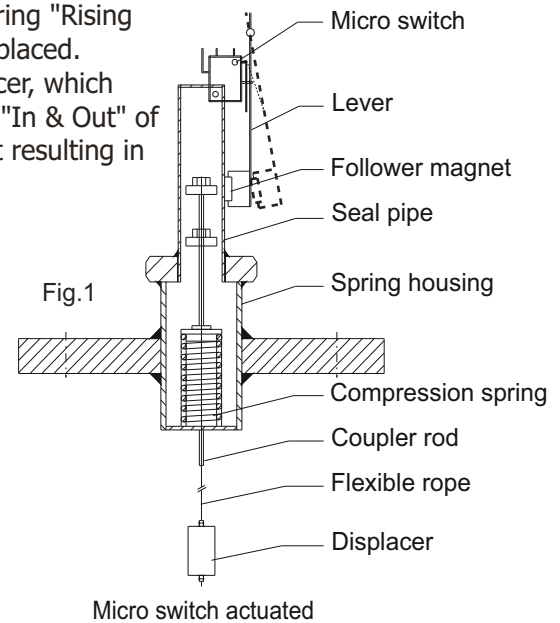
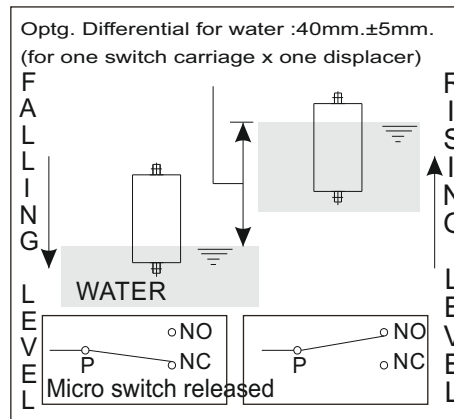


Construction & Operation: Fig.1

MODEL/FITZER/TDS/50

Displacer is connected to coupler moving within a seal pipe by a flexible wire rope via a compression spring. The coupler is magnetically linked to a follower magnet, which operates a micro switch. The status of "Displacer Immersion in Liquid" during "Rising & Falling Level" exerts a buoyant force on it equivalent to liquid displaced. (Archimedes Principle). This force effects a vertical displacement of displacer, which changes the spring tension and causes the coupler resting on it, to move "In & Out" of the follower magnets field. This attracts and releases the follower magnet resulting in "Changeover" of microswitch contacts.

- Wide choice of switching functions.
- Suitable for large tanks up to 15 meters.
- Site adjustable switch points.
- Customised for high temp., high pressure & vacuum service.
- Reliable performance in turbulent liquids even without still pipes.
- Easy transportation of long range switches.
- Enclosure : W-proof-IP-66, Ex-proof-Gr II A & II B or II C

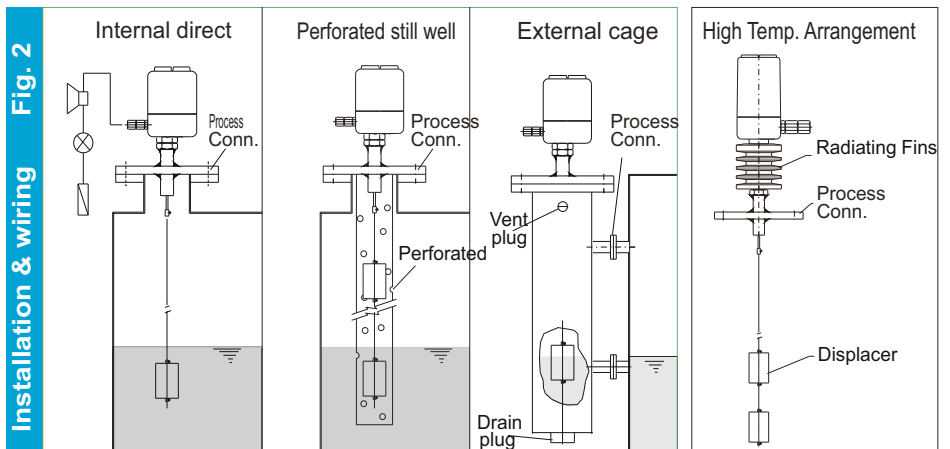


Specifications

Enclosure	: Cast AL, WP-IP66, Cast AL Ex-proof Gr. II C II A & II B or
Conduit Connection	: Brass 3/4" ET or 1/2" NPT
Measuring range:	200 mm~15000 mm
Operating Differential Type - A & C	: 40±5 mm / Type - B :- Adjustable / Type - E :- 65 ±5 mm
Switch Type	: Micro switch
Switch Contacts	: 2 SPDT (2 NO + 2 NC) @ 5A, 230 VAC (Resistive)
Switch Action	: Bistable
Terminals	: To suit 1.5 mm ² conductor
Flexible Rope	: SS 304, SS 316, PP, PTFE
Displacer	: SS 304, SS 316, PP, PTFE
Spring Housing	: SS 316, PP, PTFE
Spring Material	: SS 316, SS 316 with ECTFE coating
Process Connection	: Flanged - MS, SS 304, SS 316, PP (SS clad), PTFE (SS clad)
Perforated Still well MS,	SS 304, SS 316, PP, (65 NB)
External Cage	: MS, SS 304, SS 316, PP (80 NB)
Max. Temperature	: 0-200°C (without radiating fins) 0-300°C (with radiating fins) (Contact factory for temperature more than 300°C)
Max. Test Pressure	: Vacuum to 40 Kg./cm ² (Contact factory for pressure more than 40 Kg./cm ²)
Min. Sp. Gravity	: 0.7 (Contact factory for Sp. Gr. less than 0.7)



