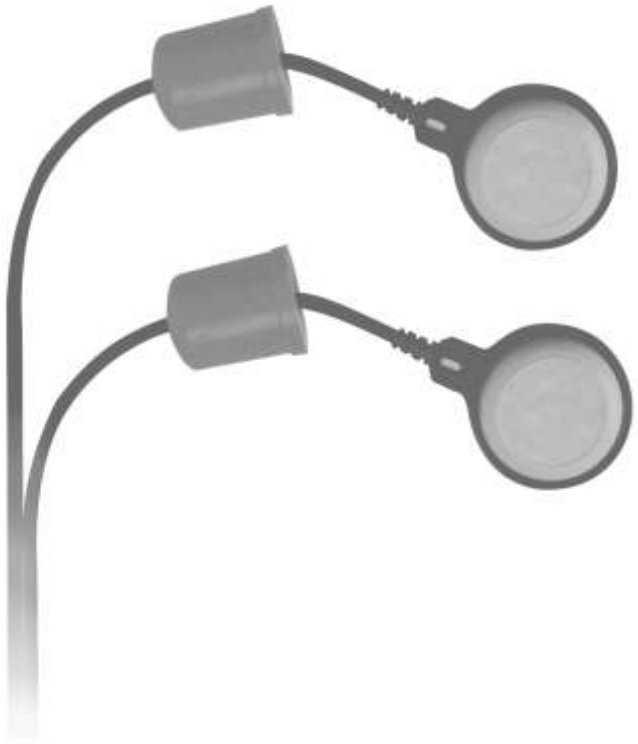
HYCONTROL
LEVEL MEASUREMENT SOLUTIONS

CABLE FLOAT SWITCHES FOR LIQUIDS



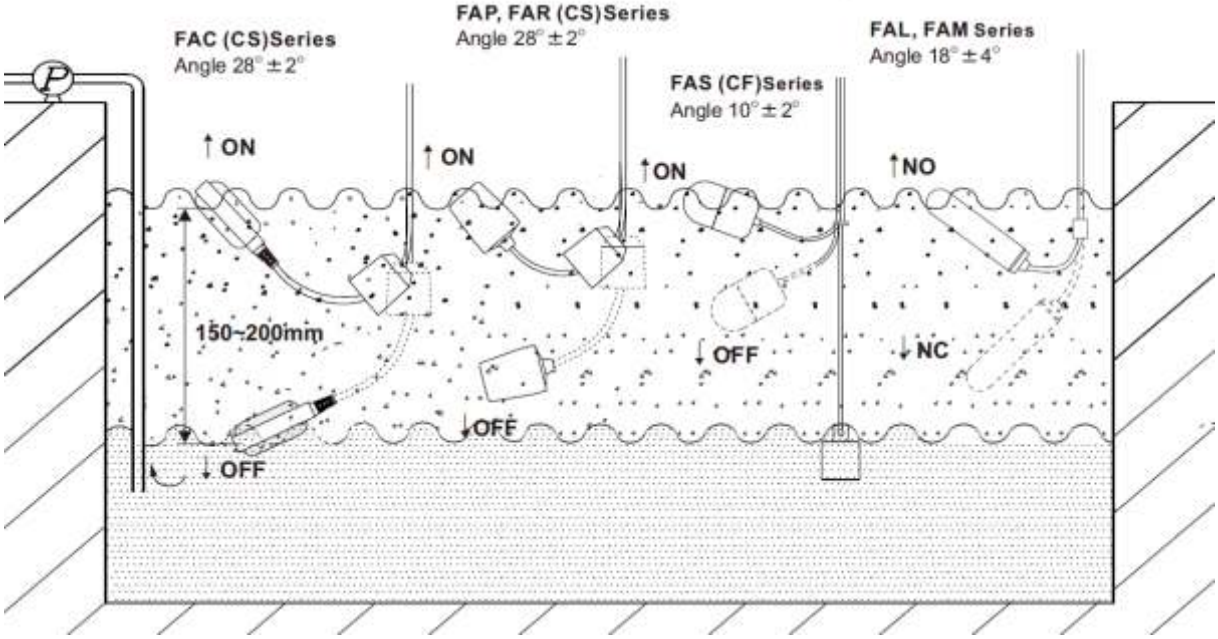
FA SERIES INTRODUCTION

OPERATING PRINCIPLE

The Hycontrol Cable Float Level Switch uses either micro switches proximity switches or reed switches to control the contact. It's user-friendly design is ideal for level measurement. The switches will transmit an ON or OFF contact signal output when the float rises and turns upwards. The switch contains a metal ball that slides as the float position changes.
A variety of different float materials are available to suit different water or solution temperatures.
Plastic and stainless steel switches are the most common options. Hycontrol's cable float level switches can be used in both clear and granular liquids. Long distance detection points and multi-point contacts are also available.
Cable float level switches can be applied in all water management, petrochemical, chemical industries. Other applications include: air-conditioner systems, drainage systems, most tanks or containers with level switch requirements.

