



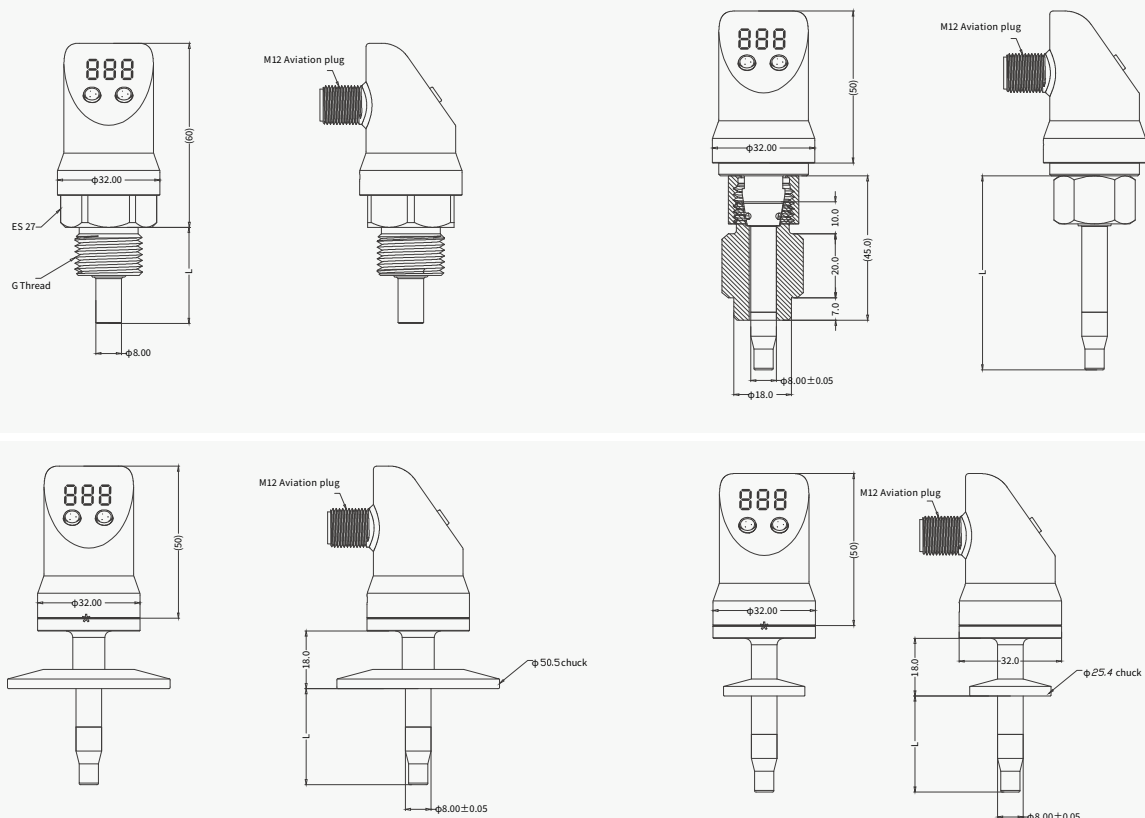
Principle structure

The FS220 series electronic flow switch/sensor has its signal processed by the post-processing circuit and converted into a standard industrial electrical signal for output and display. The one-piece injection molded shell design enables this series of products to be used in various industrial Settings. Key setting, simple operation, high-brightness LED can digitally display real-time measurement values. Multiple connection methods can fully meet various specific installation requirements.

