Submersible Level Transmitter for Fuel and Chemicals Industries

GaMicos

GLT510M

DESCRIPTION

GLT510M series (GLT510MPC、GLT510MPF) are submersible level transmitters with the fully welded structure. The product utilizes a piezoresistive sensor with proved long term stability and reliability and a special digital compensation circuit that is housed in a rugged stainless steel housing. It offers an integrated structure, supports standard outputs, and cable options of multiple material for a wide range of operation temperature. Specifically, GLT510MPF is mostly used in the level monitoring of refined oils, such as gasoline,diesel, kerosene, etc., GLT510MPC is mostly used in the level monitoring of chemicals, such as methanol, ethanol, diesel exhaust fluid (DEF), diesel engine coolant, etc. Both two level transmitters are also applicable for other environments with high requirements for wear resistance, protection, or explosion-proof.

FEATURES

- Low power consumption
- Wide operation temperature range
- Superior sealing and media compatibility
- Multiple output signals available
- Integrated temperature measurement
- Magnetic end cap for movable tanks
- NPT1/4 male thread for process connection available
- Approved for use in hazardous areas

APPLICATIONS

- Gasoline, diesel, methanol, ethanol storage tank
- Biofuel tank
- Chemicals storage tank
- Ballast tank
- Underground water level in mining areas
- Wastewater level
- Fertilizer storage tank

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TECHNICAL PARAMETER

Range	Level Measurement: 0mH2O~2mH2O...200mH2O
	Pressure Measurement:0mbar~200mbar...350bar
Pressure Type	Gauge, absolute, sealed gauge
Overpressure	≤ 2 times FS
Accuracy	See table Accuracy
Long-term Stability	≤ ±0.2% FS/ year
Compensated Temperature	-10℃ ~60℃
Operation Temperature	GLT510MPF Level Transmitter: -20℃ ~80℃ (PUR cable); -10℃ ~70℃ (PVC/PE cable)
	GLT510MPC Level Transmitter: -30℃ ~80℃
Storage Temperature	GLT510MPF Level Transmitter: -30℃ ~85℃ (PUR cable); -20℃ ~85℃ (PVC/PE cable)
	GLT510MPC Level Transmitter: -40℃ ~85℃
Vibration	20g, 20Hz~2000Hz
Shock	20g, 11ms
Protection Rating	IP68
Weight	≤280g (not including cable weight)

ACCURACY

Pressure Measurement

Pressure Type	Range	Accuracy
Gauge G	0mbar~200mbar≤X<350mbar	±1%FS
	350mbar≤X≤1bar	±0.5%FS
	1bar<X≤35bar	±0.25%FS
		±0.5%FS
Absolute A	0mbar~700mbar<X≤1bar	±1%FS
	1bar<X≤10bar	±0.5%FS
	10bar<X≤350bar	±0.25%FS
		±0.5%FS
Sealed gauge S	35bar<X≤350bar	±0.25%FS
		±0.5%FS

Level Measurement

Pressure Type	Range	Accuracy
Gauge G	0mH2O ~2mH2O≤X<3.5mH2O	±1%FS
	3.5mH2O≤X≤10mH2O	±0.5%FS
	10mH2O<X≤200mH2O	±0.25%FS
		±0.5%FS
Absolute A	7mH2O<X≤10mH2O	±1%FS
	10mH2O<X≤100mH2O	±0.5%FS
	100mH2O<X≤200mH2O	±0.25%FS
		±0.5%FS

Note: the accuracy is between compensated temperature range (-10℃ ~ 60℃)； Test standard:GB/T 17614.12-2015/IEC 60770-1:2020

OUTPUT SIGNALS

Output Signal	Supply Voltage	Output Format	Load Resistance	Insulation Resistance
4mA~20mA (E)	12V~28V DC	2-wire	≤(U-12)/0.02 (Ω)	
1V~5V (F)	15V~28V DC	3-wire	≥10kΩ	20MΩ@500V DC
0V~5V (J)				
0V~10V (V)				
0.5V~4.5V (K2)				
0.5V~4.5V (K1)	5V~10V DC			
0.5V~2.5V (W)	3.2V~5V DC			
RS485 MODBUS_RTU (R8)	3.6V~28V DC	4-wire	RS485 bus can cascade up to 99 equipments	

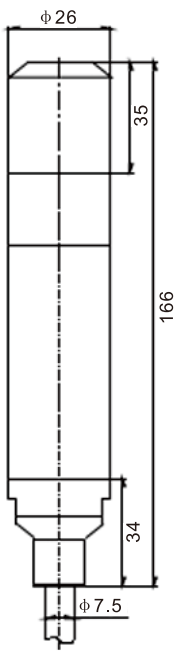
CERTIFICATE

Logo	Description	Countries and Regions
CE	EU Declaration of Conformity EMC instructions, electromagnetic radiation and immunity standards Pressure equipment instructions	EU
RoHS	RoHS conformity	EU
Ex	Technical requirements for equipment in potentially explosive environment	EU
C SA US	Explosion-proof electrical product certification system	Global
IECEx	Safety certification for electronic products saled in North American market	North America

