

## Model Indication and How to Order

**D-M9**

• Output type

Symbol	Specification
N	3-wire, NPN
P	3-wire, PNP
B	2-wire

• Electric entry

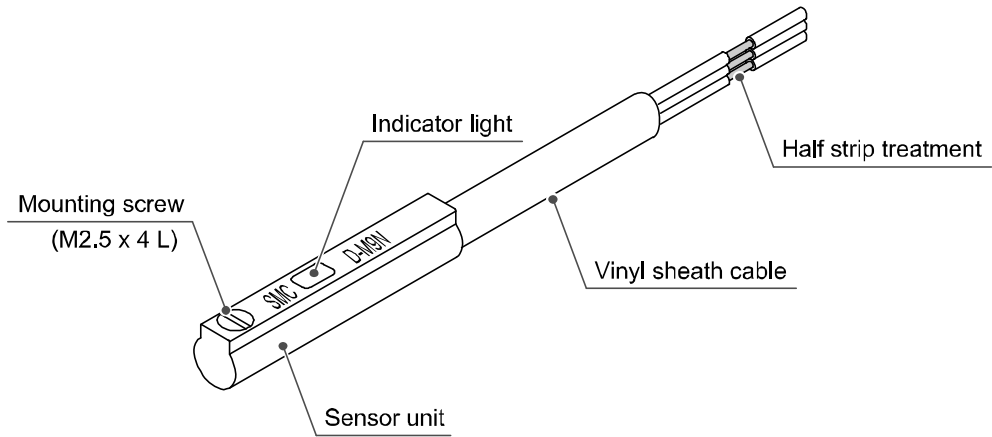
Symbol	Specification
NIL	In line
V	Perpendicular

• Lead wire length

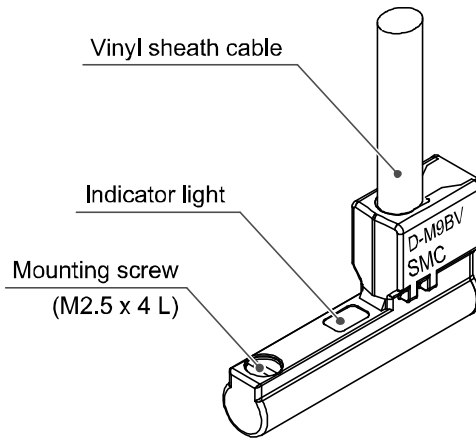
Symbol	Specification
NIL	500 mm (Half strip)
M	1000 mm (Half strip)
L	3000 mm (Half strip)
Z	5000 mm (Half strip)
SAPC	500 mm (M8 3 pin pre-wired)
SBPC	500 mm (M8 4 pin pre-wired)
SDPC	500 mm (M12 4 pin pre-wired)
MAPC	1000 mm (M8 3 pin pre-wired)
MBPC	1000 mm (M8 4 pin pre-wired)
MDPC	1000 mm (M12 4 pin pre-wired)

## Summary of Product parts

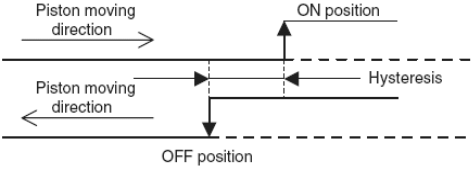
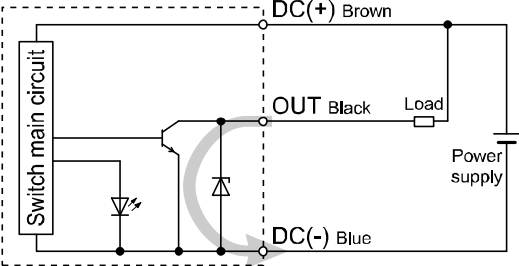
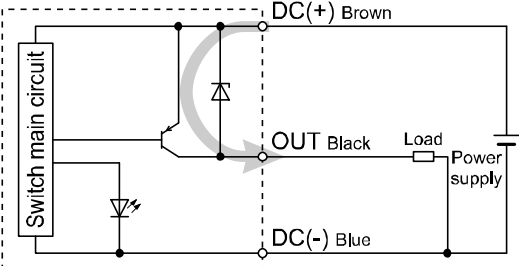
- Summary of Product parts  
D-M9B/M9N/M9P



