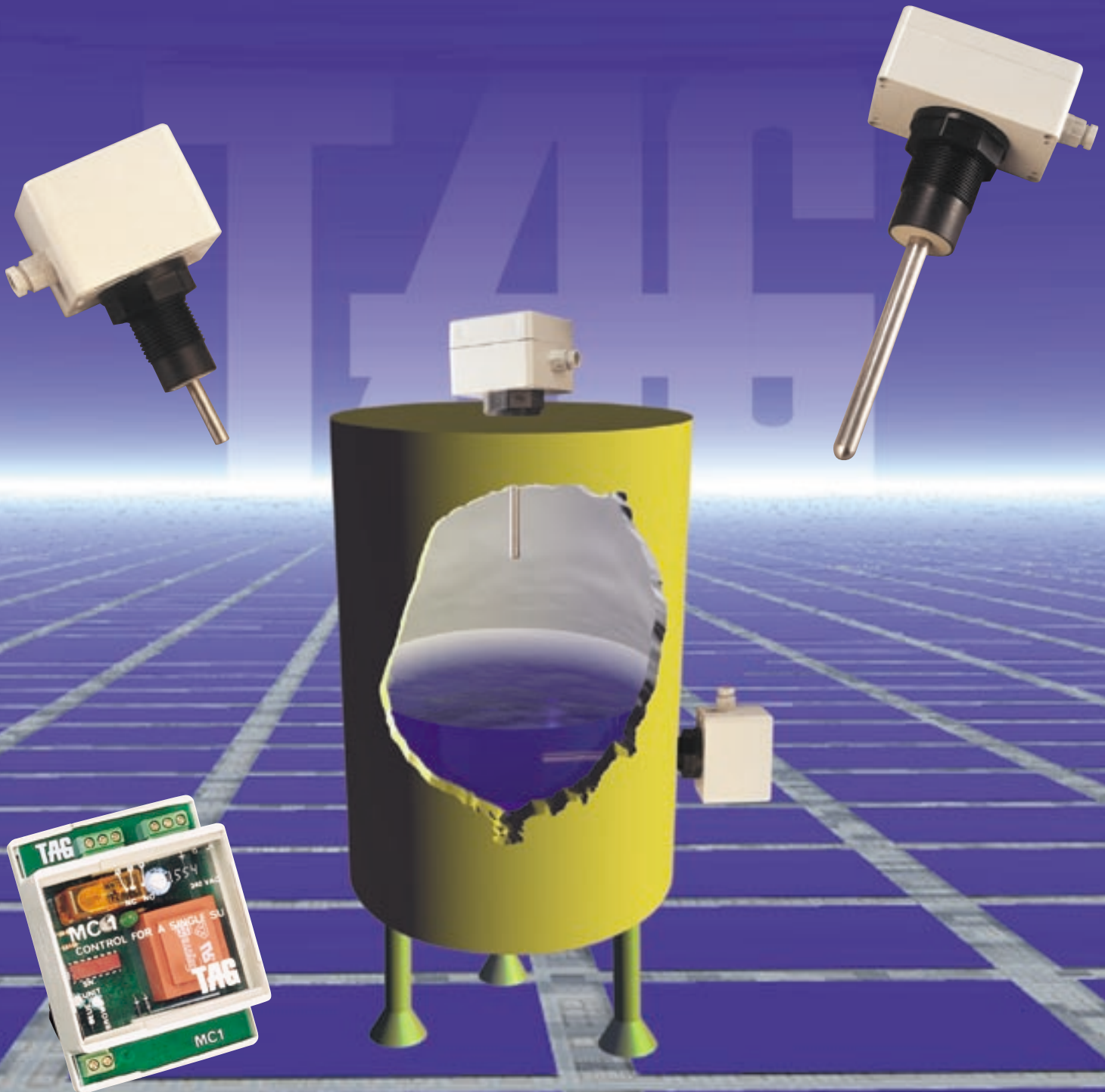


CE *United Instruments is proud to present* **TAG**

The Best Level Switch In The World

With 5 years full warrenty



**NO MOVING PARTS, NO MAINTENANCE, UNLIMITED LIFE SPAN
SUITABLE FOR ALL APPLICATIONS**

UNITED INSTRUMENTS LTD.

TAG LEVEL SWITCH

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 water-tower, 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 ready-concrete 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.



Please specify dimensions and materials of construction

HOW TO ORDER

Material Process	Sensor	Control Unit	Mounting Box	Power Supply	Optional Feeler
<input type="checkbox"/> NCO <input type="checkbox"/> HCO <input type="checkbox"/> LCO <input type="checkbox"/> WAT	<input type="checkbox"/> 1 - 10	<input type="checkbox"/> MC1 <input type="checkbox"/> MC2 <input type="checkbox"/> MMC1 <input type="checkbox"/> MMC2 <input type="checkbox"/> FS1 - (FAIL SAFE)	<input type="checkbox"/> WM - WALL MOUNT (REMOTE) <input type="checkbox"/> DR - DIN RAIL (REMOTE) <input type="checkbox"/> INT - INTEGRAL	<input type="checkbox"/> 1-220 VAC <input type="checkbox"/> 2-110 VAC <input type="checkbox"/> 3-48 VAC <input type="checkbox"/> 4-24 VAC/DC	<input type="checkbox"/> X



UNITED INSTRUMENTS LTD.

TAG LEVEL SWITCH

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
- By flange.
- 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).

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.
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.

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.

Model	Property	Material / Process	Sensing unit		
NCO	Non-Conductive	Solutions	7		
		Diluted paint	01,7,3		
		Glues	01,7,3		
		Detergents	01,7,4,3,2,1		
		Treated water	01,7,3		
		Organic oil	01,7,4,3,2,1		
		Non organic oil			
		Chemicals	01,7,3		
		Mud	01,5,4,3,2,1		
		Flower	01,5,4,3,2,1		
		Corn	01,5,4,3,2,1		
		Grains	01,5,4,3,2,1		
		Sugar	01,5,4,3,2,1		
		Salt	01,5,4,3,2,1		
		Cement	01,5,4,3,2,1		
		Chalk - Gypsum	01,5,4,3,2,1		
		Lime	01,5,4,3,2,1		
		Sand	01,5,4,3,2,1		
		Minerals	01,5,4,3,2,1		
		Fly ash	01,5,4,3,2,1		
		Plastic raw materials	01,5,4,3,2,1		
		Quarries	7		
		Sodium Hydroxide	01,7,3		
HCO	High Conductivity	Condensate Water	01,7,3		
		Solutions	01,7,3		
		Glues	01,7,3		
		Detergents	01,7,3		
		Milk & Milk products	01,7,3		
		Juices	01,7,3		
		Mud	01,7,3		
		Foam	01,7,3		
		Interface	01,7,3		
		Water in oil	01,7,3		
		Chemicals	01,7,3		
		LCO	Low-Conductivity	Solutions	01,7,3
				Juices	01,7,3
Interface	01,7,3				
Glues	01,7,3				
Detergents	01,7,3				
Treated water	01,7,3				
Paints	01,7,3				
Chemicals	01,7,3				
WAT	Loop powered	Water	9,8,6		
		Sewage	8		
		Pump protection	9,8,6		



