

Liquid Level Relays

Dual-Sinker Liquid Level Relay

TBL Series

Overview

TBL series - familiar to many by the name of dual-sinker liquid level relays - is a breakthrough product that is completely different from the conventional liquid level relays applying the mechanism of floats within liquid. Conventional liquid level relays require 2 float switches for upper and lower limit controls of the liquid surface. Kasuga's dual-sinker liquid level relay allows both upper and lower limit controls of the liquid surface using a single unit.

Features

- Operates regardless of the liquid resistivity. Not only in seawater and sewage water, the relay can also be used in liquids that do not conduct electricity (such as distilled water, oil, etc.).
- Control range can be set and changed by varying the length of the handling rope.
- Allows remote installation of control devices and alarm devices as the relay is unaffected by external induction or static electricity between electric wires.
- Protection Code IP33 (rainproof type)

Caution

TBL 13FC (for oil) is not explosion-proof. Observe laws and regulations for use.

Standard specifications

Item	Standard type (1c)		Minute load type (1c)	
	AC	DC	AC	DC
Rating (Coil load)	250V 1.5A	24V 3A	125V 0.1A	24V 0.1A
Minimum load	DC5V 160mA (reference value)		DC5V 1mA (reference value)	
Control range	0.18~10m			
Air pressure inside tank	One atmosphere			
Durability	Mechanical more than 50 million times Electrical more than 50 million times			
Compliance standards	Electrical Appliance and Material Safety Law (compliant product)			

Product list

TBL (standard set)

TBL 12 is a set of main unit (**TBLP2**), sinkers (**TBLS**) and hanging ropes (**TBLR**).

TBL 13FC is a set of main unit (**TBLF3**), sinkers (**TBLC208**) and hanging ropes (**TBLR**).

Exterior	Type name	Main unit [Material]	Sinker [Material]	Hanging rope [Material]	Application Specific gravity range	General mass (g)
	TBL 12	TBLP2 [Polycarbonate]	TBLS [Hard vinyl chloride]	TBLR (3m) [Tetron]	Treatment water, sewage water, seawater, etc. (0.85 to 1.05)	930
	TBL 12B	TBLP2B [Polycarbonate] (Micro-load compatible)				
	TBL 13 FC	TBLF3 [Aluminum casting]	TBLC208 [Copper]		Heavy oil, light oil, kerosene oil, etc. (0.70 to 0.90)	1310
	TBL 13 FCB	TBLF3B [Aluminum casting] (Micro-load compatible)				

Main unit

Application	Material	Usage temperature	Description	Type name	General mass (g)
For water	Polycarbonate	-10 to +50°C	-	TBLP2	325
			Micro-load compatible(5V DC 1mA)	TBLP2B	
For oil	Aluminum casting	-10 to +80°C	-	TBLF3	670
			Micro-load compatible(5V DC 1mA)	TBLF3B	
For hot water	Aluminum casting	-10 to +80°C	-	TBLF3H	670
			Micro-load compatible(5V DC 1mA)	TBLF3BH	

Basic type list

Application	TBL 12 (for water)	TBL 13FC (for oil)
Applied specific gravity range	Treatment water, sewage water, seawater, etc. 0.85 to 1.05	Heavy oil, light oil, kerosene oil 0.7 to 0.9
Material	Main unit	TBLP2: polycarbonate
	Sinker	TBLS: hard vinyl chloride
	Hanging rope	TBLR: tetron 3m
Exterior		