



Product principle

LS520 series adopts static pressure 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.

Static pressure is the production of atmospheric pressure in the buoy, and the rise or fall of the liquid level produces a linear change in pressure.

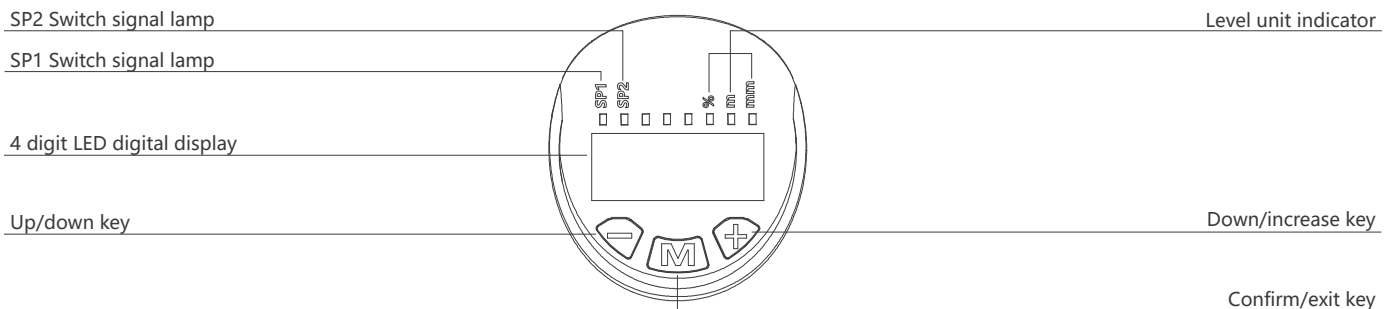
Product application

- Water (various water-based media)
- Oil (low viscosity oil)

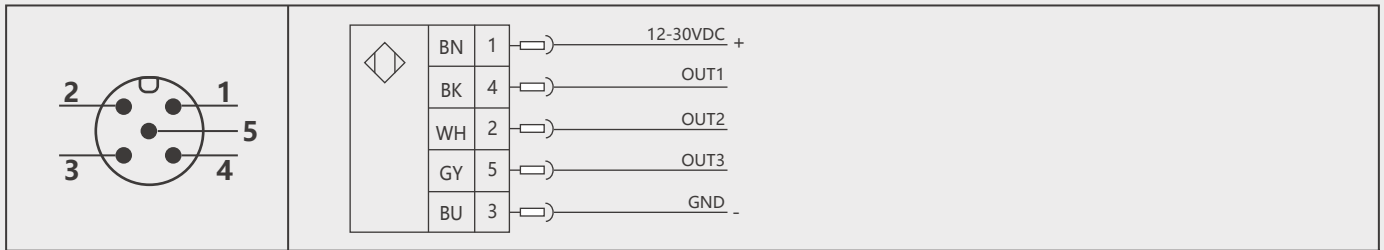
Technical parameter

- ◇ Measuring medium: corrosive liquid compatible with 304 stainless steel
- ◇ Pressure resistance: measuring range *1.5 times
- ◇ 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 can be switched, normally open/normally closed can be set
- ◇ switch load: $<200\text{mA} / 24\text{VDC}$
- ◇ Response time: 0.01~2s(factory default)
- ◇ Switching accuracy: $\leq \pm 0.5\%$ range
- ◇ Current model analog output: $\leq \pm 0.5\%$ range
- ◇ Output type: 4-20mA/1-5V/0-10V can be set
- ◇ Load RA: $\leq 500\Omega$
- ◇ Linearity: $\leq 0.5\%$ range
- ◇ Communication output: IO-Link/RS485
- Connection protection: reverse phase, overload, short circuit protection
- ◇ Display:
- Design: Red 4-bit 12mm high brightness LED
- Display range: -1999... 9999
- Accuracy: $\leq \pm 0.5\%$ range
- ◇ Stability (annual drift) : $\leq \pm 0.3\%$ range
- ◇ Temperature:
- Medium temperature: -20... 85 ° c.
- Ambient temperature: -20... 80 ° c.
- Storage temperature: -30... 80 ° c.
- ◇ Materials:
- Case: engineering plastic
- Flame retardant grade: UL-94 V-0
- Housing: stainless steel 304
- Medium contact part: stainless steel 304
- ◇ Protection level: IP67
- ◇ Outlet mode: M12x1 connector