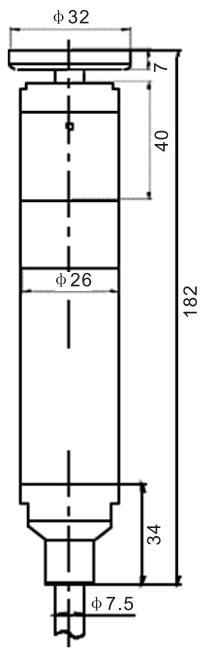
OUTLINE DIMENSIONS

unit:mm

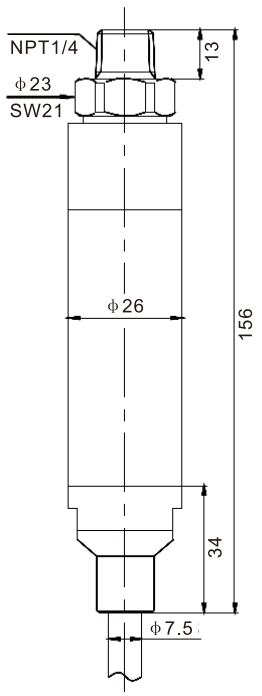
Stainless Steel/POM End Cap(LD1/LD2)



Magnetic End Cap（LD3）



NPT1/4 Male Thread (C6)



ELECTRICAL CONNECTION

Cable Color	2-wire	3-wire	4-wire
Red	+V	+V	+V
White	null	+OUT	RS485B
Black	+OUT	GND	GND
Yellow/Green	null	null	RS485A

MATERIALS

Isolated Diaphragm: SS 316L
Pressure Port: SS 316L
Housing: SS 316L
Cable Jacket: PUR/PE/PVC for GLT510MPF
PFA for GLT510MPC
Sealing Element: HNBR for GLT510MPF
FFKM for GLT510MPC

ORDER GUIDE

GLT510M	Submersible Level Transmitter									
	Code	**Application**								
	PF	Fuels								
	PC	Chemicals								
		Code	**Cable Material**							
		P1	PE	(for GLT510MPF only)						
		P2	PUR							
		P3	PVC							
		P4	PFA	(for GLT510MPC only)						
			Code	**Process Connection**						
			LD1	End cap, SS 316L						
			LD2	End cap, POM						
			LD3	End cap,magnetic,SS 316L						
			C6	NPT1/4 male thread						
				Range	Level Measurement: 0mH2O~2mH2O...200mH2O					
					Pressure Measurement: 0mbar~200mbar...350bar					
				[0~XmH2O]L [0~Xbar]L	X: actual measured range, L: cable length, recommended cable length L=X+(1~2)m for level transmitter					
					Code	**Pressure Type**				
					G	Gauge				
					A	Absolute				
					S	Sealed Gauge				
						Code	**Accuracy ①**			
						A1	±0.25%FS			
						A2	±0.5%FS			
						A3	±1%FS			
							Code	**Output Signal**		
							E	4mA~20mA DC		
							J	0V~5V DC		
							F	1V~5V DC		
							V	0V~10V DC		
							K1	0.5V~4.5V DC(5V~10V DC power)		
							K2	0.5V~4.5V DC(15V~28V DC power)		
							W	0.5V~2.5V DC(3.2V~5V DC power)		
							R8	RS485 MODBUS_RTU protocol with temperature output		
								Code	**Connection Box ②**	
								Yn	4no connection box	
								Yb	Aluminum connection box without display	
								Yc	MS200 waterproof connection box	
								Yd	PD140 lightening-proof connection box	
								Ye	Connection box (with or without display)	
									Code	**Display Indicator (with Ye connection box only)**
									Mn	No display indicator
									M1	0%~100% linear indicator
									M6	4 digits LED digital indicator
									M7	4 digits LCD digital indicator
GLT510M	PF	P4	C6	[0~5mH2O]6	G	A2	V	Ye	Mn	

Ordering Notes:

1." ① ", see "Accuracy" on Page 2 for details.
2." ② ", all connection boxes are non-explosion-proof accessories;
3.4~20mA output is available only when ordering the transmitter with M6 or M7 indicator, power supply should ≥17V DC.
4. Environmental temperature should be -20℃ ~ 70℃ when ordering the transmitter with M6 indicator, environmental temperature should be -10 ℃ ~ 60℃ when ordering the transmitter with M7 indicator, indicator setting can refer to our indicator lectotype, which can be found on our company's website.
5. The measured media should be compatible with the wetted material and the measured media density except water needs to be specified on contract.
6.If the product is installed in a thunderstorm area, a lightning protection device is required and be sure that the product and the power are reliably earthed, which can efficiently prevent the level sensor from lightning damage.
7.If metrology verification certificate is needed or there are other requirements, please contact us.