APPLICATIONS

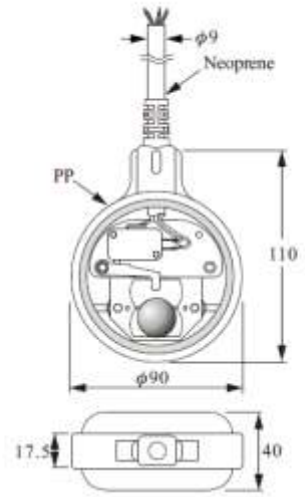
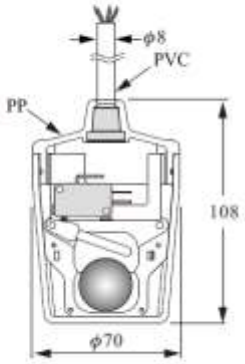
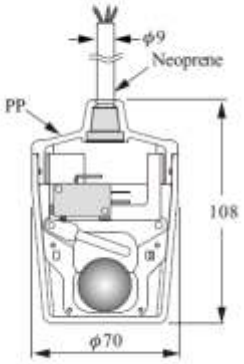
FAC: *Suitable for pump controlled systems*
FAR/P/D/E: *Suitable for pump controlled waste water with a low Specific Gravity (SG) level*
FAS: *High temperature solutions*
FAL/J: *Cleaner water, and installation with smaller process connections*
The use of reed switch contact models in PLC or DCS control applications is suggested.



THE FA SERIES

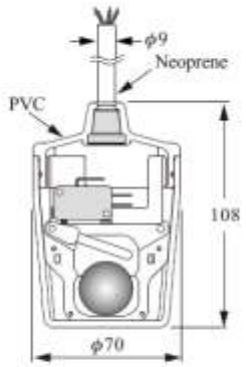
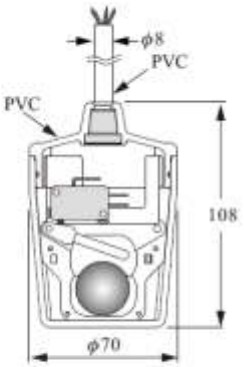
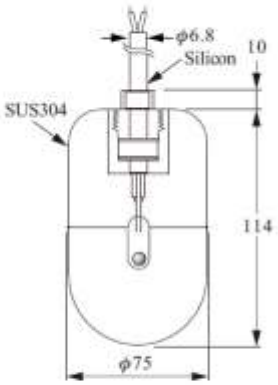
The FA Series Float Level Switch from Hycontrol is usually made from chemical-resistant polypropylene. It is durable, low-cost,and specially designed to assist with long-range and multi-point level detection in liquids. It is also suitable for tanks containing pumps and granular solutions.

