



Product principle

LS500 series adopts magnetic induction technology sensor for liquid level measurement, and the signal is converted into standard industrial electrical signal output and display after processing by the rear processing circuit. The float is equipped with Hall elements in a closed non-magnetic conductive stainless steel tube, and the float is equipped with a ring magnetic ring, and the float moves with the rise or fall of the liquid level, thereby triggering or releasing the switch in the stainless steel tube and issuing a switching signal. Magnetic sensing switch element with 2 sets of inductive magnetic float through the position to measure the liquid level.

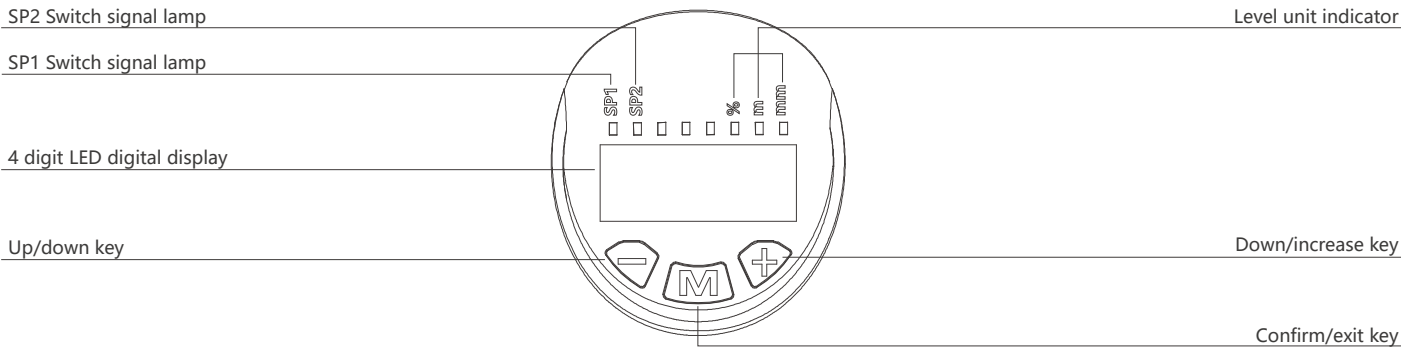
Product application

food Paper making Petrochemical pulp for power plant
pharmaceutical Water treatment boiler

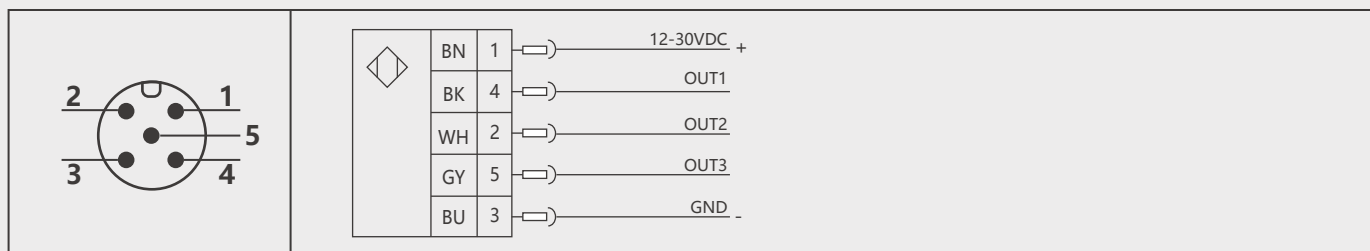
Technical parameter

- ◇ Measuring range (guide rod length L) : 0-2m optional
- ◇ Measuring medium: corrosive liquid compatible with stainless steel 304
- ◇ Medium density: $\geq 0.7\text{g/cm}$
- ◇ Supply voltage: 12... 30Vdc
- ◇ No-load current consumption: maximum 40mA, 24Vdc power supply
- ◇ Switch output:
- Output type: PNP/NPN switchable,
Normally open (NO)/Normally closed (NC) can be set
- Switching load: $< 200\text{mA} / 24\text{VDC}$
- Response time: 0.01~2s (factory default)
- ◇ Current type analog output: $\pm 0.5\%$ range
- Output type: 4... 20mA/1-5V/0-10V configurable
- Load RA: $\leq 500\Omega$
- Linearity: $\leq 0.5\%$ range
- ◇ Communication output: IO-Link/RS485
- ◇ Wiring protection: reverse phase, overload, short circuit protection
- ◇ Display:
- Design: Red 4-bit 12mm high brightness LED
- Display range: -1999... 9999
- ◇ Accuracy: 10mm/5mm
- ◇ Temperature:
- Medium temperature: -20... 85°C
- Ambient temperature: -20... 80°C
- Storage temperature: -30... 80°C
- ◇ Material:
- Watch head housing: engineering plastic
- Flame retardant class: UL-94 V-0
- Housing: stainless steel 304
- Medium contact part: stainless steel 304/NBR
- ◇ Protection grade: IP67
- ◇ Outlet: M12x1 connector

