CKD

New Products

Improved Water-Resistant Cylinder Switch SW-T2WL



Improved reliability in water-resistant environments

Water resistance (coolant) Improved performance !



SW-T2WLH



SW-T2WLV



M8 connector



Space saving

The exterior is reduced by using a compact sensor.

volume ratio **70% or less**

Degree of protection

Dust-proof/waterproof standard "IP67" compatible.

Dust-proof/waterproof standards **IP67 Compatible**

Lightweight and downsizing

A weight of 18 grams realized. Mountable on compact hand-chuck.

Weight **46% or less**

High water resistance

Calculation based on CKD's unique standards. More than 6 times that of conventional models.

Water resistance **6X or more than conventional**

Compatibility with conventional products

Magnet replacement not required. The switch only needs to be replaced.

Compatibility **Magnet change Not required**

Reduced wiring space

The use of a bend-resistant wire allows for thinner wires and can be accommodated in the T-shaped groove of the cylinder.

Lead wire **Bend resistant material**

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CC-1592A

Switch compatible model list

Compatibility		Bore size
Pencil shaped cylinder	SCP*3	ø6 to 16
Small bore size cylinder	CMK2	ø20 to 40
Medium bore size cylinder	CMA2	ø20 to 40
Round shaped cylinder	SCM	ø20 to 100
Tie rod cylinder	SCG	ø32 to 100
Medium bore size cylinder (medium bore size)	SCA2	ø40 to 100
Large bore size cylinder (large bore size)	SCS2	ø125 to 250
Compact cylinder with valve	CKV2	ø20 to 40
Cylinder with valve	COV*2	ø50 to 100
Cylinder with valve	CAV2	ø50 to 100
Compact cylinder	SSD2	ø12 to 100
Guided super compact cylinder	SSG	ø12 to 100
Compact cylinder	SSD	ø12 to 160
Stopper cylinder	STK	ø20 to 50
Rodless cylinder	SRL3	ø12 to 100
High precision guided rodless cylinder	SRG3	ø12 to 25
High precision guided rodless cylinder	SRM3	ø25 to 63
Rodless cylinder with brake	SRT3	ø12 to 63
Rodless cylinder with magnet	MRL2	ø6 to 32
Rodless cylinder with magnet with high precision guide	MRG2	ø50 to 700
Linear slide cylinder	LCR	ø16 to 25
Linear slide cylinder	LCG	ø16
Thin linear slide cylinder	LCX	ø25,32
Guided cylinder	STG	ø12 to 100
Guided cylinder	STS/L	ø8 to 100
High energy absorption cylinder	HCM	ø20 to 63
Clamp cylinder	CAC4	ø40 to 80
Lightweight clamp cylinder	CAC-N	N32,N40
Rotary clamp cylinder	RCS2	ø12 to 63
Rotary clamp cylinder	RCC2	ø16 to 63
Mechanical power cylinder	MCP	Size 2 t, 5 t
Rotary actuator	RRC	Size 8 to 63
Table rotary actuator	GRC	Size 5 to 80

Example of model No. display (compact cylinder SSD2 Series)

Without switch (without magnet for switch)

SSD2-G2 - 32 ○ ○ - 5 ——— N - LB - I

With switch (built-in magnet for switch)

SSD2-G2L - 32 ○ ○ - 10 - T2WLH3 - R - N - LB - I

Refer to "Pneumatic Cylinders" (No.CB-029SA, CB-030SA) for details on each cylinder.

- A Model No.
- B Bore size
- C Port thread
- D Cushion
- E Stroke
- F Switch model No.
- G Switch quantity
- H Option
- I Mounting bracket
- J Accessory

F Switch model No.				
Straight lead wire	**L-shaped lead wire**	**Contact**	**Indicator**	**Lead wire**
T2WLH	**T2WLV**	Proximity	2-color LED	2-wire

* Lead wire length, connector specifications	
Blank	Lead wire 1 m
3	Lead wire 3 m
5	Lead wire 5 m
W	M8 connector, 1PIN (+) 4PIN (-)

Specifications

Descriptions	Proximity 2-wire	
	T2WLH/T2WLV	T2WLHW/T2WLVW
Applications	Dedicated for programmable controller	
Load voltage	24 VDC ±10%	
Load current	5 to 20 mA (*1)	
Internal voltage drop	4 V or less	
Leakage current	1 mA or less	
Indicator lamp	Red/green LED (Lit when ON)	
Lead wire length	1 m (PUR cable 2-conductor 0.2mm^2)	0.3m (PUR cord with M8 connector)
Insulation resistance	20 MΩ and over with 500 VDC megger	
Withstand voltage	No failure after 1 minute of 1,000 VAC application.	
Shock resistance	980m/s^2	
Ambient temperature	-10 to +60°C	
Degree of protection	IEC standards IP67 JISC0920 (water-tight)	
Weight	1 m: 18 g 3 m: 49 g 5 m: 80 g	11g

*1: Max. load current: 20mA at 25°C. The current is lower than 20mA if the operating ambient temperature is higher than 25°C. (5 to 10mA with 60°C)

SW-T2WL Series

How to order

●2-wire cylinder switch

SW - T2WL H W

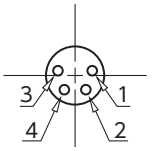
Ⓐ Lead wire outlet direction

Ⓑ Lead wire length, connector specifications

Ⓐ Lead wire outlet direction	
H	Straight lead wire
V	L-shaped lead wire

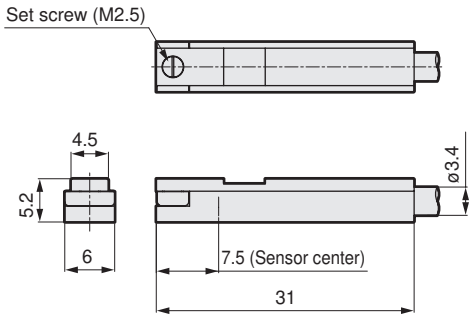
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Connector specifications

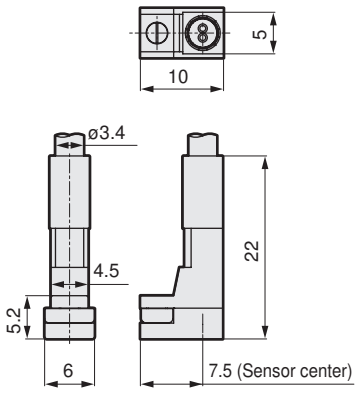
Descriptions	M8
Pin array	
Shock resistance	294m/s^2
Degree of protection	IP67
Insulation resistance	100 MΩ with 500 VDC megger
Withstand voltage	AC 1000 V for 1 minute (between contacts and between contact housings) Leakage current 1 mA or less
Weight	4g

Dimensions

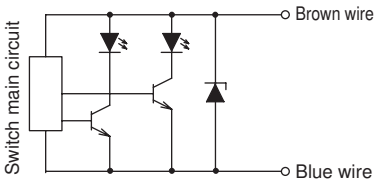
●T2WLH (straight lead wire)



●T2WLV (L-shaped lead wire)



Switch internal circuit diagram



Precautions for use

Be sure to read this section before use. Also refer to the precautions in "Pneumatic Cylinders I and II" (No.CB-029SA, CB-030SA).

⚠CAUTION

■ These have been improved with respect to water (coolant), but have IEC standards IP67 structure. Therefore, constant water (In an environment where coolant is applied, malfunction may occur at an early stage. Service life performance varies depending on the type of liquid (coolant, etc.) used. Be sure to carry out the installation test with the actual device before use.

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● Specifications are subject to change without notice.
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