



# TDR LEVEL TRANSMITTER WITH SWITCH

Innovative Signal Analysis  
Disturbance Signal Suppression  
High Accuracy

## MODEL 5756

- **GUIDED WAVE RADAR LEVEL MEASUREMENT** ●
- **INDEPENDENT OF VARYING PROCESS CONDITIONS** ●
- **4-20 mA ANALOG OUTPUT** ● **POINT LEVEL SWITCHING OUTPUT** ●



SWITZER Model 5756 TDR Level Transmitter with point level switching output is a versatile liquid level measuring and control instrument with latest state-of-art design and technology.

The model uses TDR (Time Domain Reflectometry) principle for level measurement. Low energy, high frequency electromagnetic impulses, generated by the sensor's circuitry are propagated along the probe which is immersed in the liquid to be measured. When the impulses hit the surface of the liquid, part of the energy is reflected back to the circuitry which calculates the time difference between the impulses sent and received.

The innovative technology enables precise level measurement of any liquid independent of varying process parameters like density, conductivity, temperature, pressure, vapour and turbulence. The instrument produces a 4-20mA analog current output and a single point level switching output for on-off control purpose.

Probe construction can be of single probe or coaxial probe depending on the type of application vessel. This is especially suitable for use in bypass chambers and stillwells.

The instrument is housed in a certified explosion and weatherproof cast aluminium enclosure suitable for use in hazardous areas.

### ORDERING MATRIX

<b>Basic Model No.</b>	5756	AM	-	AEC	-	□□□□
<b>PROBE TYPE</b>						
Single		AM				
Coaxial		AJ				
<b>Process Connection</b>						
3/4" BSPM (Std.)				AEC		
3/4" NPTM				AEA		
1½" 150 RF Flange				AGE		
<b>Probe Length (in mm)</b>						
Probe length *						□□□□

**Note :**

\* To be represented in 4 digits --- dddd

**For Example**

(a) 350mm length is to be shown as "0350"

(b) 6000mm length is to be shown as "6000"

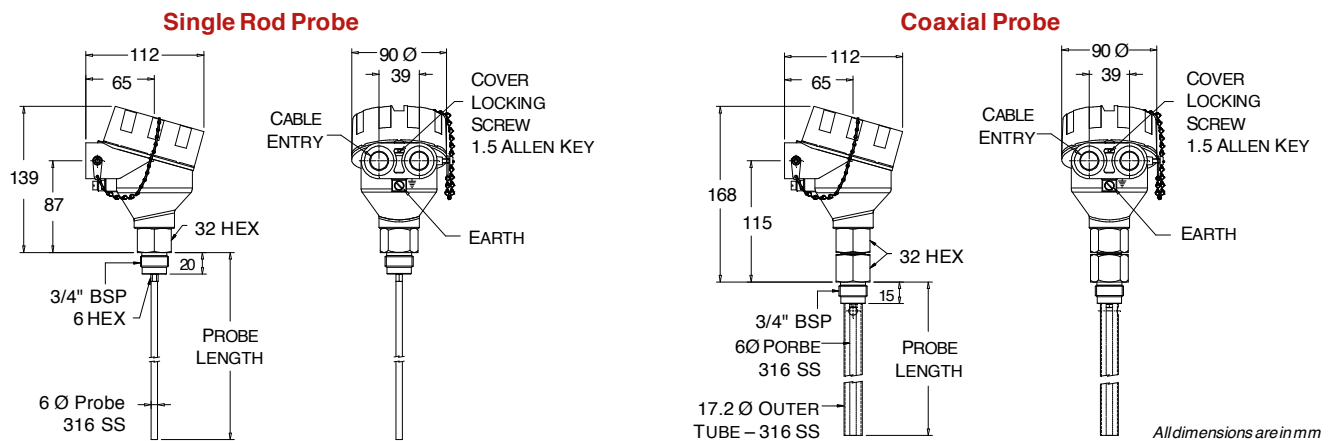
# GENERAL SPECIFICATIONS



Characteristics	Specifications
<b>ELECTRICAL</b>	
Product	TDR 4-wire Level Transmitter with Switch
Probe length	Single rod probe : 100 to 3000 mm Coaxial probe : 100 to 6000 mm Measuring range to be within the top and bottom inactive limits specified.
Inactive probe areas - Top	<b>Single rod probe for</b> Conductive media : 50mm Non-conductive media : 80mm
	<b>Coaxial probe for</b> Conductive media : 30mm Non-conductive media : 50mm
Inactive probe areas - Bottom	<b>Single rod probe for</b> Conductive media : 10mm Non-conductive media : 50mm
	<b>Coaxial probe for</b> Conductive media : 10mm Non-conductive media : 50mm
Probe size	Single rod : $\varnothing$ 6mm Coaxial probe : $\varnothing$ 17.2mm
Accuracy	$\pm$ 3 mm
Repeatability	<2 mm
Resolution	<1 mm
Electrical connections	Screwless, cage clamp terminal block for stranded and solid wires 0.5 to 2 mm <sup>2</sup>
<b>Power supply</b>	
Power supply	12 to 30 V DC
Current consumption	<70 mA at 24VDC
Start up time	<6 secs

Characteristics	Specifications
<b>Analog Output</b>	
Type	Current : 4-20 mA, 4-wire
Range	Same as instrument calibrated range
Load capacity	500 Ohms max.
Response time	0.5 secs (default); 2 secs and 5 secs selectable
<b>Switching Output</b>	
Type	DC, Transistor PNP- Active Output
Form	NC or NO selectable
Load current	<200mA (short-circuit protected)
Load Voltage	About 2V lower than supply voltage
Setpoint	One-Freely positionable in the measuring range
Deadband	Freely configurable through switch ON and OFF setting
<b>MECHANICAL</b>	
Enclosure	Die-cast aluminium, Type XD-AD
Enclosure protection	Weatherproof to IP68 Explosion proof : ATEX  II2G Ex d IIC Gb
Process connection	3/4" BSPM/NPTM; 1 1/2" 150RF Flange
Process connection material	Single probe : SS316 and PEEK® Coaxial probe : SS316, PEEK and Viton®
Process pressure	40 bar maximum
Process Temp. limits	-20°C to 120°C
Ambient Temp. limits	0 to 60°C
Ambient Relative Humidity	95% max.
Mounting	Direct on tank / vessel
Cable entry	2 entries of 1/2" NPTF
Overall Dimension	Enclosure 90(w) x 139(h) x 112(d) This does not include the probe length
<small>Viton® is a registered trademark of DuPont Dow Elastomers PEEK® is a registered trademark of Victrex.</small>	

## MOUNTING DIMENSIONS



**This is not a contractual document. Prior notification of changes in specifications is impracticable due to continuous improvement**

FOR SWITZER'S OFFICES IN INDIA

CHECK AT:

<http://www.switzerinstrument.com/offices.htm>