Panel diagram

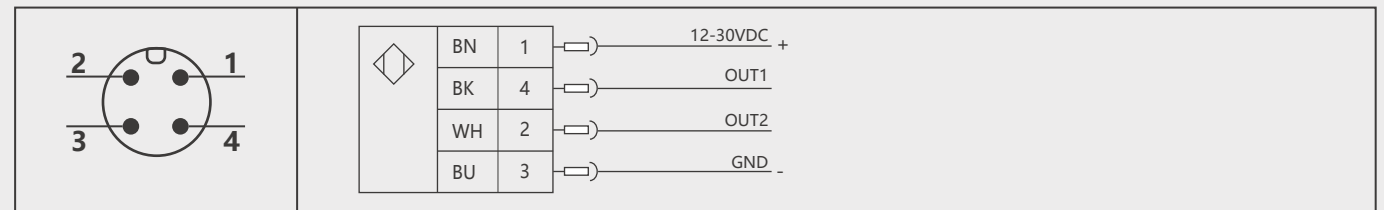


Wiring diagram



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

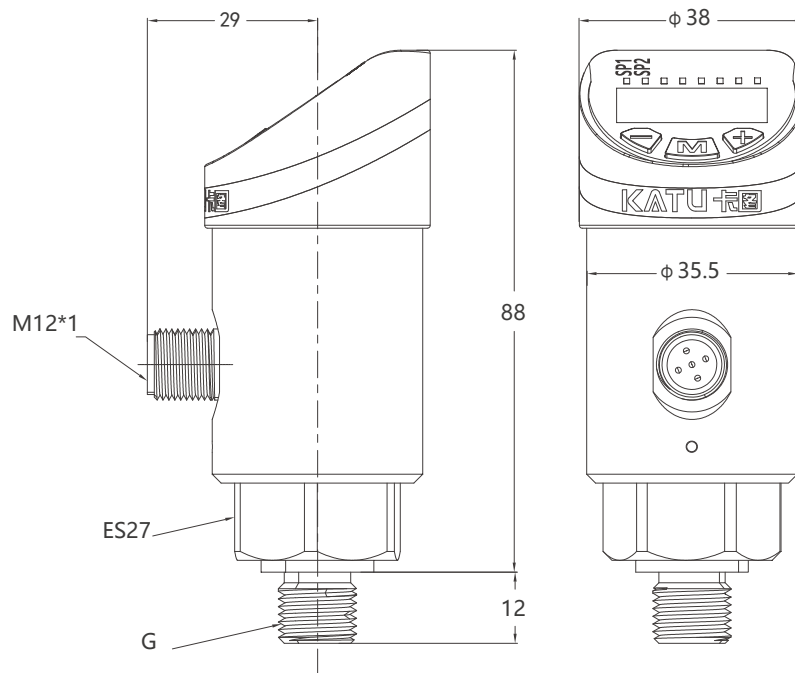
SA: One switch /IO-Link + analog

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)



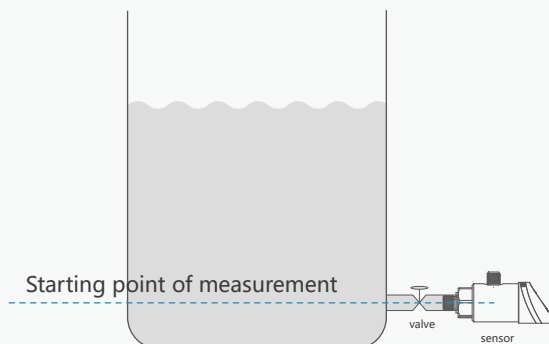
Selection table

LS520-	S2	G14M	L005	Detailed description
LS520				LS520 Electronic static pressure liquid level sensor
	S2			Output signal: Two switch outputs /IO-link (4-core cable)
	SA			Output signal: One switch output /IO-link+ analog output (4-core cable)
	A3			Output signal: Two switch outputs + analog output (5-core cable)
	RS			Output signal: RS485 communication (4-core cable)
		G14M		Process connection: G1/4 external thread
		G12M		Process connection: G1/2 external thread
		G14K		Process connection: G1/4 internal thread
		N14M		Process connection: NPT 1/4 external thread
		R14M		Process connection: R1/4 external thread
		M20M		Process connection: M20*1.5 external thread
		M27P		Process connection: M27*2 metal flat film type
		M22P		Process connection: Oil-filled metal flat film type M22*1.5 external thread
		M22T		Process connection: Ceramic flat film type M22*1.5 external thread (dry anti-corrosion)
		G112T		Process connection: G1 1/2 ceramic capacitor flat film type (dry anti-corrosion)
		KT50		Process connection: Ceramic chuck connection (outer diameter 50.5mm)
		KP50		Process connection: 1.5-inch (outer diameter 50.5mm) metal flat film type chuck
		KH50		Process connection: 1.5-inch (outer diameter 50.5mm) sanitary grade chuck metal flat film type
		KF16		Process connection: KF16 vacuum chuck type
			L005	Measurement range: 500mm
			L01	Measurement range: 1 meter
			L05	Measurement range: 5 meters
			L10	Measurement range: 10 meters
			L25	Measurement range: 25 meters

