

東横化学

TOYOKO KAGAKU CO., LTD.

Kawasaki, Kanagawa, Japan

Detecting Liquid in the Tubings
No physical contact with liquid
Easy to install on the Tubings
Excellent Cost Performance

CE Mark Compliance 
UL Recognized Products 
EU-RoHS Compliance 

Level Sensor

TK-010N2 TK-015N2 Series

Non-contact Liquid Detection

Installed easily with no tools

Free from color or dielectric factor

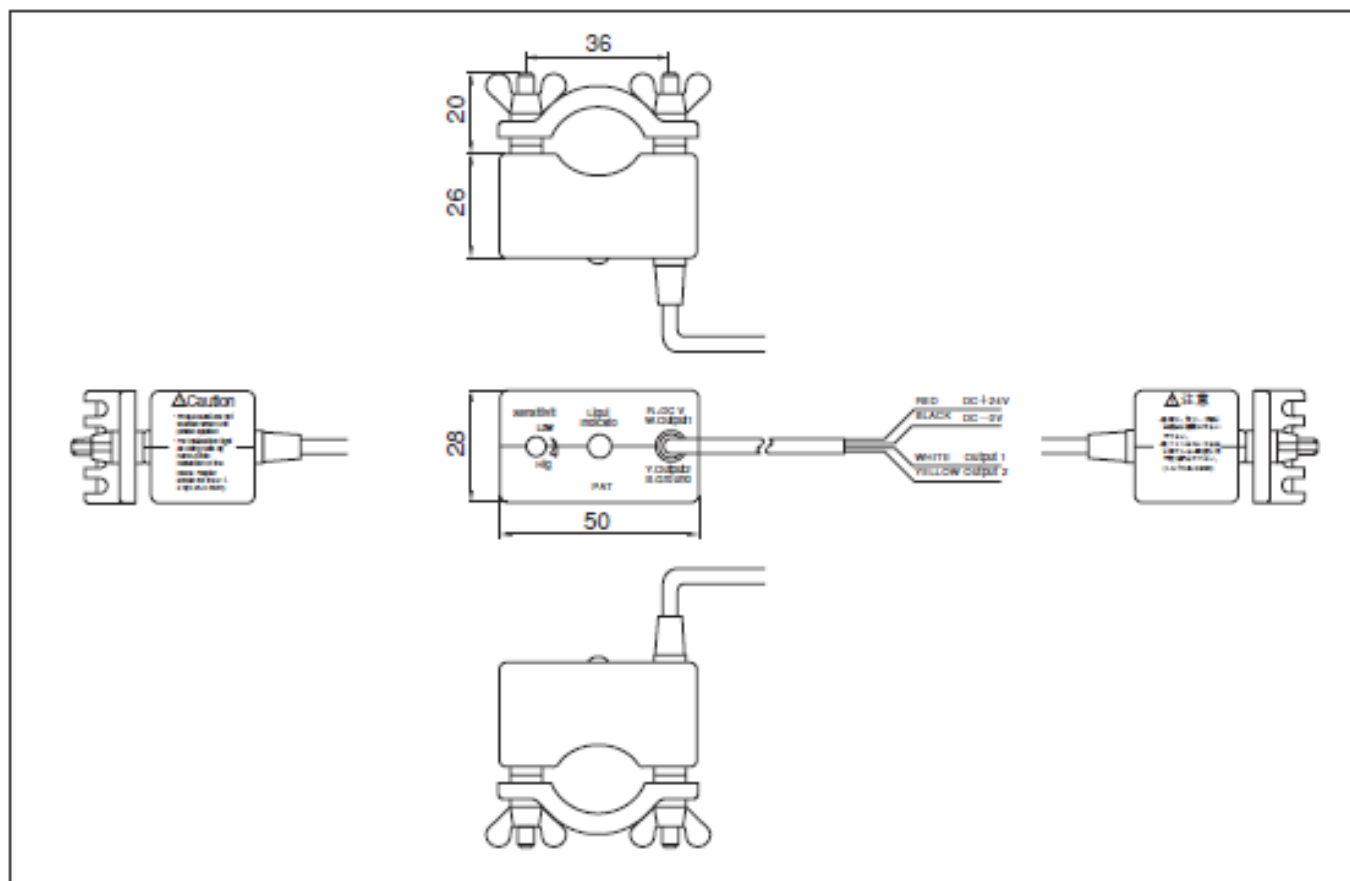
TK-010/015N2 Series Sensor is an optical-electric device to detect the liquid in transparent or semi-transparent tubings, being installed at the outer wall of tubing. The installation job is very simple using the attached bracket and nuts, anywhere place you can fix the sensor to detect if the liquid exists, or not. Namely this versatile device can be used for liquid level sensor as shown at a left photo.

Because non-contact detecting method is the principle of optical physics, almost every liquid can be detected without influence of complex adjustment procedure for dielectric factor nor color, density, etc. Free from contamination by contact with media liquid is also a strong point of the design of TK-010/015N2 sensor.

For highly reflecting solution, such as slurry mixture, -S1 model is provided in this optical-electric sensor family for the properly expanded application.



Dimensions (unit: millimeter)



Specifications

Model	TK-010N2	TK-015N2	TK-010N2-S1	TK-015N2-S1
Media Liquid	for General Liquid		for Sullury solution, etc	
Voltage	DC24V \pm 10%			
Current	45 mA or below			
Applicable Dia. of Tubings	ϕ 6 - 25.4 mm OD		ϕ 10 - 25.4 mm OD	
Detection Method	Infrared optical electric device			
Output	Open Collector Output, 50 mA max, dual lines			
	NPN Transistor	PNP Transistor	NPN Transistor	PNP Transistor
Ambient Temperature	-10 deg C to 60 deg C			
Water Protect	Silicon Stuffed			
Material of Body Case	Poly carbonate resin			
Material of Bracket	Poly carbonate resin			
Cable	ϕ 3.8mm, 4-wire, 2 m		ϕ 3.8mm, 4-wire, 3 m	
Weight	approx 100g			



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LEVEL SENSOR

Model TK-020

Without contacting liquid, Toyoko LEVEL SENSOR can detect any liquid in the tube by a sharp focus of optical method, showing the border position.