SPECIFICATIONS

Dimensions (Unit:mm)			
Model	**FAC A/B/C Round type**	**FAP A/B/C Cup type**	**FAR A/B/C Cup type**
Switch	Micro switch	Micro switch	Micro switch
Float material	P.P.		
Cable spec	Neoprene Cable 1mm^{2}x3C or 2C	PVC Cable 1.25mm^{2}x3C or 2C	Neoprene Cable 1mm^{2}x3C or 2C
Contact rating	10A/ 250Vac (std.) or 15A/ 250Vac		
Contact form	N.O or N.C or SPDT		
Operating temp.	-10°C~80°C	0°C~60°C	-10°C~80°C
Specific gravity	0.6	0.6	0.6
Weight approx.	770g/5M	290g/1M	290g/1M
Pressure	2 kg/cm^2	2 kg/cm^2	2 kg/cm^2
Wire voltage	600 Vac	600 Vac	600 Vac
Isolation resistance	Min 100 MΩ	Min 100 MΩ	Min 100 MΩ
Contact resistance	Max. 100mΩ	Max. 100mΩ	Max. 100mΩ
Actuation angle	28° ± 2°	28° ± 2°	28° ± 2°
Protection	IP68	IP68	IP68

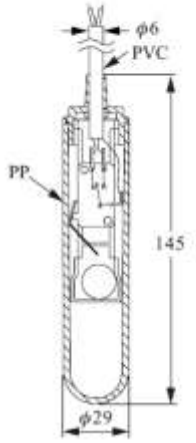
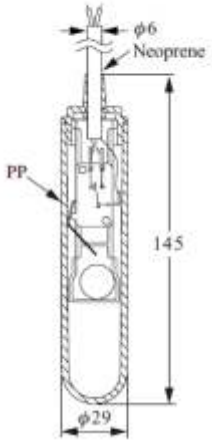
* Available cable lengths: 0.6m, 3m, 5m, 10m, 20m

SPECIFICATIONS

Dimensions (Unit:mm)			
Model	**FAD A/B/C Round type**	**FAE A/B/C Cup type**	**FAS A/B/C Cup type**
Switch	Micro switch	Micro switch	Mercury switch
Float material	PVC		SUS304
Cable spec	Neoprene Cable $1mm^2$x3C or 2C	PVC Cable $1.25mm^2$x3C or 2C	Silicon Cable $0.75mm^2$x3C or 2C
Contact rating	10A/ 250Vac (std.) or 15A/ 250Vac		1A/ 230Vac
Contact form	N.O or N.C or SPDT		N.O or N.C or SPDT
Operating temp.	0°C~60°C	0°C~60°C	0°C~170°C
Specific gravity	0.6	0.6	0.5
Weight approx.	290g/1M	290g/1M	480g/5M
Pressure	2 kg/cm^2	2 kg/cm^2	2 kg/cm^2
Wire voltage	600 Vac	600 Vac	300 Vac
Isolation resistance	Min 100 MΩ	Min 100 MΩ	———
Contact resistance	Max. 100mΩ	Max. 100mΩ	Max. 1Ω
Actuation angle	28° ± 2°	28° ± 2°	10° ± 2°
Protection	IP68	IP68	IP68

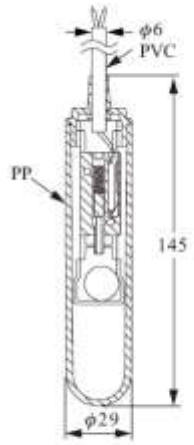
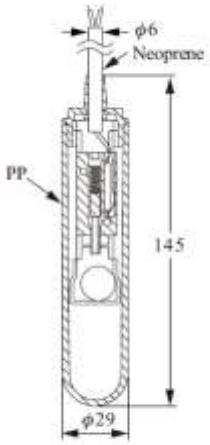
* Available cable lengths: 0.6m, 3m, 5m, 10m, 20m

SPECIFICATIONS

Dimensions (Unit:mm)		
Model	**FAL A/B/C Bar type**	**FAM A/B/C Bar type**
Switch	Micro switch	
Float material	P.P.	
Cable spec	PVC Cable 0.75mm²x3C	Neoprene Cable 0.75mm²x3C
Contact rating	3A/ 125/250Vac	
Contact mode	N.O or N.C or SPDT	
Operating temp.	-0°C~60°C	-10°C~80°C
Specific gravity	0.8	
Weight approx.	113 ± 2g/1M Cable	
Pressure	4.5 kg/cm²	
Wire voltage	600 Vac	
Isolation resistance	Min 100 MΩ	
Contact resistance	Max. 100mΩ	
Actuation angle	Up 18° ± 4°/ Down 3° ± 3°	
Protection	IP68	

