

# Cylinder Speed Checker (Built-in Magnet Cylinder)



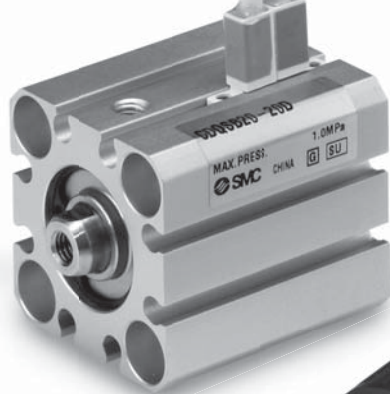
RoHS

**3**  
measurement  
modes

*Speed (mm/s)*

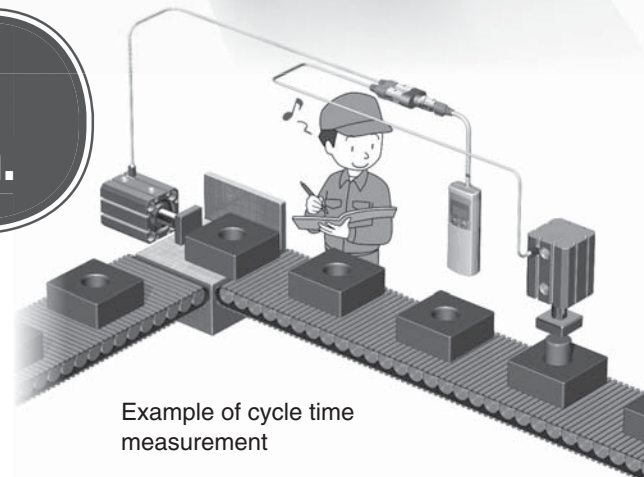
*Time required for stroke (s)*

*Operation count (Times)*



**Realises increase in efficiency with visualisation of air cylinder operation.**

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



Example of cycle time measurement

**IN574-95/-73**

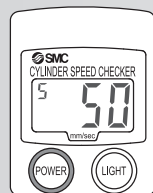


14-EU641-UK

## 3 Measurement Modes

### Speed [mm/s]

Measures the speed of cylinders.



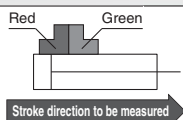
Rated measurement range<sup>(Note)</sup>

-1999 to 1999 mm/s

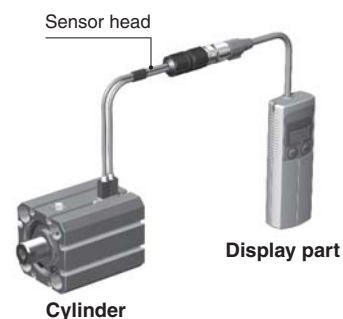
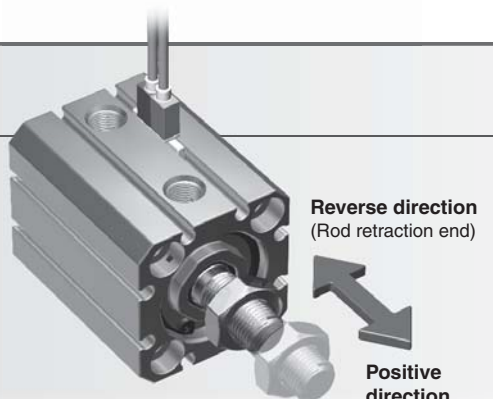
Note) Minus (-) is added to the measured value to distinguish the extension and retraction of a cylinder.

Rod extension end: Positive direction

Rod retraction end: Reverse direction (-)

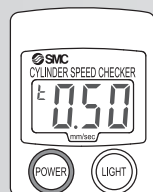


\* Although a measurement can be done even when the sensor is mounted in the reverse direction, the display direction is also reversed.



