

# TAG LEVEL SWITCH

The best level switch in the world  
With 5 years warranty

## PURPOSES & APPLICATIONS

- To enable material in container to reach a predetermined level.
- To prevent material in container to go lower than a predetermined level.
- Indicate the presence of material at a fixed place.
- To enable filling and stop filling.
- To prevent pumps from dry-running (including water, fuel).
- To regulate and/or signal the level of various materials in containers. (i.e. grains in siloes, water in reservoirs, feeding plastic raw materials to extruders, oils, fuels and chemicals in various containers).
- To keep material within 2 fixed levels (such as water in watertower, material in bins).
- Pumping commands.

- Distinguish intrusion into oil.
- Control of level in oil (mineral and organic) tanks and tankers.
- Liquid - liquid interphase separation.
- Keep water contents in material (such as water content in margarine).
- Control of liquified cryogenic gases (i.e. fluid nitrogen at-220°C).
- Level control of very corrosive materials (bromide and compounds, hydrochloric acid, chlorine, etc).
- Control of condensation water.
- Level control of plastic raw material.
- Foam detection.
- Differentiating foam from liquid.
- Control of filling milk in tanks and tankers.
- Control of filling cement , flour, etc. in tanks and tankers.
- Level control of stones and aggregates in quarries and in readyconcrete plants
- Level control of sand
- Control of pigments in color industry.

- ❑ Control of colors in containers and industrial processes.
- ❑ Control of glues and adhesives on watery and non watery basis
- ❑ (such as in paper industry, laminates, glueing metal films on plastic).
- ❑ Control of various chemicals in industrial processes and in storage.
- ❑ Control of impregnating materials in impregnation vessels.
- ❑ Overflow protection in waterpools.
- ❑ Control of materials in high temperature of 250°C, (reactors, furnaces).
- ❑ Control of fly-ash and settled ash.
- ❑ Control of lime.
- ❑ 24 VDC "WAT Series" instruments for water and sewage. Fail-Safe version of instruments.

### DESCRIPTION OF THE SET

The set is comprised of a sensing unit and a control box. The sensing unit is made of a potted electronic circuitry with a metal feeler, which may be separated for special applications. The control box includes a power supply, amplifier switch and relay with dry contacts. The distance between the sensing unit and the control box is unlimited.

Contact us: [info@tagltd.co.il](mailto:info@tagltd.co.il) [www.tagltd.co.il](http://www.tagltd.co.il)

### HOW IT WORKS

Some of the principals on which the instruments function (all principals simultaneously): changes of RF current and Voltage.

Loss of energy

Changes of dielectric constant versus air (disregarding capacity).

RF is transferred from the feeler through the mass of material to ground point of the sensing unit. this causes RF energy losses.

the variations of RF current are turned to DC, and thus reach the control box. the amplifier in the control box activates the relay which incorporates dry contacts.

The set will continue to work properly even though the feeler will be totally covered by material.

### PERTINENT CHARACTERISTICS

Functions in all kinds of materials, conductive as well as non-conductive, solids and liquids (grains, powders, plastic raw materials, oils & fuels, water, sewage, etc.).

The function of the sensing units is not influenced by material sticking to it.

It is not influenced by relative humidity of the environment.

Contact us: [info@tagltd.co.il](mailto:info@tagltd.co.il) [www.tagltd.co.il](http://www.tagltd.co.il)

Does not require maintenance.

Unlimited life span.

After initial fitting of set to working conditions no further adjustment is required.

Can be designed to fit any requirement.

Available in "Fail Safe" version.