* Available cable lengths: 0.6m, 3m, 5m, 10m, 20m

SPECIFICATIONS

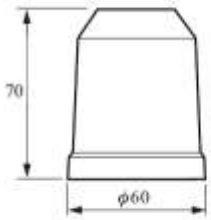
Dimensions (Unit:mm)		
Model	**FAJ A/B/C Bar type**	**FAK A/B/C Bar type**
Switch	Reed Switch	
Float material	P.P.	
Cable spec	PVC Cable 0.75mm^{2}x3C	Neoprene Cable 0.75mm^{2}x3C
Contact rating	AC70 VA / DC50 W(N.O), 20W(N.C, SPDT)	
Contact mode	N.O or N.C or SPDT	
Operating temp.	-0°C~60°C	-10°C~80°C
Specific gravity	0.8	
Weight approx.	115 ± 2g/1M Cable	
Pressure	4.5 kg/cm^2	
Wire voltage	300 Vac/ 350Vdc(N.O), 150 Vac/ 200Vdc(N.C, SPDT)	
Isolation resistance	Min 100 MΩ	
Contact resistance	Max. 100mΩ(N.O), Max. 150mΩ(N.C, SPDT)	
Actuation angle	Up 18° ± 4°/ Down 3° ± 3°	
Protection	IP68	

* Available cable lengths: 0.6m, 3m, 5m, 10m, 20m

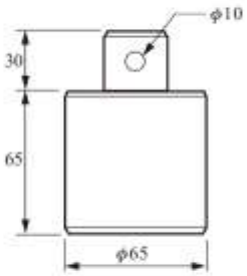
WEIGHTS DIMENSIONS & CONTACT MODE

WEIGHTS DIMENSIONS

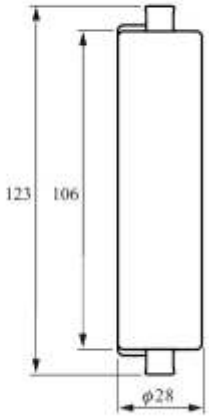
FAPW-03
FAPW-05



FASW



FAB-0010

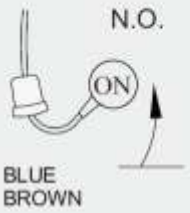


Model	Material	Weight
FAPW-03 FAPW-05	PP	0.3kg 0.5kg
FASW	SUS304	1.8kg
FAB-0010	PP	0.15kg

