

Electronic Flow Sensors FS604

Applications

FS604 series electronic flow sensors adopt advanced temperature difference technology to measure flow rate of medium. The products are equipped with switch and analogue output to be used in upper monitor so as to monitor the state of system pipes. The all digital FS604 series could set flow rate alarm buy panel buttons in accordance with requirements. FS604 series are applied in gas and liquid measurement, cutting oil, cooling fluid, lubrication fluid and circulating water with high accuracy.

Characteristics

Stainless steel housing,
additional digital flow rate indication

Key press for easy debugging

Optional output, IP67



Standard threaded for pipe connection

Short-circuit, reverse polarity and
overload protection

M12 connector for easy connection

Electrical characteristics

Voltage supply	$V_s = 20\sim 30\text{ V DC} / V_s = 85\sim 265\text{ V AC}$
Output signal	NPN NO/NC current consumption: <60 mA PNP NO/NC current consumption: <60 mA Relay NO/NC current consumption: <60 mA 4~20 mA current consumption: <60 mA
Load current	NPN output Max. 300 mA PNP output Max. 300 mA Relay output Max. 5 A(220V AC / 30V DC)
Voltage drop	< 2.5V (NPN / PNP output)
Switch accuracy	$\pm 1\sim \pm 10\text{ cm/s}$
Output accuracy	$\pm 10\%$: 4~20mA output(set by water at 25°C)
Start delay	Preheating~3 min
Response time	1 ~ 10 s typ. 2 s
Medium temperature drift	Max. 300 K / min

Sensor characteristics

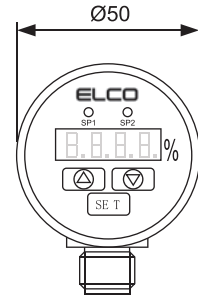
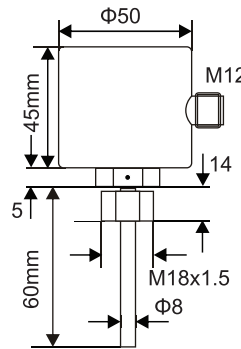
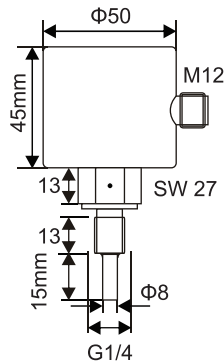
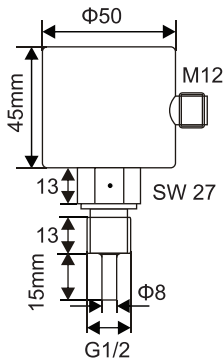
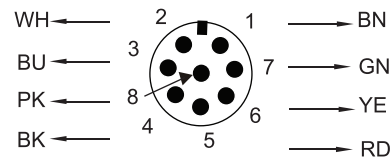
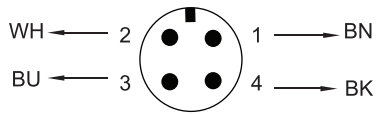
Port	Stainless steel (ANSI 316L)
Housing	Stainless steel (ANSI 316L)
Probe length	Standard: 15mm Optional: 20mm, 30mm, 40mm, 45mm
Display	7-segment LED display
Shock	50g
Vibration	20g
Electrical connection	M12 connector
Compressive strength	100bar
Ambient temperature	-20~80°C
Medium temperature	-20~80°C
Measuring range	Water : 3~300 cm/s Oil : 3~300 cm/s Gas: 200~3000 cm/s
Weight	Approx. 460 g

Electrical connection

Signal	+Ub	0V	S1	S2	S3	S4	S5	S6	S7
Cable color	BN	BU	WH	BK	RD	YE	GN	PK	GY
4-pin	1	3	2	4	-	-	-	-	-
8-pin	2	7	1		8	4	3	6	5