TK-020 Sensor is designed for smaller diameter tubes to be installed in. 3mm to 6mm is its capable tube size of the application, typically good for the many fields such as medical, semiconductor, chemical and far more as you may belong with.

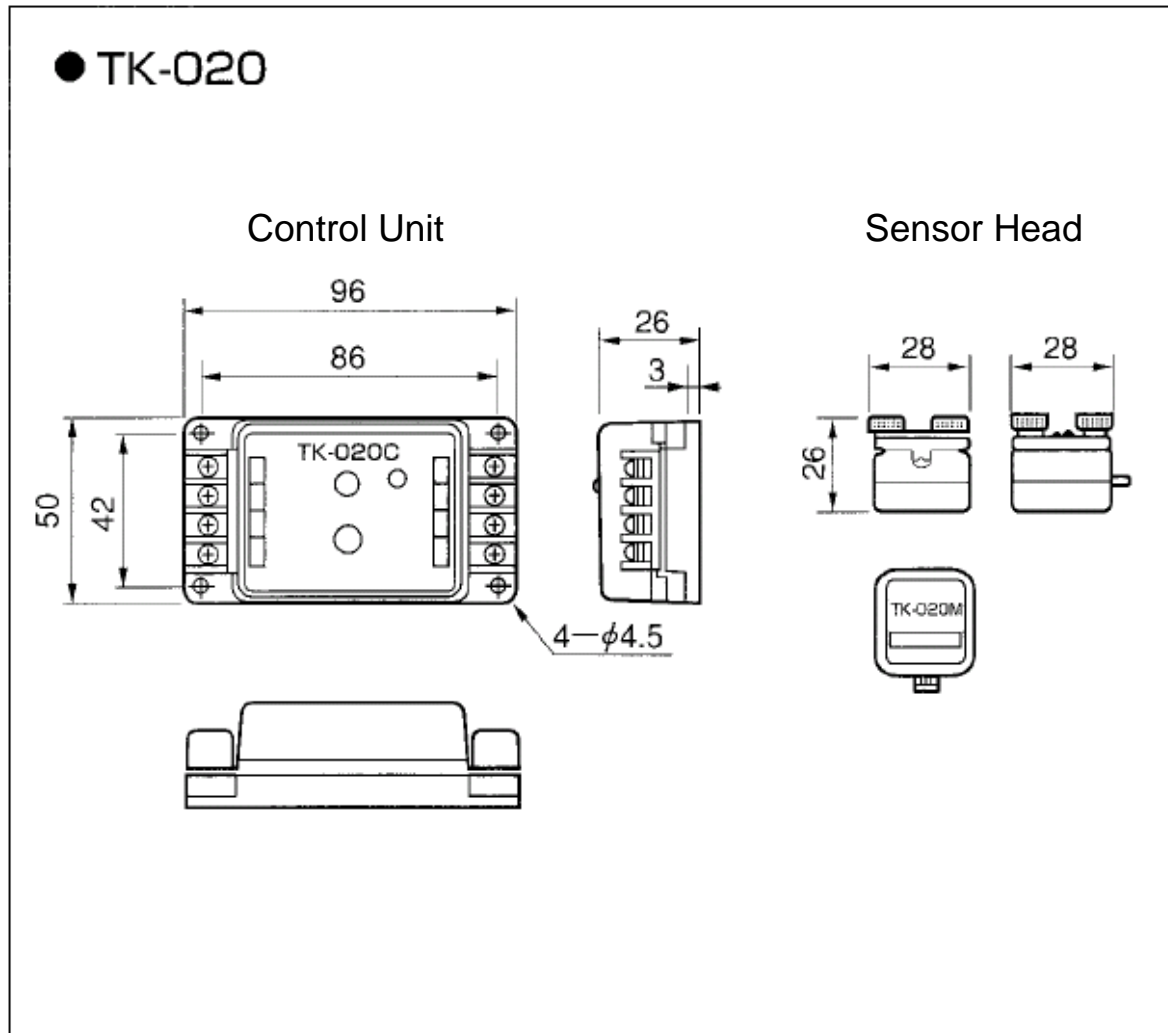


TK series are photoelectric type sensors that detect if there is Liquid or no Liquid in the transparent or semi-transparent tube from outside.

TK series detectors do not generate any contamination in the clean and purified liquids, because the detector do not contact with the liquid at all.

TK series detectors can be used for strong acid, strong alkali and solvent regardless of its color, viscosity, and even its statistical characteristics.

Dimensions



Specifications

Model	Control Unit: TK-020C Sensor Head: TK-020M	
Voltage, Power	24V DC \pm 10%	
Power Consumption	55mA or below	
Applicable Tube Diameter	3mm to 6mm (0.12" to 0.24")	
Detecting method	Infrared photoelectric method	
Output	NPN Transistor Open Collector, Max 50mA	
Ambient Temperature	0 to 60degC (32 to 140 deg F)	
Adjusting Sensitivity	Refer to an operation manual.	
Water Protect	Silicone stuffed (Sensor Head)	
Material	Control Unit	Poly- Carbonate
	Sensor Head	ABS resin
Cable	Flat cable, 4-line, 2m(6.6ft) length	
Weight (approx)	50g (Sensor Head), 75g (Control Unit)	
LED Indicator	Red: Liquid exist, Green: Empty	

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