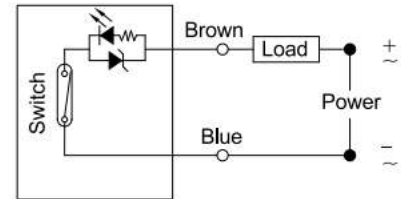


## Safety instructions

Be sure to read the safety instructions before use.

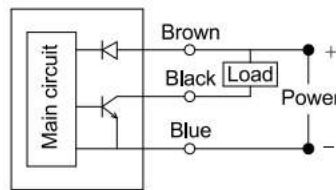
**⚠ Do not exceed specification, or permanent damage to the sensor may occur. Keep sensors away from strong magnetic field and magnetic metal to avoid malfunctions.**

1. While using a 2-wire switch, ensure that it is connected to a proper resistance load. Otherwise, excessive current will lead to permanent damage of the switch.
2. For direct current (DC), connect the brown wire in series with load positive (+) and the blue wire with negative (-) of power source. Otherwise, LED indicator will remain off. Reversed polarity will not cause damage to the switch. Correct the connection as instructed if reversed, and LED indicator light will function normally.

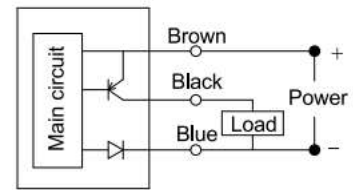


3. For solid-state 3-wire switch, direct current (DC) is a must, and polarity should be observed.
  - Connect brown wire to the positive (+), the blue to the negative(-) of DC power source, and the black to the load.
  - Incorrect connection may result in permanent damage of the switch.

● NPN output

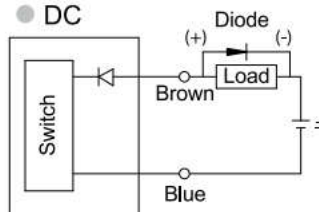


● PNP output

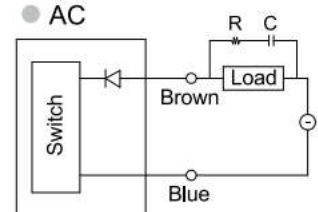


4. While using with inductive load like relay or solenoid valve, install a protection circuit parallel to the load to extend the service life of switch.
  - If using with DC inductive load, install a diode parallel to the load. Pay attention to polarity as incorrect wiring might lead to damage of the switch.
  - For AC inductive load, attach a R-C circuit parallel to the load.

● DC

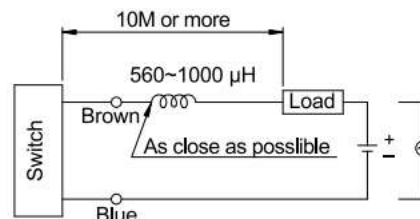


● AC



R: 2.7KΩ C: 0.1uf/600V

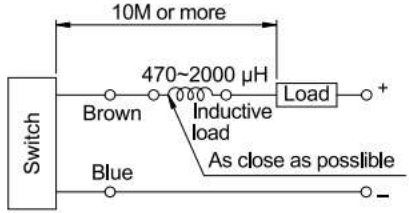
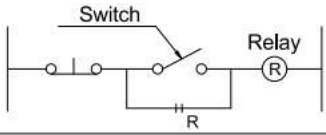
5. While using switch with capacitive load or if the lead wire is over 10 meters long, install an inductor (560~1000 μH) in series with the switch. To ensure normal function of the switch, the inductor should be installed as close to the switch as possible.



# SAFETY INSTRUCTIONS OF SWITCH

## Troubleshooting

Be sure to read the safety instructions before use.

Malfunction	Check point	Method	Solution
LED indicator not come on	Check first whether the power source is alternating current (AC) or direct current (DC)	Check if power source alternating current (AC) is on	1. Switch operate: LED indicator may malfunction. Please return the switch to Chanto for inspection. 2. Switch not operate: Please refer to "switch not operate."
		Check if power source direct current (DC) is on	1. Switch operate: Check if the polarity is reversed. Correct the polarity if reversed. If polarity is correct, then LED malfunction. 2. Switch not operate: Please refer to "switch not operate."
Switch not operate	Check if the wiring is correct	Incorrect wiring	Correct the wiring
		Correct wiring	Disassemble the switch from cylinder. Take one magnet to check if the switch senses. 1. Sense: probably due to weak magnetism of cylinder or insufficient sensitivity of switch. Please contact Chanto. 2. No sense: Switch malfunction. Please return it to Chanto for inspection.
Switch stays "ON" all the time	Check if the application exceeds the range of specification of voltage, current, and contact	Overload	Correct to be within the range of specification
		Not overload	Check if the wiring between the switch and the load is over 10 meters long. 1. Less than 10M: Switch may malfunction. Please return it to Chanto for inspection. 2. Over 10M: Add an inductor (about 1000uH) to remove surge resulting from overlong wiring. Connection: 
LED indicator comes on once but then goes out	Check if it is overloaded	YES	The switch may have burned down. Change the circuit to allowable load.
		NO	Check if the problem is caused by protection circuit. 1. YES: Change the circuit. 2. NO: Switch may malfunction. Please return it to Chanto for inspection. Protection circuit: 
Switch senses twice or above	Probably due to strong magnetism or high sensitivity of switch.		Please contact Chanto.