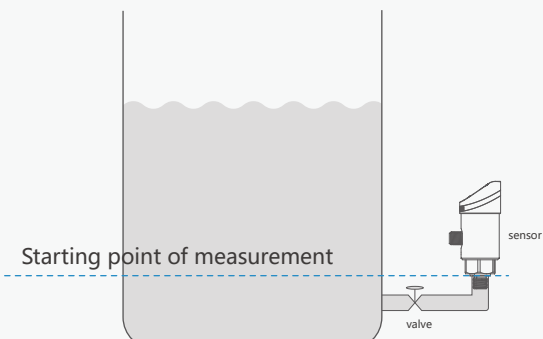
Special requirements can be customized

Installation diagram

■ Install the bottom of the side horizontally

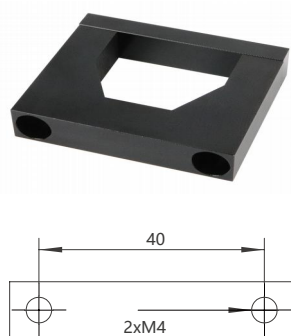


■ Install the bottom of the side vertically

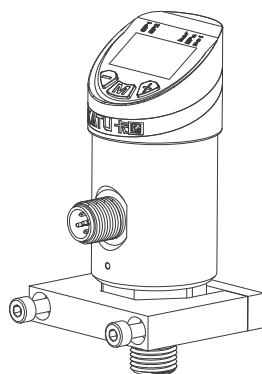


Optional accessories-FA027

Outline drawing/dimension drawing (mm)

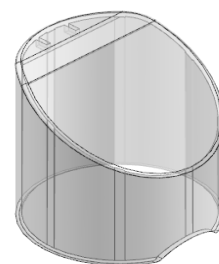


Installation effect drawing



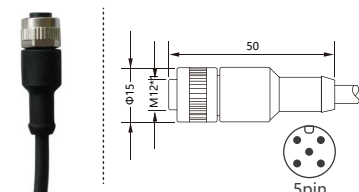
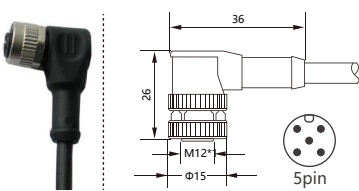
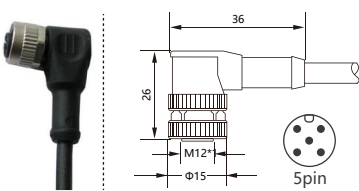
Optional accessories - Protective cover

500 Series(switch) Sensor protection cover

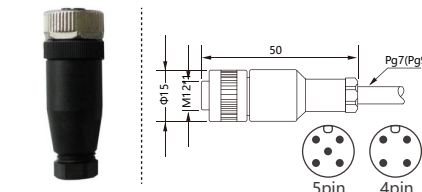
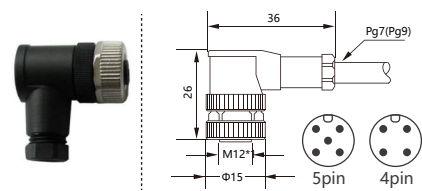


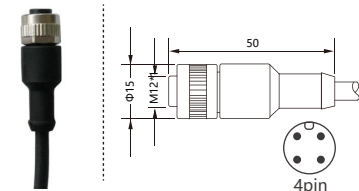
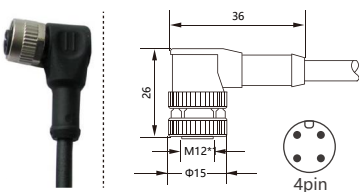
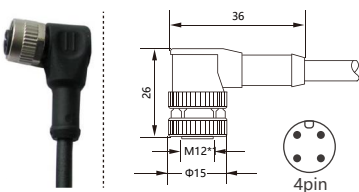
Order number: KTCS33662

Optional accessories - electrical accessories

name	Outline drawing/dimension drawing (mm)	material	model
M12*1-5Pin (2m cable)		PUR	ZL05-PU02G
M12*1-5Pin (5m cable)			ZL05-PU05G
M12*1-5Pin (10m cable)			ZL05-PU010G
M12*1-5Pin (2m cable)		PVC	ZL05-PC02G
M12*1-5Pin (5m cable)			ZL05-PC05G
M12*1-5Pin (10m cable)			ZL05-PC010G
M12*1-5Pin (2m cable)		PUR	ZL05-PU02W
M12*1-5Pin (5m cable)			ZL05-PU05W
M12*1-5Pin (10m cable)			ZL05-PU010W
M12*1-5Pin (2m cable)		PVC	ZL05-PC02W
M12*1-5Pin (5m cable)			ZL05-PC05W
M12*1-5Pin (10m cable)			ZL05-PC010W

Factory standard:ZL05-PC02G

M12* 1-4pin /5Pin self-connector/size drawing (mm)	model
	GL04 (4Pin joint)
	GL05 (5Pin joint)
	WL04 (4Pin joint)
	WL05 (5Pin joint)

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

Factory standard:ZL04-PC02G