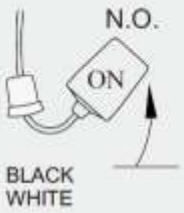
CONTACT MODE

1. SPDT (N.O)

FACA

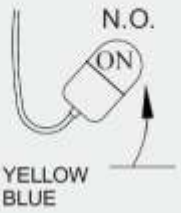


FAPA/FAEA



FARA/FADA

FASA



2. SPDT (N.C)

FACB

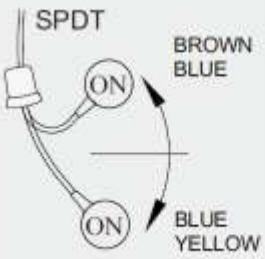
FAPB/FAEB

FARB/FADB

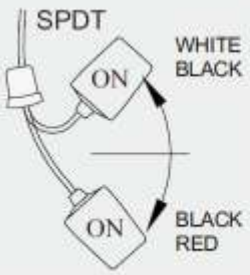
FASB

3. SPDT (1C)

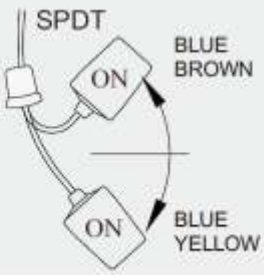
FACC



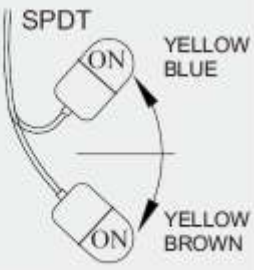
FAPC/FAEC



FARC/FADC



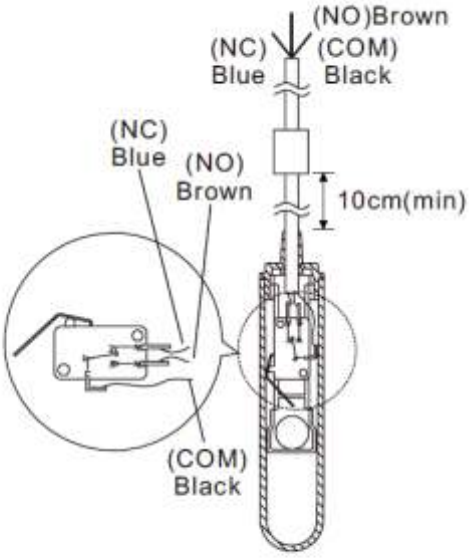
FASC

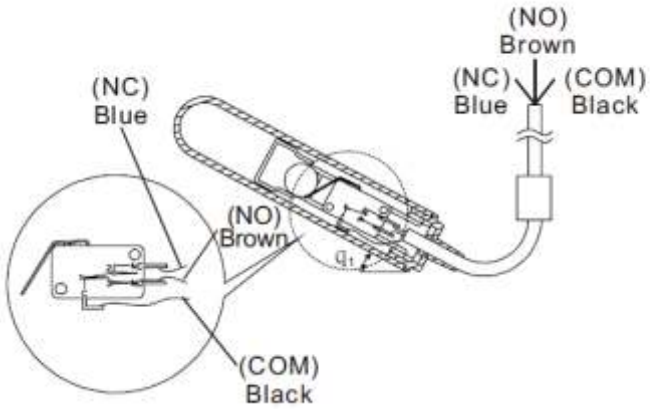


WIRING INFORMATION

MICRO SWITCH

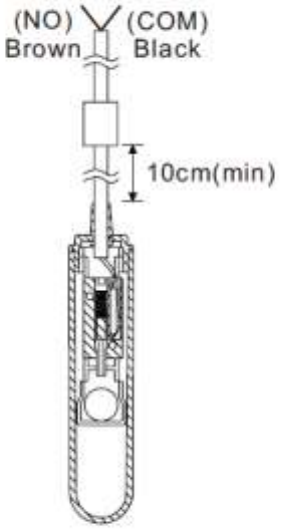
When the float has not yet made contact with the liquid, the blue and black wires are in an open state and the contact mode will be NC. When the liquid level rises and lifts the float up to the actuation angle, the brown and black wires will then be in an open state and the contact mode will be NO.

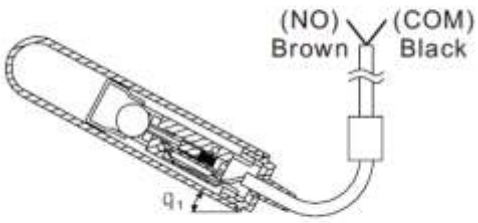




REED SWITCH

When the liquid level is low, the metal ball remains away from the sensing range and the brown and black wires are in an open state (NC mode). When the liquid level rises it will lift the float until it reaches the actuation angle, resulting in the brown and black wires switching to an open state (NO mode).

