistant	Grommet (In-line)	M9PA
		Grommet (Perpendicular)	M9PAV

* Please contact SMC for other applicable auto switches.

Order separately when using the time required for stroke/operation count measurement modes.

Application example

(5) Y connector



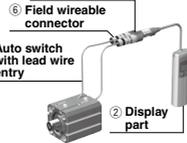
Ordering example

IN574-98 1 pc.
Cylinder Speed Checker (Display part)*
D-M9NSAPC 2 pcs.
Auto switch with pre-wired connector
PCA-1557798 1 pc.
Y connector

* Only NPN type auto switches can be used. For PNP types, prepare an IN574-95-P, but do not use the sensor head.

Application example

(5) Y connector



Ordering example

IN574-98 1 pc.
Cylinder Speed Checker (Display part)*
D-M9N 2 pcs.
Auto switch with lead wire entry
PCA-1557730 2 pcs.
Field wireable connector
PCA-1557798 1 pc.
Y connector

* Only NPN type auto switches can be used. For PNP types, prepare an IN574-95-P, but do not use the sensor head.

Refer to pages 1590 to 1649 for the auto switches (3, 4) and Best Pneumatics No.1-1 for the M8/M12 connectors (5, 6).

Time Required for Stroke/Operation Count Measurement Type

④ Auto switch with lead wire entry

D-M9N

• Lead wire length

Nil	0.5 m
M	1.0 m

• Applicable auto switch

Output type	Function	Electrical entry	Applicable model	
NPN type	—	Grommet (In-line)	M9N	
		Grommet (Perpendicular)	M9NV	
	2-color indicator	Grommet (In-line)	M9NW	
		Grommet (Perpendicular)	M9NWV	
Water resistant	—	Grommet (In-line)	M9NA	
		Grommet (Perpendicular)	M9NAV	
PNP type	—	Grommet (In-line)	M9P	
		Grommet (Perpendicular)	M9PV	
	2-color indicator	Grommet (In-line)	M9PW	
		Grommet (Perpendicular)	M9PWV	
	Water resistant	—	Grommet (In-line)	M9PA
			Grommet (Perpendicular)	M9PAV

* Please contact SMC for other applicable auto switches.

* The lead wire is converted to M8/M12 connector for use.



⑤ Y connector



PCA-1557798
Two auto switches with M8 connectors can be connected.



PCA-1557785
Two auto switches with M12 connectors can be connected.

⑥ Field wireable connector



PCA-1557730
Attached to end of the lead wire of the auto switch. Used in combination with PCA-1557798.



PCA-1557743
Attached to end of the lead wire of the auto switch. Used in combination with PCA-1557785.

* Note that although it can be connected, the IP65/67 may not be held depending on the assembly method.

Refer to pages 1590 to 1649 for the auto switches (③, ④) and Best Pneumatics No.1-1 for the M8/M12 connectors (⑤, ⑥).

Specifications Note 1)

Model		IN574-95/IN574-95-P		
Measurement mode	Speed	Time required for stroke		Operation count (Times)
Rated measurement range	-1999 to 1999 mm/s	-999.9 to 999.9 s		0 to 999 times
Minimum display unit	1 mm/s	0.01 s (0.00 to 99.99 s, 0.00 to -99.99 s)		1 time
		0.1 s (100.0 to 999.9 s, -100.0 to -999.9 s)		
Measurement accuracy	±20% or less	±0.2 s or less		—
Power supply <small>Note 2)</small>	2 x 1.5 VDC 2A alkali dry cell batteries (continuous use for 15 hours or more)			
Applicable cylinder	Built-in magnet			
Environmental resistance	Enclosure	IP40		
	Operating temperature range	Operating: 0 to 40°C, Stored: -10 to 60°C (with no freezing or condensation)		
	Operating humidity range	Operating/Stored: 35 to 85% R.H. (with no condensation)		
	Vibration resistance	10 to 150 Hz at 1.5 mm amplitude or 98 m/s ² acceleration whichever is smaller, in X, Y, Z directions for 2 hrs. each (De-energized)		
	Impact resistance	100 m/s ² in X, Y, Z directions 3 times each (De-energized)		
Weight	Sensor part: 25 g, Body: 65 g (excluding dry cell batteries)			
Standards	RoHS, CE			

Note 1) The above specifications may change depending on the operating environment.
 Note 2) 2A alkali dry cell batteries are not included, and must be acquired separately.

Speed Measurement Sensor/D-F8N, D-F8P

Model	D-F8N	D-F8P
Power supply voltage	4.5 to 28 VDC	
Current consumption	10 mA or less	
Load voltage	28 VDC or less	—
Load current	40 mA or less	80 mA or less
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA)	
Leak current	100 µA or less	
Operating time	1 ms or less	
Indicator light	Red LED is illuminated when turned ON.	
Ambient temperature	-10 to 60°C	

Applicable Auto Switches for the Time Required for Stroke/ Operation Count Measurement

Power supply voltage	14 VDC or less
Output type	NPN open collector
ON voltage	2 V or less
OFF current	100 µA or less

Dimensions

IN574-95/IN574-95-P (Sensor head + Display part)