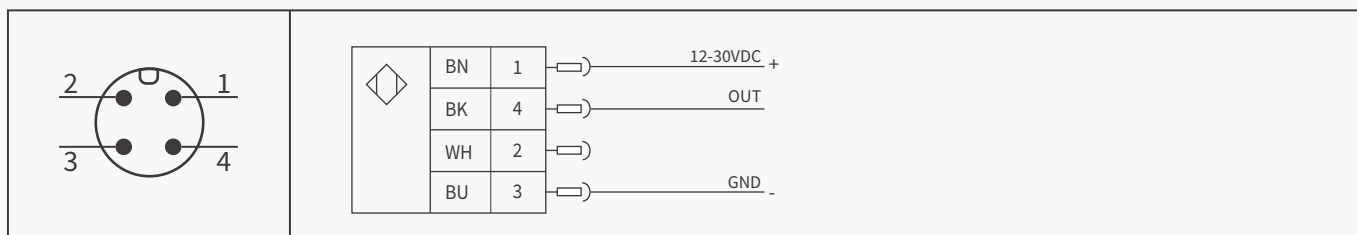
Technical parameters

◇ Measured medium:	Water/Oil/Air
◇ Supply voltage:	12...30Vdc
◇ No-load current consumption:	Maximum 30mA, 24Vdc power supply
◇ Output type:	PNP / NPN can be set, and open/contact / closed/contact can also be set.
◇ Switching load:	<200mA
◇ Response time:	1-13s
◇ Wiring protection:	Reverse phase, overload, short circuit protection
◇ Medium temperature:	-20...85°C
◇ Ambient temperature:	-20...80°C
◇ Storage temperature:	-30...80°C
◇ Inductive probe material:	Stainless steel 304
◇ Process connection material:	Stainless steel 304
◇ Shell material:	Engineering plastics
◇ Protection class:	IP67
◇ Outlet method:	M12x1 Aviation plug

Dimension drawing (mm)



Wiring diagram



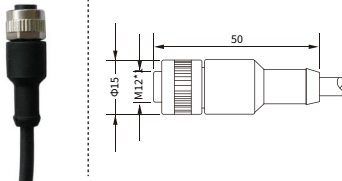
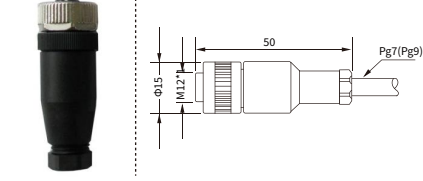
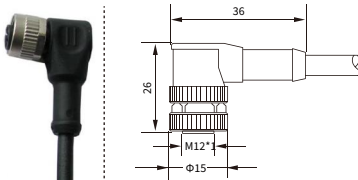
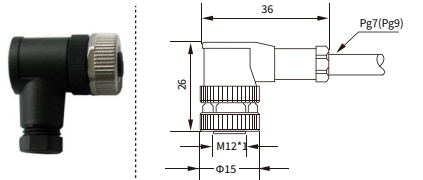
1-channel Switch

color	stitch	Instructions	color	stitch	Instructions
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT)	SP1 Switch PNP (Factory default) SP1 Switch NPN	WH	2	/

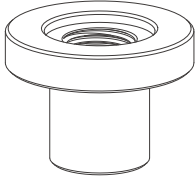
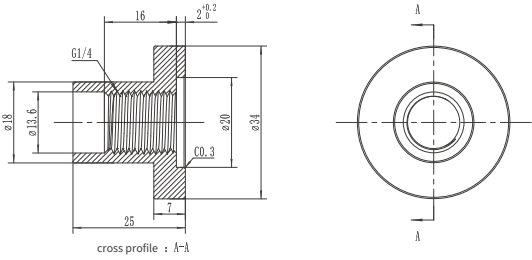
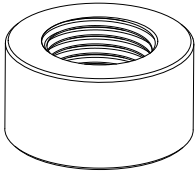
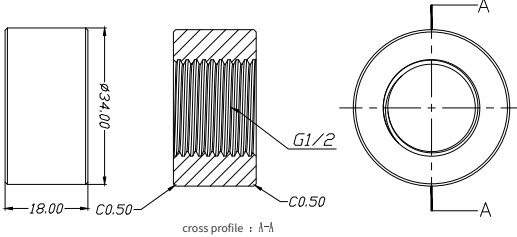
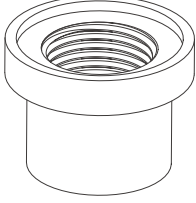
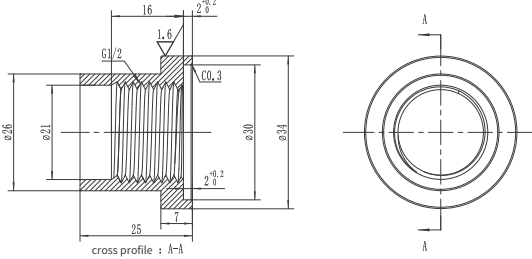
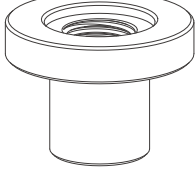
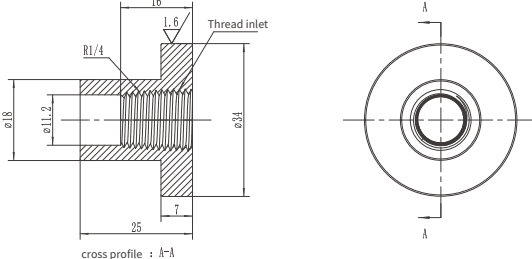
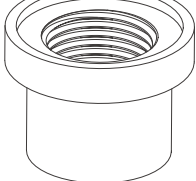
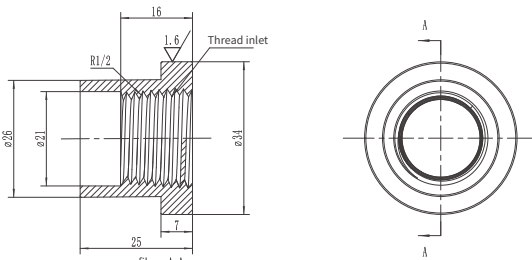
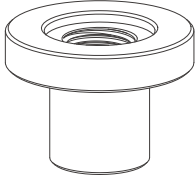
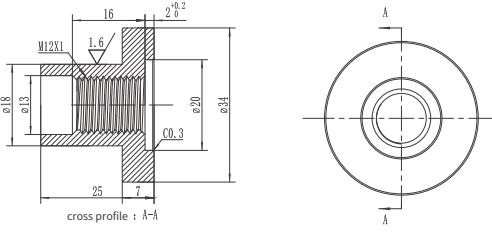
Selection Table