### Time required for stroke [s]

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



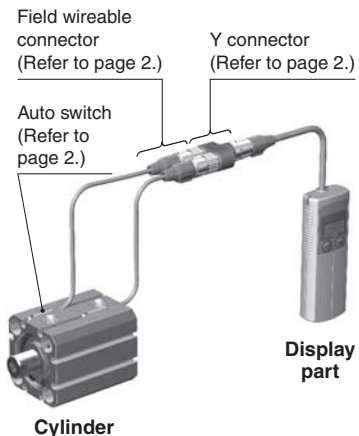
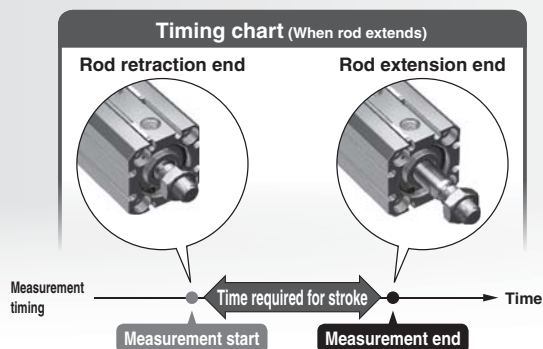
Rated measurement range<sup>(Note)</sup>

-999.9 to 999.9 s

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

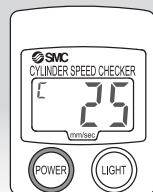
Rod extension end: Positive direction

Rod retraction end: Reverse direction (-)



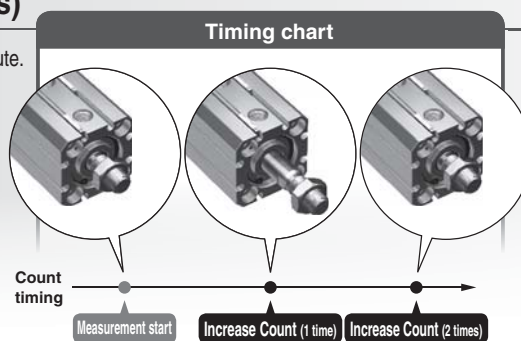
### Operation count (Times)

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)

\* Excluding dry cell batteries.

■ 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

### How to Order

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

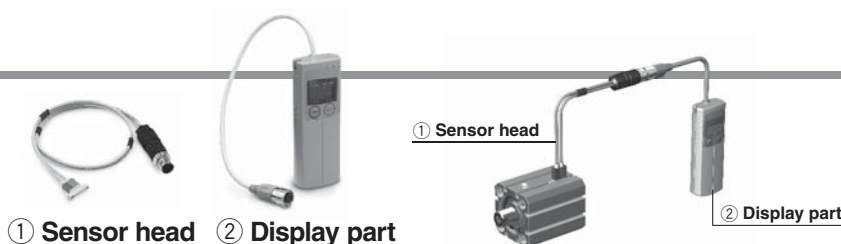
Sensor head **IN574-73**



### Speed Measurement Type

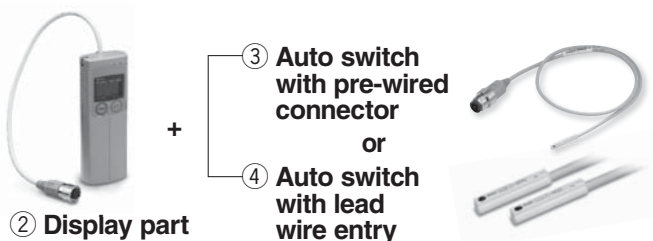
Model **IN574-95**

(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**

#### Applicable auto switch

Function	Electrical entry	Applicable model
—	Grommet (In-line)	<b>M9N</b>
	Grommet (Perpendicular)	<b>M9NV</b>
2-colour indication	Grommet (In-line)	<b>M9NW</b>
	Grommet (Perpendicular)	<b>M9NWV</b>
Water resistant	Grommet (In-line)	<b>M9NA</b>
	Grommet (Perpendicular)	<b>M9NAV</b>

\* Please contact SMC for other applicable auto switches.

Connector model

<b>A</b>	M8-3 pin
<b>D</b>	M12-4 pin

#### Lead wire length

<b>S</b>	0.5 m
<b>M</b>	1.0 m

④ Auto switch with lead wire entry

**D-M9N**

#### Applicable auto switch

Function	Electrical entry	Applicable model
—	Grommet (In-line)	<b>M9N</b>
	Grommet (Perpendicular)	<b>M9NV</b>
2-colour indication	Grommet (In-line)	<b>M9NW</b>
	Grommet (Perpendicular)	<b>M9NWV</b>
Water resistant	Grommet (In-line)	<b>M9NA</b>
	Grommet (Perpendicular)	<b>M9NAV</b>

\* Please contact SMC for other applicable auto switches.