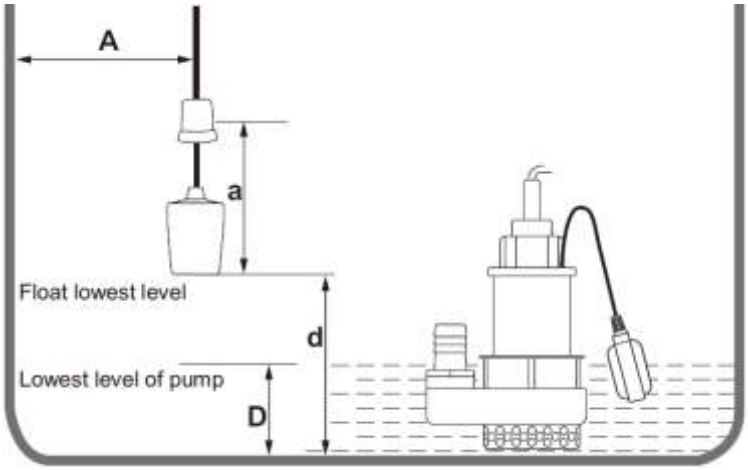




INSTALLATION INFORMATION

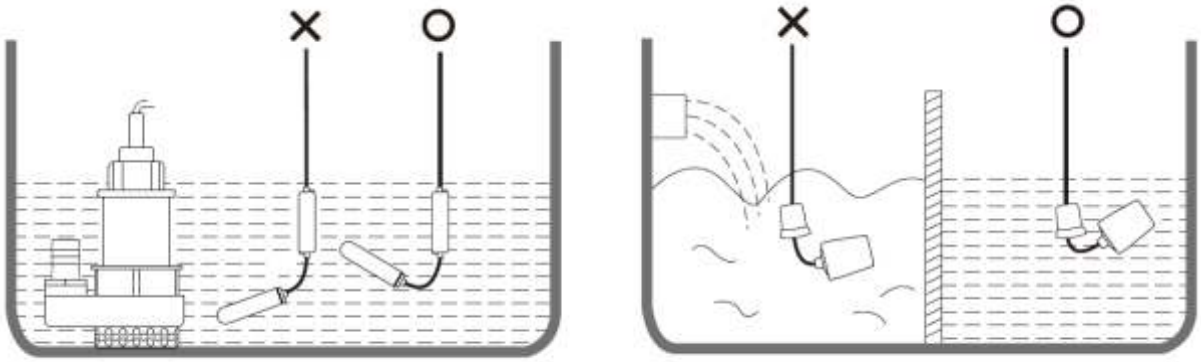
DIMENSIONS

The float's action length (a) must be shorter than the distance between the wall and the cable (A); if not, it will not function correctly. The lowest float level (d) must be higher than the lowest water level of the pump (D).



PRECAUTIONS

Keep an appropriate distance between the installation position and the water pump inlet in order to prevent the float switch from being sucked in towards the pump. There should likewise be an appropriate distance from the water inlet to prevent any direct water impact. If these issues cannot be avoided, please install a pipe-shield or plate to reduce turbulence.



To get a quotation for a cable float switch to suit your needs, please contact sales@hycontrol.com

HYCONTROL LEVEL TECHNOLOGIES

Product Range For Solids :-

(1) TDR Radar For Solids

(2) Ultrasonic, ‘Through Air’