FS220-	G12M	L030	-	Detailed description	
FS220-				FS220 Electronic flow switch/sensor	
	G12M			Interface thread: G1/2 external thread	
	G14M			Interface thread: G1/4 external thread	
	R12M			Interface thread: R1/2 external thread	
	R14M			Interface thread: R1/4 external thread	
	M18K			Process connection: M18×1.5 internal thread It is convenient to use in conjunction with the installation accessories for on-site installation. The direction can be adjusted by rotation.	
	H25			Process connection: Outer diameter 25.4mm, 1/2 chuck connection (National standard: ISO2852-1993)	
	H50			Process connection: Outer diameter 50.5mm, 1.5-inch chuck connection (National standard: ISO2852-1993)	
		L030		The length of the probe rod L=30mm	Selection of M18 internal thread is prohibited for this item.
		L050		The length of the probe rod L=50mm	
		L060		The length of the probe rod L=60mm	M18K internal thread type recommended for ≤ DN32
		L070		The length of the probe rod L=70mm	M18K internal thread type recommended for ≥ DN40
		L080		The length of the probe rod L=80mm	M18K internal thread type recommended for ≥ DN50
		L100		The length of the probe rod L=100mm	M18K internal thread type recommended for ≥ DN80
			-	Output signal: 1-channel switch	

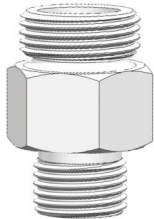
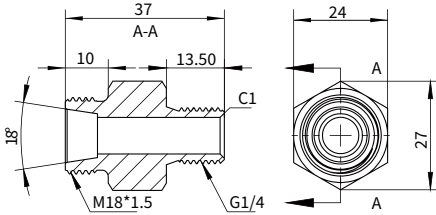
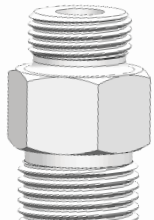
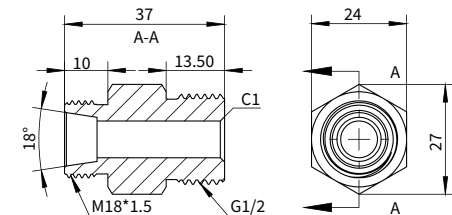
Factory standard:ZL03-PC02G

name	Outline drawing/dimension drawing (mm)	material	model	M12* 1-4pin self-connector/size drawing (mm)	model
M12*1-4Pin (2m cable)		PUR	ZL03-PU02G		GL04 (4Pin joint)
M12*1-4Pin (5m cable)			ZL03-PU05G		
M12*1-4Pin (10m cable)			ZL03-PU010G		
		ZL03-PC02G			
		PVC	ZL03-PC05G		
		ZL03-PC010G			
M12*1-4Pin (2m cable)		PUR	ZL03-PU02W		WL04 (4Pin joint)
M12*1-4Pin (5m cable)			ZL03-PU05W		
M12*1-4Pin (10m cable)			ZL03-PU010W		
		ZL03-PC02W			
		PVC	ZL03-PC05W		
		ZL03-PC010W			