Panel diagram

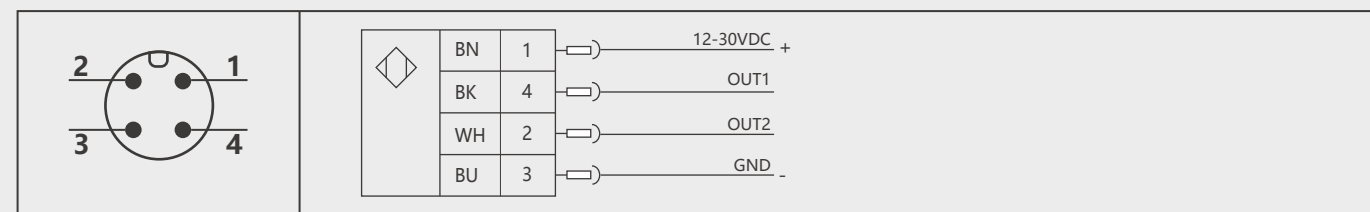


Wiring diagram



A3: Two way switch + one way analog

color	stitch	Instructions	color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)	GY	5 (OUT3)	4-20mA (Factory default) 1-5V 0-10V
BK	4 (OUT1)	SP1 switch PNP (Factory default) SP1 switch NPN	WH	2 (OUT2)	SP2 switch PNP (Factory default) SP2 switch NPN			



S2: Two-way switch/IO-Link

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	SP1 switch PNP (Factory default) SP1 switch NPN IO-Link	WH	2 (OUT2)	SP2 switch PNP (Factory default) SP2 switch NPN

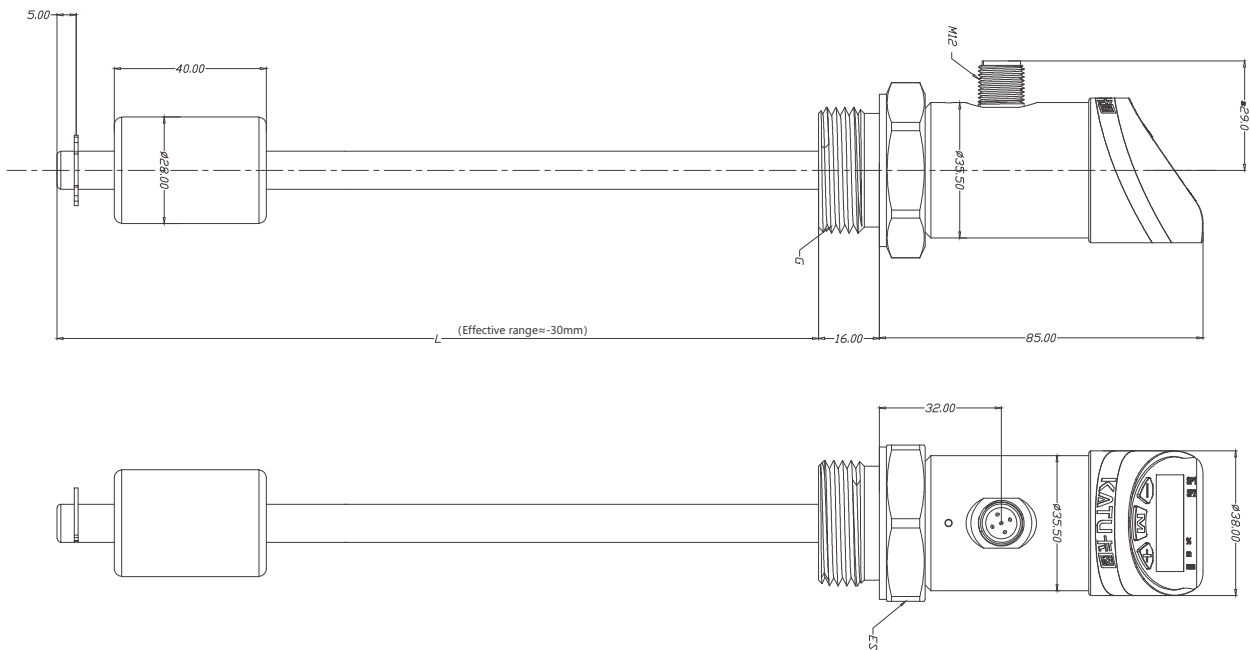
SA: One switch /IO-Link + analog

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	SP1 switch PNP (Factory default) SP1 switch NPN IO-Link	WH	2 (OUT2)	4-20mA (Factory default) 1-5V 0-10V

RS: RS485

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	RS485(B)	WH	2 (OUT2)	RS485(A)

Dimensional drawing (mm)