(2) 2 Wire Ultrasonic Transmitter

(3) FMCW 2 Wire Radar

(4) Continuous ‘Servo’ Level Indicator

(5) FMCW 2 Wire Radar

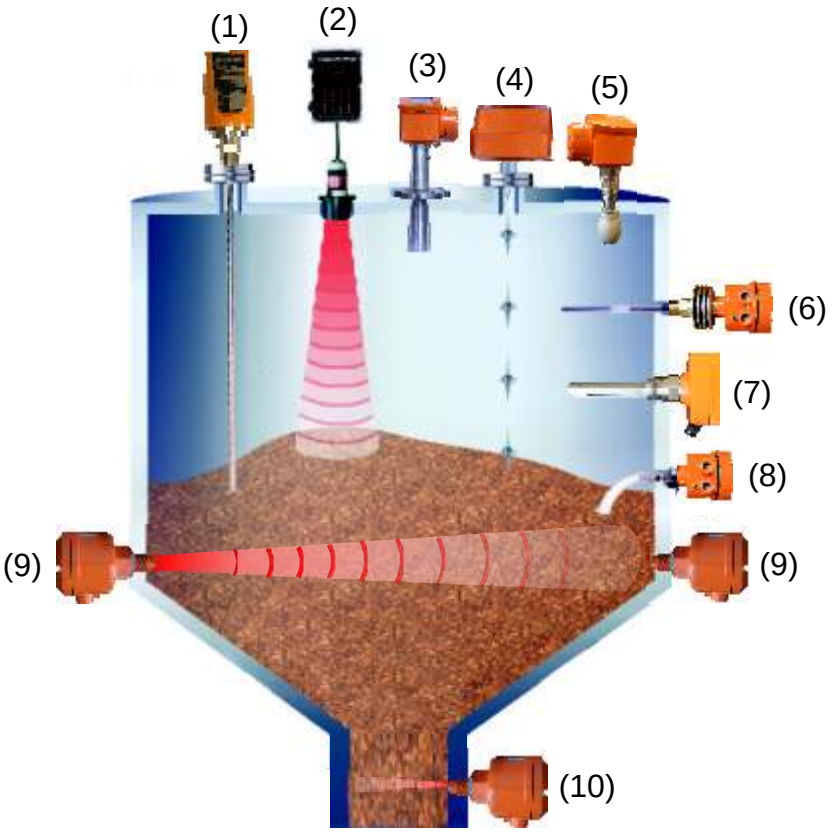
(6) Capacitance Level Switch

(7) Vibrating Probe Level Switch

(8) Rotating Paddle Level switch

(9) Microwave Level Switch

(10) Doppler Flow Switch



Product Range For Liquids :-

(1) By-Pass Level Indicator With Radar

(2) TDR Radar For Liquids

(3) 2 Wire Ultrasonic Transmitter

(4) FMCW ‘Horn’ Radar 2 Wire

(5) Magnetic Float Switches

(6) FMCW 2 Wire Radar

(7) Capacitance Level Switch

(8) RF Admittance Level Switch

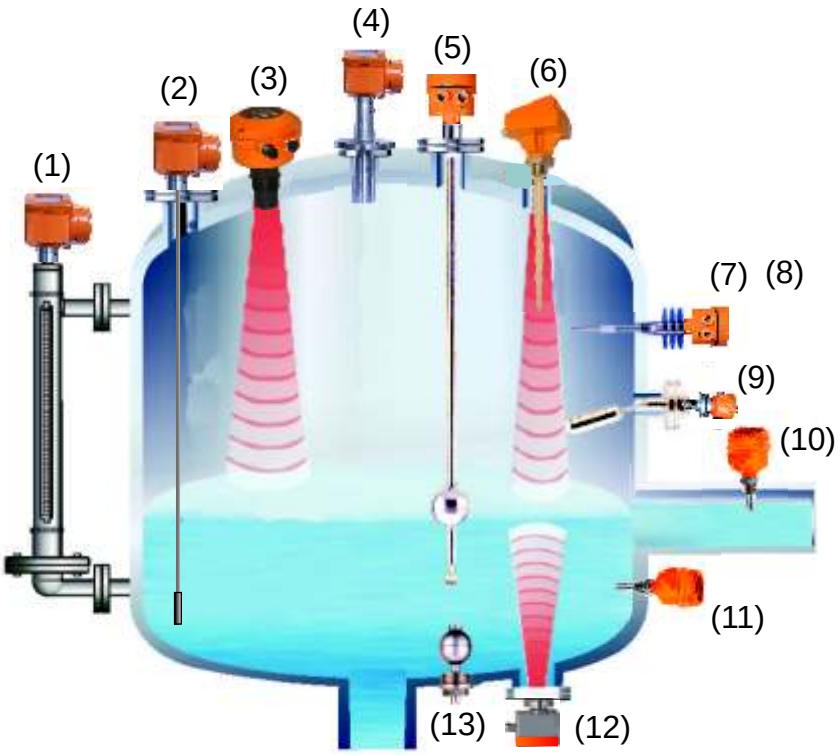
(9) Side Mounting 316 SS Float Switch

(10) Tuning Fork Level Switch

(11) Tuning Fork Level Switch

(12) Ultrasonics ‘Through Wall’

(13) Mini Magnetic Float Level Switch



Hycontrol Ltd, Larchwood House, Orchard Street, Redditch, Worcestershire, England, B98 7DP
Tel : 01527 406800, Fax : 01527 406810, sales@hycontrol.com, www.hycontrol.com