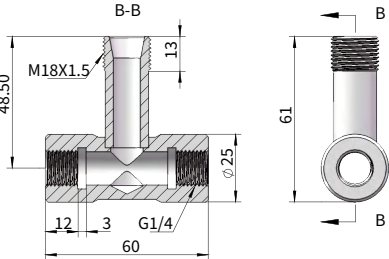
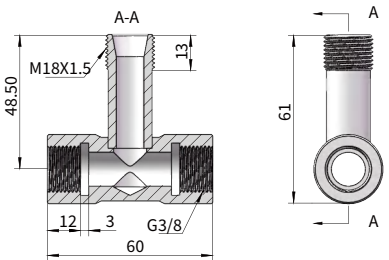
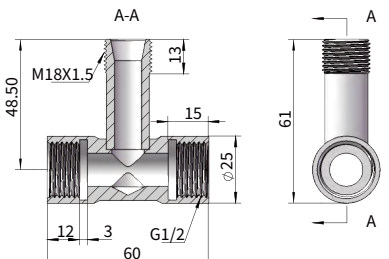
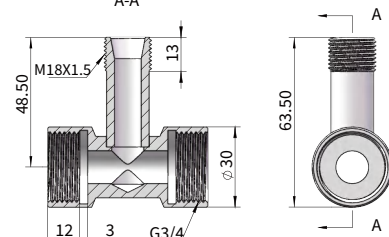
Welded base (optional external thread only)

name	External drawing	Size drawing (unit :mm)	model
G1/4 Welded base			FA002-G14 (Material: 304 stainless steel)
G1/2 High pressure welded base			FA002-G12H (Material: 304 stainless steel)
G1/2 Welded base			FA002-G12 (Material: 304 stainless steel)
Rc1/4 Welded base			FA002-R14 (Material: 304 stainless steel)
Rc1/2 Welded base			FA002-R12 (Material: 304 stainless steel)
M12*1 Welded base			FA002-M12 (Material: 304 stainless steel)

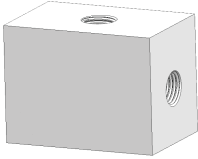
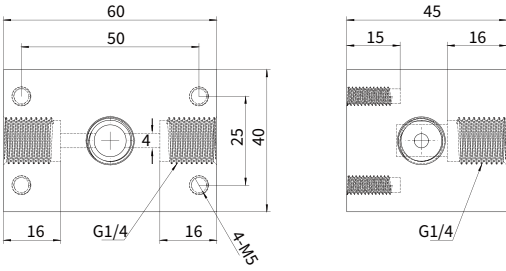
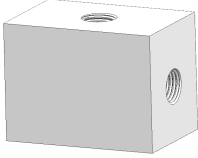
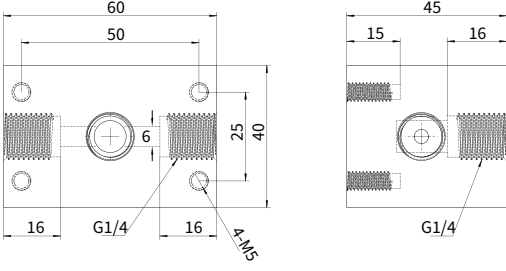
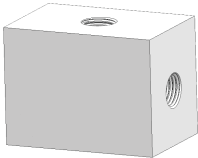
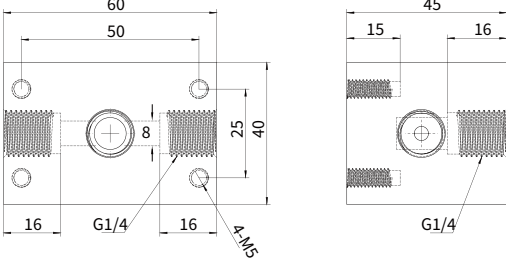
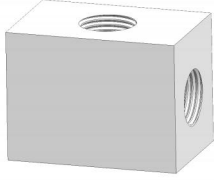
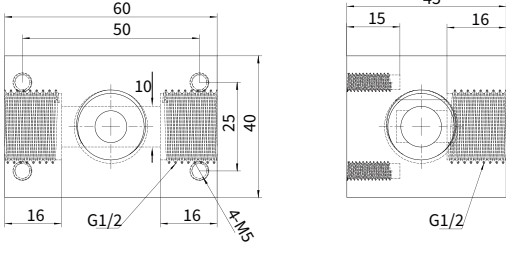
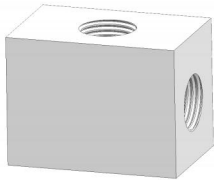
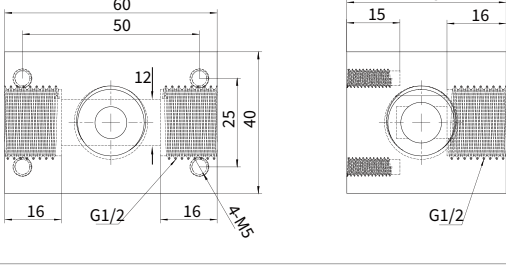
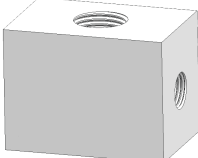
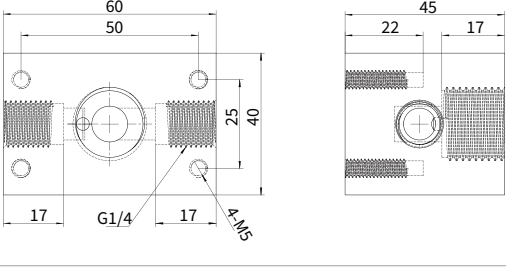
Adapter (M18 internal thread only optional)