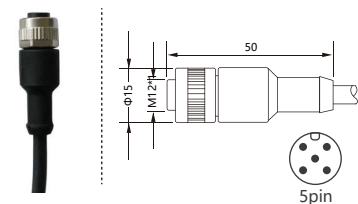
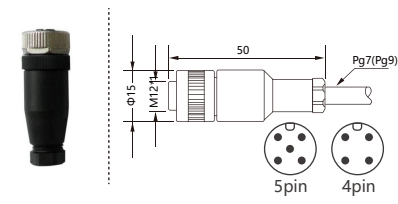
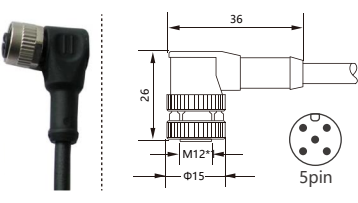
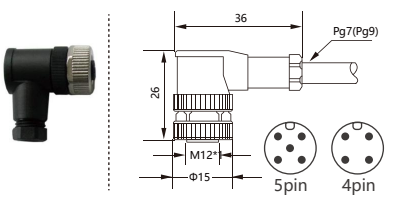
Selection table

LS500-	S2	F25	L125	N	-	detail
LS500						LS500 electronic liquid level sensor
	S2					Output signal: Two switch output/IO-link (4-core cable)
	SA					Output signal: One switch output /IO-link + analog output (4-core cable)
	A3					Output signal: two switch output + analog output (5-core cable)
	RS					Output signal: RS485 communication (4-core cable)
		G1M				Process connection: G1 external thread
		G2M				Process connection: G2 external thread
		G112M				Process connection: G1-1/2 external thread
		F45				Process connection: Flange connection 3(number of holes)*45mm (center distance)
		F25				Process connection: DN25 Flange connection (GB)
		F50				Process connection: DN50 Flange connection (GB)
			L150			Measuring length L=150mm
			L250			Measuring length L=250mm
			L350			Measuring length L=350mm
			L500			Measuring length L=500mm
			L650			The measured length L=650mm
			L750			Measuring length L=750mm
			L1000			Measurement length L=1000mm
				N		Float material: NBR Outer diameter 30mm(oil)
				S		Float material: 304 OD 40mm(water) Optional ≥G1-1/2 external thread or flange only
					-	Measurement resolution: 10mm (default)
					5	Measurement resolution: 5mm

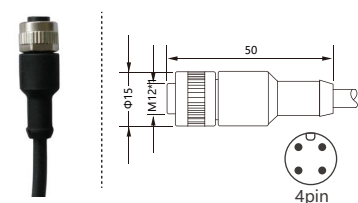
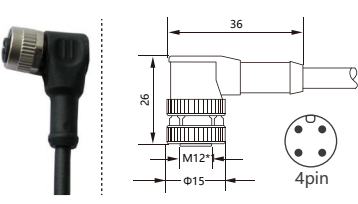
* Special requirements can be customized

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Optional accessories - Electrical accessories (M12-5Pin: Factory default ZL05-PC02G)

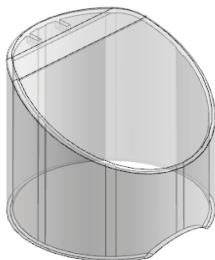
name	Outline drawing/dimension drawing (unit :mm)	material	Model number	Shielded wire	M12*1-4Pin/5Pin self-connector/Dimensions (Unit :mm)	Model number
M12*1-5Pin (2m cable)		PUR	ZL05-PU02G	-P		GL04 (4 Pin connector)
M12*1-5Pin (5m cable)			ZL05-PU05G			GL05 (4 Pin connector)
M12*1-5Pin (10m cable)			ZL05-PU010G			
		PVC	ZL05-PC02G			WL04 (4 Pin connector)
			ZL05-PC05G			
			ZL05-PC010G			WL05 (5 Pin connector)
M12*1-5Pin (2m cable)		PUR	ZL05-PU02W			WL04 (4 Pin connector)
M12*1-5Pin (5m cable)			ZL05-PU05W			
M12*1-5Pin (10m cable)			ZL05-PU010W			WL05 (5 Pin connector)
		PVC	ZL05-PC02W			
			ZL05-PC05W			
			ZL05-PC010W			

Optional accessories - Electrical accessories (M12-4Pin: Factory default ZL04-PC02G)

name	Outline drawing/dimension drawing (unit :mm)	material	Model number	Shielded wire
M12*1-4Pin (2m cable)		PUR	ZL04-PU02G	-P
M12*1-4Pin (5m cable)			ZL04-PU05G	
M12*1-4Pin (10m cable)			ZL04-PU010G	
		PVC	ZL04-PC02G	
			ZL04-PC05G	
			ZL04-PC010G	
M12*1-4Pin (2m cable)		PUR	ZL04-PU02W	
M12*1-4Pin (5m cable)			ZL04-PU05W	
M12*1-4Pin (10m cable)			ZL04-PU010W	
		PVC	ZL04-PC02W	
			ZL04-PC05W	
			ZL04-PC010W	

Optional accessories - Protective cover

500 Series(sensor) Sensor protection cover



Order number: KTC533662