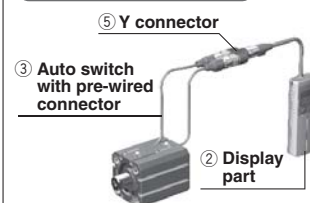
\* The lead wire is converted to M8/M12 connector for use.

Lead wire length

—	0.5 m
<b>M</b>	1.0 m

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

#### Application example

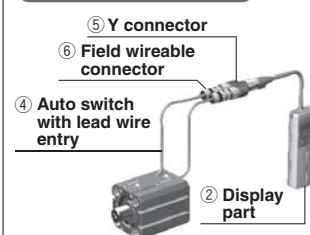


#### Ordering example

· **IN574-95**.....1 pc.  
Cylinder Speed Checker (Sensor head + Display part)\*  
· **D-M9NSAPC**.....2 pcs.  
Auto switch with pre-wired connector  
· **PCA-1557798**.....1 pc.  
Y connector

\* The sensor head is not used when the checker is used for the time required for stroke/operation count measurement.

#### Application example

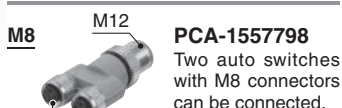


#### Ordering example

· **IN574-95**.....1 pc.  
Cylinder Speed Checker (Sensor head + 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

\* The sensor head is not used when the checker is used for the time required for stroke/operation count measurement.

⑤ Y connector

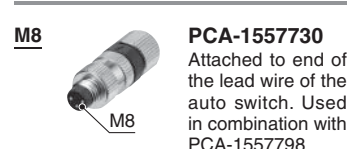


**PCA-1557798**  
Two auto switches with M8 connectors can be connected.



**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 the **Auto Switch Guide** for the details on the auto switches (③, ④) and the M8/M12 connectors (⑤, ⑥).

# IN574-95/-73

## Specifications <sup>Note 1)</sup>

Model		IN574-95	
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) 0.1 s (100.0 to 999.9 s, –100.0 to –999.9 s)	1 time
Measurement accuracy	±20 % or less	±0.2 s or less	—
Power supply <sup>Note 2)</sup>	2 x 1.5 V DC 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 <sup>2</sup> acceleration whichever is smaller, in X, Y, Z directions for 2 hrs. each (De-energised)	
	Impact resistance	100 m/s <sup>2</sup> in X, Y, Z directions 3 times each (De-energised)	
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

Power supply voltage	4.5 to 28 V DC
Current consumption	10 mA or less
Load voltage	28 V DC or less
Load current	40 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

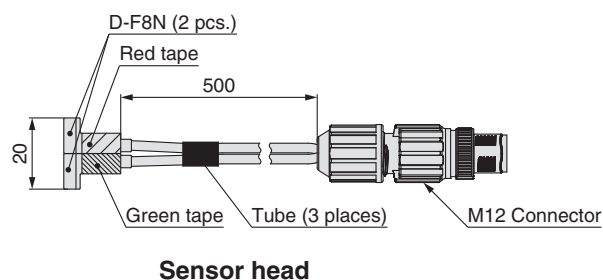
Power supply voltage	14 V DC or less
Output type	NPN open collector
ON voltage	2 V or less
OFF current	100 µA or less

## Dimensions

### IN574-95 (Sensor head + Display part)

### Wiring

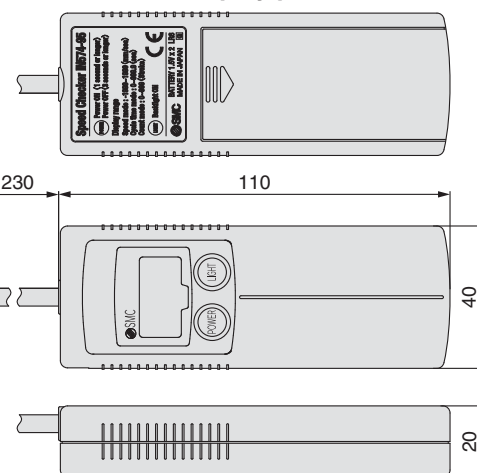
Terminal no.	Description	Note
1	+15 V	—
2	Output signal 1	D-F8N
3	GND	—
4	Output signal 2	D-F8N



Sensor head



Display part



Plug connector  
A-coded (Normal key)



Socket connector  
A-coded (Normal key)

## SMC Corporation

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