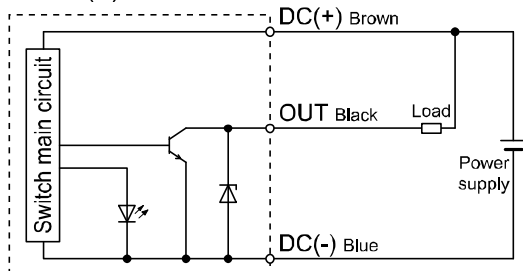
D-M9BV/M9NV/M9PV



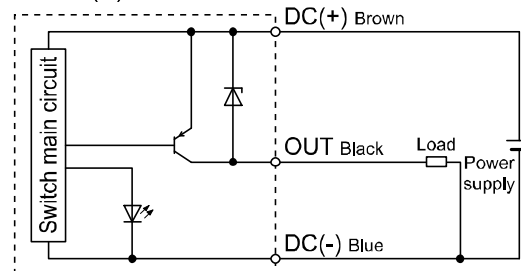
## ■ Definition and terminology

	Term	Meaning and definition
2	2-wire Auto switch	Auto switch which has only signal line and COM line.
C	Current leakage	The current flowing to the load when the Auto switch turns off.
H	Hysteresis	<p>The difference between the points when the Auto switch turns on and off, which is provided to prevent chattering.</p> 
I	Internal voltage drop	The voltage applied between the COM and signal line when the Auto switch turns on.
L	Load current	The current flowing to the load when the Auto switch turns on.
M	Most sensitive position	The center position of the sensor unit (which gets the strongest reaction of the sensor unit), which means the center position of an operating range as well.
N	NPN output	<p>Auto switch which sinks current from the signal line when turning on.</p> 
P	PNP output	<p>Auto switch which sources current from the signal line when turning on.</p> 
R	Reed Auto switch	Auto switch which generates on and off outputs with a mechanical contact.
S	Sequence controller (PLC)	The device to perform sequence control, which performs controlling such as receipt of inputs from the Auto switch along with programming and sending of the output to other machines.
	Solid state Auto switch	Auto switch which generates on and off outputs with or without mechanical contact such as a transistor.

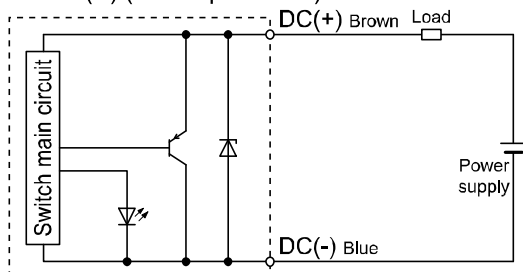
•Internal circuit  
D-M9N(V)



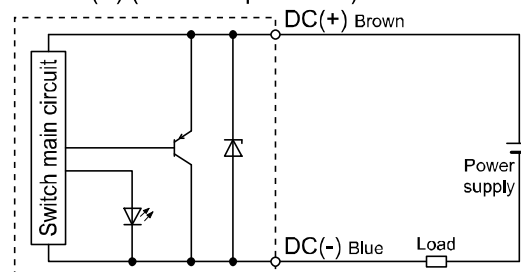
D-M9P(V)



D-M9B(V) (Sink input mode)



D-M9B(V) (Source input mode)



\*: The number marked on each lead wire color shows the pin number of pre-wired connector.

## Maintenance

After the power has been disconnected, please observe the following precautions:-

Regarding the actuator operation set up, the contents of the program may be maintained by the customer's application system.

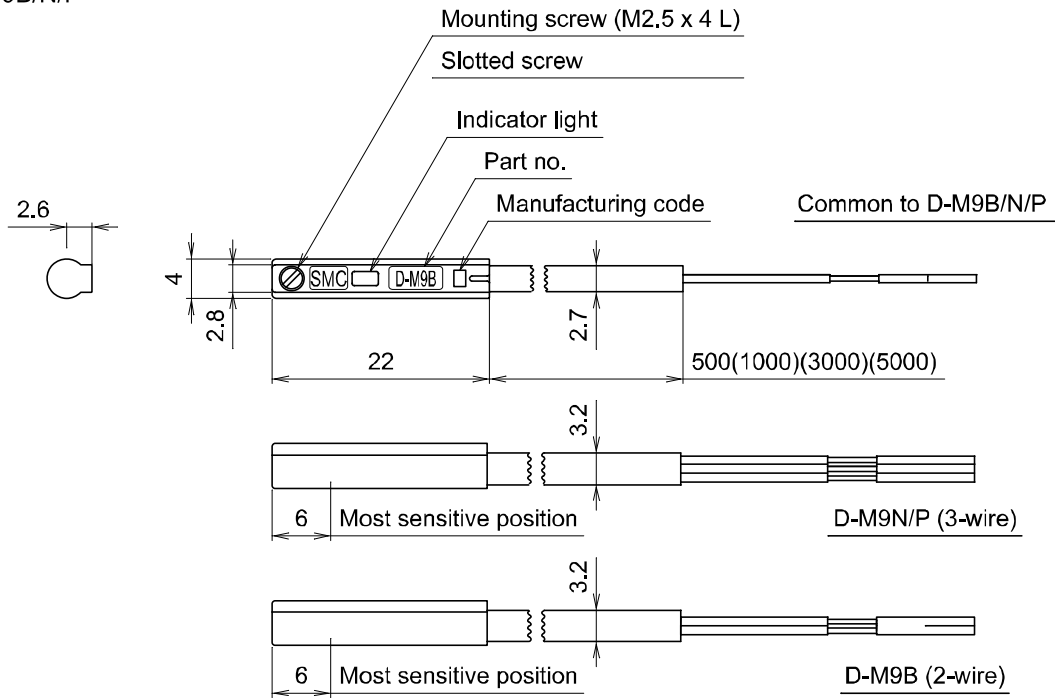
Take care to confirm safety when the power is re-connected, and the actuator operation is resumed, because the operation may have stopped in an unstable condition.