name	External drawing	Size chart (mm)	model
M18 * 1.5 internal thread To g1/4 male thread, Probe insertion depth 15mm			FA004-M18G14S (Material: 304 stainless steel)
			FA004-M18G14T (Material: brass)
M18 * 1.5 internal thread To g1/2 male thread			FA004-M18G12S (Material: 304 stainless steel)
			FA004-M18G12T (Material: brass)

Tee (stainless steel) (M18 internal thread only optional)

name	External drawing	Size chart (mm)	model
M18 * 1.5 internal thread Equipped with G1/4 tee			FA003-M18G14 (Material: 304 stainless steel)
M18 * 1.5 internal thread With G3/8 tee			FA003-M18G38 (Material: 304 stainless steel)
M18 * 1.5 internal thread Equipped with G1/2 tee			FA003-M18G12 (Material: 304 stainless steel)
M18 * 1.5 internal thread With G3/4 tee			FA003-M18G34 (Material: 304 stainless steel)

Tee (PP) (external thread only optional)

name	External drawing	Size chart (mm)	model
Type G1/4 small flow tee			FA010-04G14 (material:PP)
Type G1/4 straight hole tee			FA010-06G14 (material:PP)
Type G1/4 small flow tee			FA010-08G14 (material:PP)
Type G1/2 straight hole tee			FA010-10G12 (material:PP)
Type G1/2 straight hole tee			FA010-12G12 (material:PP)
G1/4 gas only Tee adapter			FA012-01 (material:PP)

Tee (conventional stainless steel :40bar) (external thread only optional)



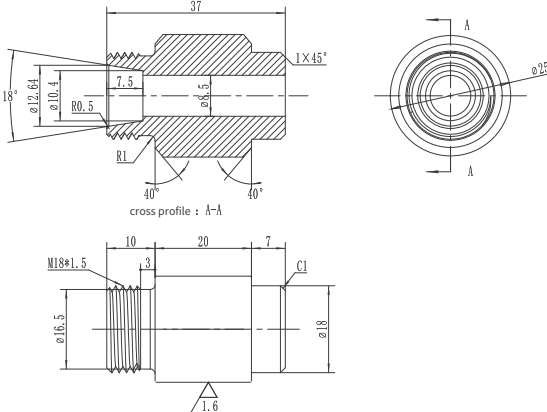
Size table					
Conventional tee					
Diameter of thread	Inch code	Pipe thread (R)	Model number		
DN15	4 points	1/2	FA013-R12K		
Reducing tee					
Diameter of thread	Inch code	Pipe thread left (R)	Pipe thread center (R)	Pipe thread right (R)	Model number
DN20	6 points×4 points	3/4 “	1/2”	3/4 “	FA013-R12KR34K
DN25	1 inch x 4 points	1”	1/2”	1”	FA013-R12KR1K
DN32	1.2 inches x 4 points	1.2 “	1/2”	1.2 “	FA013-R12KR1.2K

Tee (high pressure stainless steel :200bar) (external thread only optional)



Size table					
Conventional tee					
Diameter of thread	Inch code	Pipe thread (G)	Model number		
DN15	Four points	1/2	FA014-G12K		
Reducing tee					
Diameter of thread	Inch code	Pipe thread left	Pipe thread center	Pipe thread right	Model number
DN20	6 points x 4 points	G 3/4 “	G 1/2”	G 3/4 “	FA014-G12KG34K
DN25	1 inch x 4 points	G 1 ”	G 1/2”	G 1 ”	FA014-G12KG1K

Welded base (M18 internal thread only optional)

name	External drawing	Size drawing (unit :mm)	model
M18*1.5 Welded base			FA002-M18 (Material: 304 stainless steel)