Installation & wiring



Installation : The switch can be installed internally or externally as shown in Fig. 2. Perforated still well is recommended for tanks with excessive turbulent liquids. The microswitch contacts being rated for 5A. at 230 VAC. can be directly wired to control devices viz. Solenoid valve or pumps, through a PVC cable of 1.5 mm

Model Identification : TDS- [] [] [] [] [] [] [] [] X Range (mm)

Construction (Switch Carriage x Displacer)

One x One	A
One x Two	B
Two x Two	C
Two x Three	D
Three x Three	E

Enclosure

Cast Al, W-proof IP 66 x ¾" ET.	J
Cast Al, Ex-proof Gr. IIA & IIB x ½"NPT Double comp'n	E
Cast Al Ex-proof Gr. IIC x ½"NPT Double comp'n	F
Non-std.	O

Displacer MOC

SS 304	N
SS 316	S
PP	P
Non-std.	O

Process Conn. MOC

MS	M
SS 304	N
SS 316	S
PP (SS Clad)	P
Non-std.	O

Process Conn

80 NB, ASA 150 # flange	1
80 NB, BS-10 T 'D' flange	2
Non-std.	0

Installation

Internal Direct	1
Perforated Still Well in MS	2
Perforated Still Well in SS 304	3
Perforated Still Well in SS 316	4
Perforated Still Well in PP	5
External Cage with 1" NB Flange in MS	6
External Cage with 1" NB Flange in SS 304	7
External Cage with 1" NB Flange in SS 316	8
Non-std.	0

High Temp. Arrangement

Not provided	R
Provided	H

ORDERING INFORMATION :

Model x Range (mm) x Liquid & its Sp. Gr. x Optg. Temp x Pressure

APPLICATIONS : Large Sumps & Fuel Tanks, Boiler Feed Water, Waste Water & Sewage, Interface Liquids, Petrochemical, Nuclear Power, Generator Sealing Liquid.

Customer friendly notes :

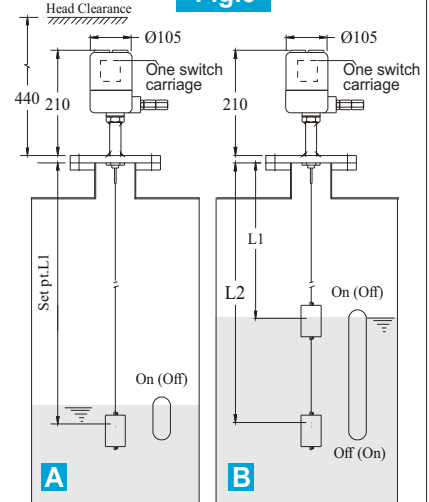
- Optg. diff. varies inversely with liquid density.
- 'Set Point' is the distance from flange bottom face to actuation point.
- The minimum gap between two consecutive set points is 120 mm.
- Max. diff. between set points L1 & L2 = L - 250 mm.
- Set points easily adjustable by shifting the displacer to new position on flexible rope.

Construction : By configuring, the number of Switch Carriages and Displacers as shown in Fig.3, the switch can be used for variety of switching functions.

Fig.3

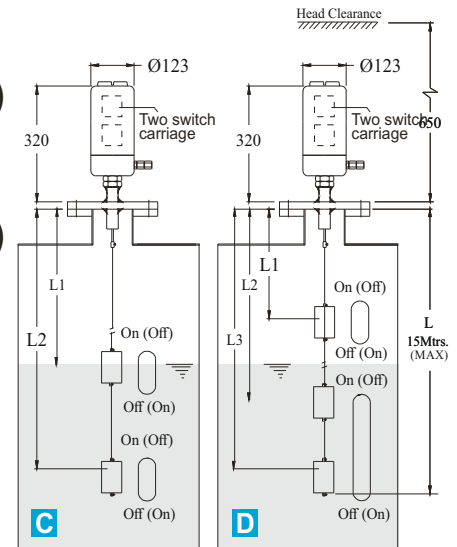
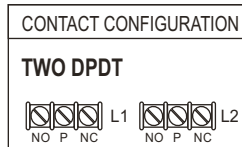
A One point switching with small diff. (fixed) for "Alarm" (low or high)

B Two points switching with large diff. (adj.) for Level Control.

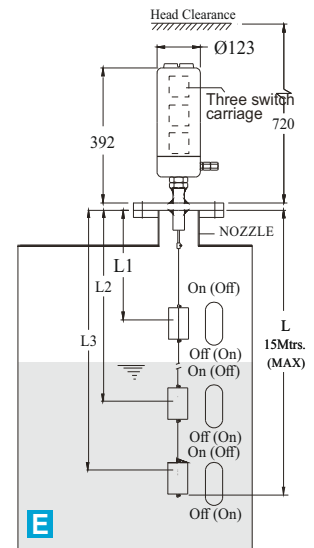
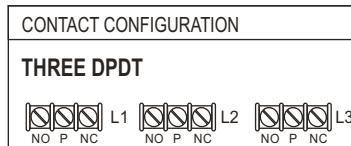


C Two point switching with low diff. (fixed) for "Alarm" (Low or High)

D Three point switching with low diff. (fixed) for "Alarm" (High or Low) and Level Control.



E Three points switching with low diff. (fixed) for "Alarm" (low, very low and high or low, high and very high)



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