TD-11 series have reached EOL. Please select the substitute model-TD-M9 series instead.

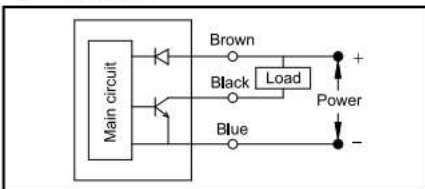


## Specification

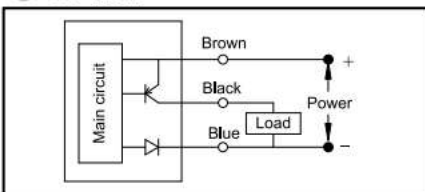
Series	TD-M9N	TD-M9P	TD-M9B
Wiring system	3-wire type		2-wire type
Sensor type	NPN current sinking	PNP current sourcing	Reed switch
Operating voltage	DC 5~30V		6-30V DC
Switching current	200mA max.		40mA max.
Switching rating	6W max.		
Current consumption	8mA @ 24V max. (switch active)		0.02mA
Internal voltage drop	1V @ 200mA max.		4V max.
Leakage current	0.01mA max.		0.5mA max.
Indicator lamp	Red LED	Green LED	Red LED
Cable	Ø2.6, 3C, PVC		Ø2.9, 2C, PVC
Temperature range	-10°C~+70°C		
Shock	50G		
Vibration	9G		
Enclosure classification	IEC 529 IP67		
Protection circuit	Power source reverse polarity, surge suppression		None

## Wiring diagrams

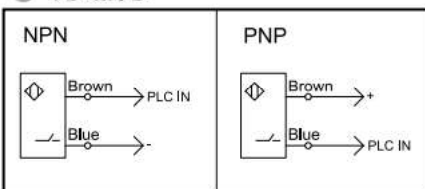
### TD-M9N



### TD-M9P



### TD-M9B

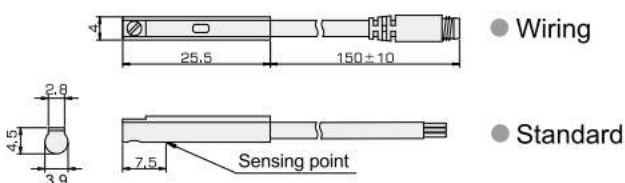


## How to order

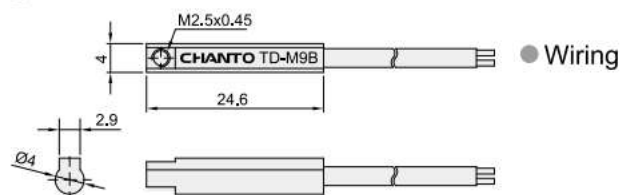
TD	M9B	D
Series	Type of switch	Connector
M9B	Reed switch 2-wire (N.O.)	Nil / Standard type
M9N	Solid state switch 3-wire (NPN) (N.O.)	D / M8 male connector
M9P	Solid state switch 3-wire (PNP) (N.O.)	

## External dimensions

### TD-M9N,TD-M9P / TD-M9ND,TD-M9PD

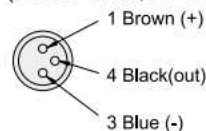


### TD-M9B / TD-M9BD



## Connector pin

### 3-wire type (for TD-M9N,TD-M9P)



Application	Bore
DF	Ø10
KA,KB	Ø10
JS	Ø12~Ø100
MKS	Ø20~Ø50
JU	Ø6~Ø32

Specification

TDL-11 series have reached EOL. Please select the substitute model-TD-M9\_V series instead.