### **TECHNICAL SPECIFICATIONS**

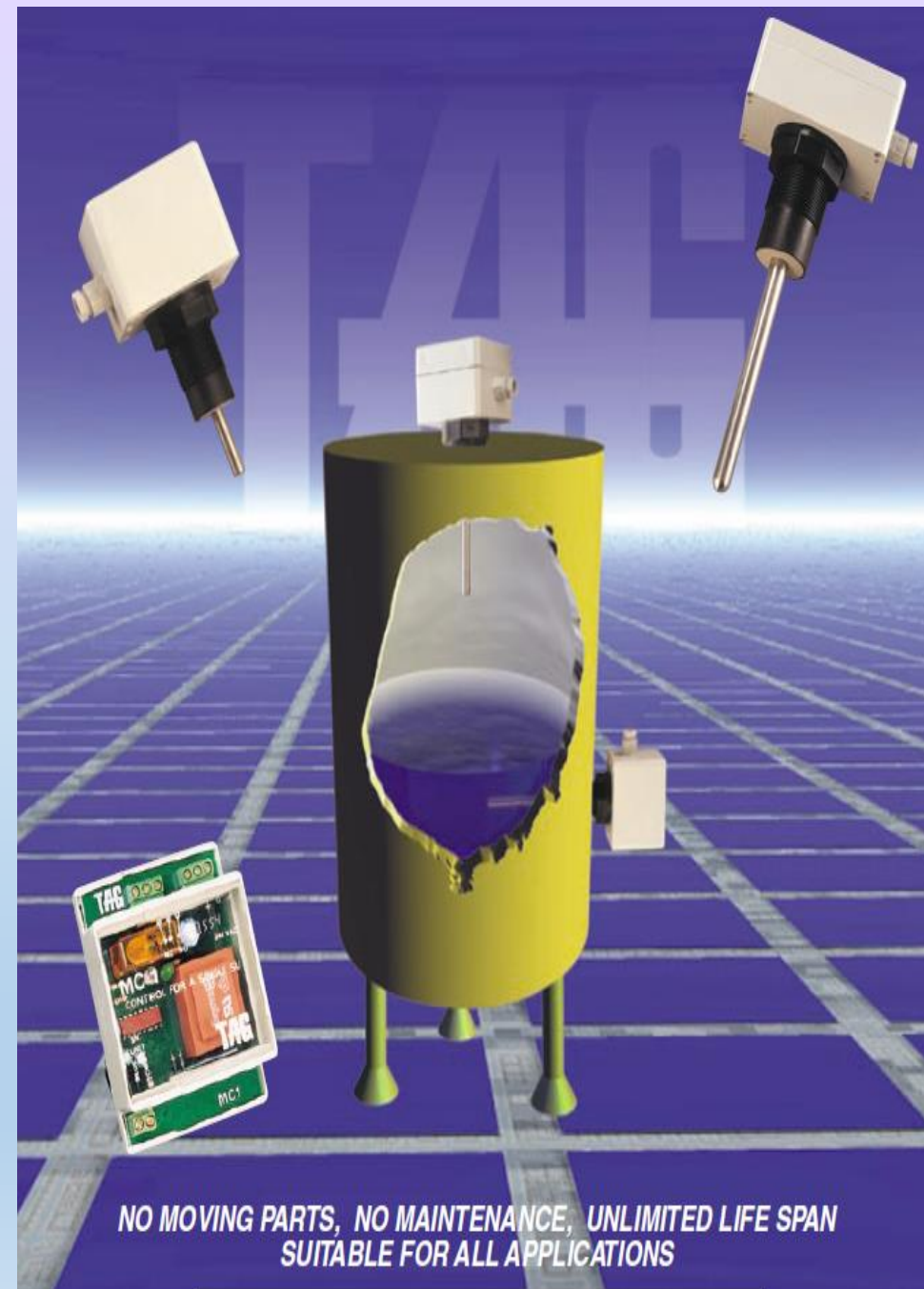
- Power supply to control boxes:  
24 / 48 / 110 / 220 VAC 24 / 48 VDC
- The sensing units get their supply directly from the control boxes.
- Voltage between control box and sensing unit in the standard set: 15 - 18 VDC.
- Working currents in the standard set: 0.5mA - 2 mA.
- Short circuit current: 12 mA.
- The sensing units are made of two parts:
  - 1) the electronic circuit, in plastic housing
  - 2) the metal part, may have the shape of a blade, a rod, made of stainless steel or any other metal, and may be totally covered by plastic.

- Mounting:
  - Top mounting (hanging).
  - Top and Side mounting: 1" BSP, 1.5" BSP
- A twin cable connects the sensing unit with the control box.
- A twin screened cable is to be used to protect from RF disturbances.
- The distance between control box and sensing unit is unlimited.
- Temperature of material to be controlled may reach 250°C. (for higher temp. please contact factory).

<b>Model</b>	<b>Property</b>	<b>Material / Process</b>
--------------	-----------------	---------------------------

<b>NCO</b>	Non-Conductive	Solutions
		Diluted paint
		Glues
		Detergents
		Treated water
		Organic oil
		Non organic oil
		Chemicals
		Mud
		Flower
		Corn
		Grains
		Sugar
		Salt
		Cement
		Chalk - Gypsum
		Lime
		Sand
		Minerals
		Fly ash
		Plastic raw materials

<b>HCO</b>	High Conductivity	Condensate Water
		Solutions
		Glues
		Detergents
		Milk & Milk products
		Juices
		Mud
		Foam
		Interface
		Water in oil
		Chemicals
<b>LCO</b>	Low-Conductivity	Solutions
		Juices
		Interface
		Glues
		Detergents
		Treated water
		Paints
		Chemicals
<b>WAT</b>	Loop powered	Water
		Sewage
		Pump protection



RT17INT	LEVEL SWITCH for non conductive solids like powders , plastics , bulk material and ct. sensor unit with integral controller. When purchase an order – need to idicate if needed 24v supply or 230v supply. Relay 10A output with change over contacts
RT161INT	LEVEL SWITCH for non conductive liquids like oil , diezel and ct. sensor unit with integral controller. When purchase an order – need to idicate if needed 24v supply or 230v supply .also need to indicate the length of the prob – 170mm or 120mm .Relay 10A output with change over contacts
RT22INT(ALL CONDUCTIVE)/ M47(WATER ONLY)	LEVEL SWITCH for conductive liquids like water ,sewge and ct. sensor unit with integral controller. When purchase an order – need to idicate if needed 24v supply or 230v supply .also need to indicate the length of the prob – 170mm or 120mm .Relay 10A output with change over contacts
RT17	LEVEL SWITCH sensor unit only
RT17H	LEVEL SWITCH sensor unit only , like RT17 Usualy used for hanging from top OF CAONTAINER / SILO and ct.
RT161	LEVEL SWITCH sensor unit only - also need to indicate the length of the prob – 170mm or 120mm
RT22	LEVEL SWITCH sensor unit only - also need to indicate the length of the prob – 170mm or 120mm
MC1	CONTROLLER for mounting on din rail for 1 sensor unit, When purchase an order – need to idicate if needed 24v supply or 230v supply. Relay 10A output with change over contacts. Suitable for RT161,RT17 and RT22
MC2	CONTROLLER for mounting on din rail for 2 sensorS unit for filling container application When purchase an order – need to idicate if needed 24v supply or 230v supply. Relay 10A output with change over contacts. Suitable for RT161,RT17 and RT22

**RT17INT**

connection	1.5" male
Body material	PVC
Prob material	Stainless still
Degree of protection	IP65
Power supply	24 / 230v

**RT161INT / RT22INT / M47WATINT**

connection	1 " male
Body material	PVC
Prob material	Stainless still
Prob length	170/120mm Other-on requeust
Degree of protection	IP65
Power supply	24 / 230v

**RT17H**

connection	1 " female on top of unit
Body material	PVC
Prob material	Stainless still
Degree of protection	IP65

Need controller MC1