## Specifications

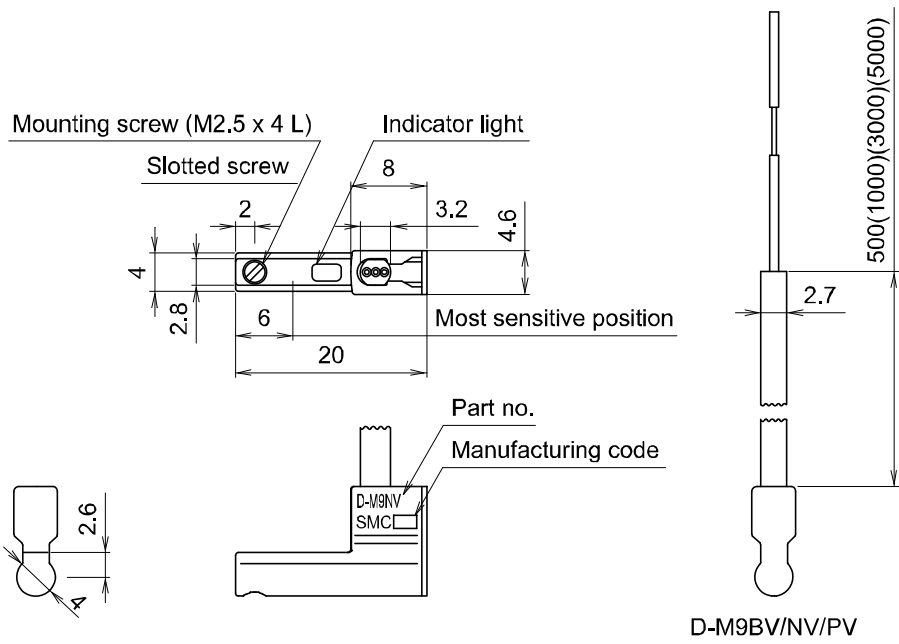
### ■ Specification

Switch part no.	D-M9N	D-M9NV	D-M9P	D-M9PV	D-M9B	D-M9BV
Wiring	3-wire				2-wire	
Output	NPN		PNP		-	
Lead wire orientation	In line	Perpendicular	In line	Perpendicular	In line	Perpendicular
Applicable load	IC circuit/Relay/PLC				24 VDC Relay/PLC	
Power supply voltage	5/12/24 VDC (4.5 to 28 VDC)				-	
Current consumption	10 mA or less				-	
Load voltage	28 VDC or less		-		24 VDC (10 to 28 VDC)	
Load current	40 mA or less				2.5 to 40 mA	
Internal voltage drop	0.8 V or less at load current of 10 mA (2 V or less at load current of 40 mA)				4 V or less	
Current leakage	100 $\mu$ A or less at 24 VDC				0.8 mA or less	
Operating time	1 ms or less					
Indication light	Operating position: The Red LED lights up.					
Electrical entry	Grommet					
Lead wire	Vinyl sheath cable 2.7 x 3.2 oval, 0.15 mm <sup>2</sup> , 2-wire (D-M9B(V)), 3-wire (D-M9N(V),D-M9P(V))					
Impact proof	1000 m/s <sup>2</sup>					
Insulation resistance	50 M $\Omega$ or more under the test voltage 500 VDC (between case and cable)					
Withstand voltage	1000 VAC 1 min. (between case and cable)					
Ambient temperature	-10 to 60 °C					
Enclosure	IEC 60529 criteria IP67, JISC0920 watertight construction					

■ Dimensions  
D-M9B/N/P



D-M9BV/NV/PV



#### Revision history

- A: Add the D-M9\*V series and the applicable Actuator.
- B: Add the applicable Actuator.  
Change the torque range for mounting switch.  
Change the product spec.
- C: Modify the contents.
- D: Modify the contents.
- E: Limited warranty and Disclaimer are added.

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Note: Specifications are subject to change without prior notice and any obligation on the part of the manufacturer.  
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