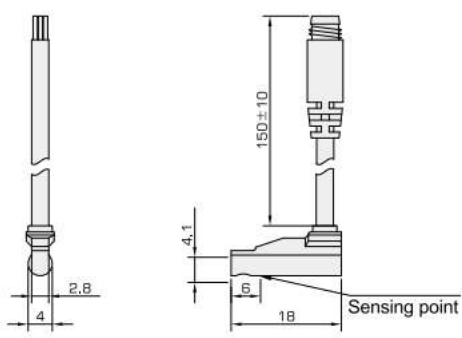


Series	TD-M9NV	TD-M9PV
Wiring system	3-wire type	
Sensor type	NPN current sinking	PNP current sourcing
Operating voltage	DC 5~30V	
Switching current	50mA max.	
Switching rating	1.5W max.	
Current consumption	7mA@ 24VDC max.	9mA@ 24VDC max.
Internal voltage drop	1.5V@50mA max.	
Leakage current	0.01mA max.	
Indicator lamp	Red LED	Green LED
Cable	Ø2.6, 3C, PVC	
Temperature range	-10°C ~ 70°C	
Shock	50G	
Vibration	9G	
Enclosure classification	IEC529 IP67	
Protection circuit	Power source reverse polarity, surge suppression	

1  
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External dimensions

- TD-M9NV,TD-M9PV
- TD-M9NVD,TD-M9PVD

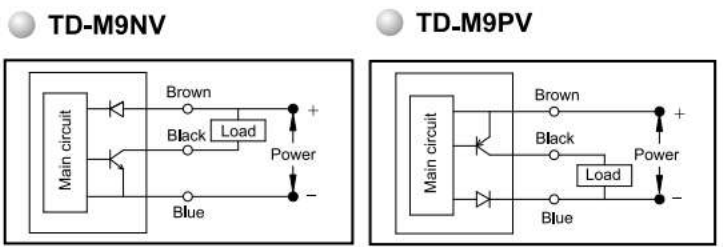


● Standard      ● Wiring

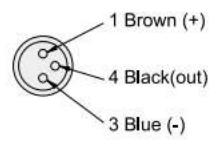
How to order

Series	Type of switch	Connector
M9NV	Solid state switch 3-wire (NPN) (N.O.)	Nil Standard type
M9PV	Solid state switch 3-wire (PNP) (N.O.)	D M8 male connector

Wiring diagrams



Connector pin



Application	Bore
DF	Ø10
JB, KA, KB	Ø10
JS	Ø12~ Ø100
MKS	Ø20~Ø50

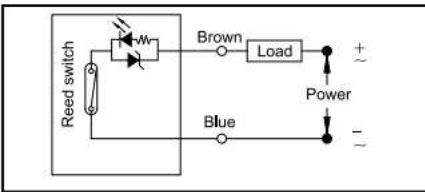
## Specification

Series	TD-A93	TD-A93V
Wiring system	2-wire type	
Sensor type	Reed switch	
Operating voltage	DC/AC 5~120V	
Switching current	100mA max.	
Switching rating	10W max.	6W max.
Current consumption	—	
Internal voltage drop	3.5V max.	3V max.
Leakage current	—	
Indicator lamp	Red LED	
Cable	Ø2.6, 2C, PVC	
Temperature range	-10°C ~ 70°C	
Shock	30G	
Vibration	9G	
Enclosure classification	IEC529	IP67
Protection circuit	None	



## Wiring diagrams

### TD-A93, TD-A93V



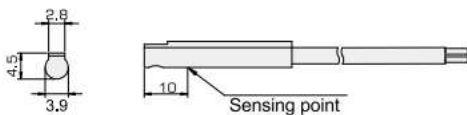
## How to order

Series	Type of switch	Connector
<b>TD</b>	<b>A93</b>	<b>D</b>
<b>A93</b>	Reed switch 2-wire (N.O.)	Nil / Standard type
<b>A93V</b>	Reed switch 2-wire (N.O.)	D / M8 male connector

## External dimensions

### TD-A93 / TD-A93D

#### Standard

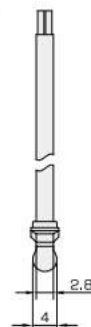


#### Wiring

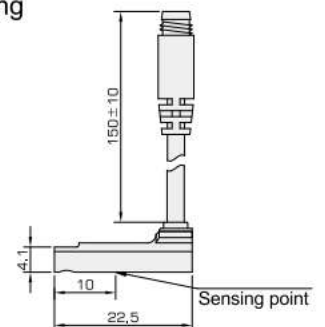


### TD-A93V / TD-A93VD

#### Standard



#### Wiring



### TD-A93 / TD-A93D

Application	Bore
DF, KA, KB	Ø10
JS	Ø12~Ø100
MKS	Ø20~Ø50
JU	Ø6~Ø32

### TD-A93V / TD-A93VD

Application	Bore
DF	Ø10
JB, KA, KB	Ø10
JS	Ø12~Ø100
MKS	Ø20~Ø50

## Connector pin

### 2-wire type