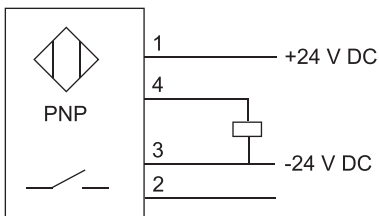
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4-pin

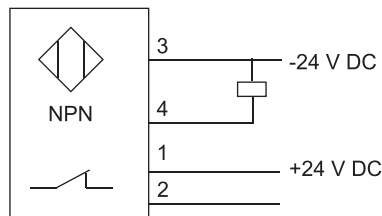


Attn: 1, 85~265V AC: length increases by 15mm
 2, The probe length varies from types
 Standard for probe length of G1/4 and G1/2 is 15mm, max. 45mm for M18

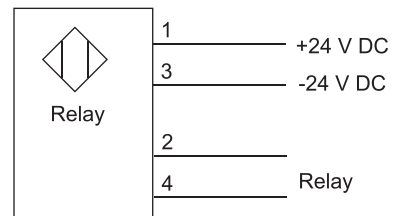
Wiring diagram



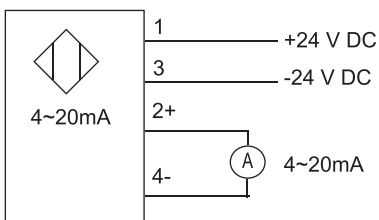
PNP NO output



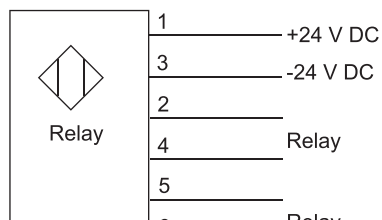
NPN NC output



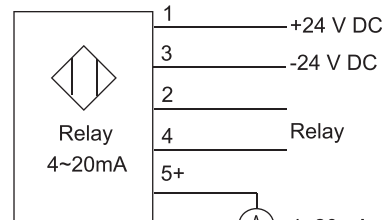
Relay output



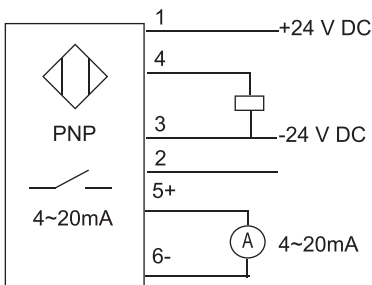
4~20mA analogue output



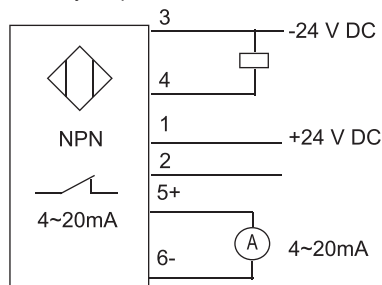
2-relay output



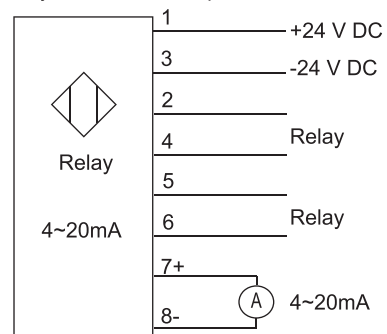
Relay and 4~20mA output



PNP and 4~20mA output

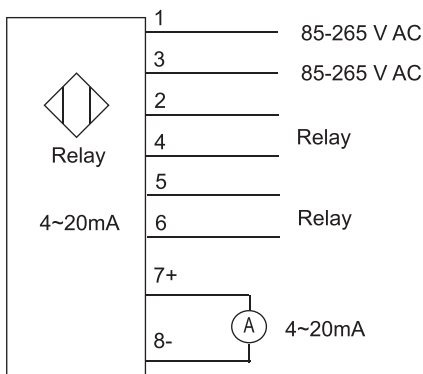
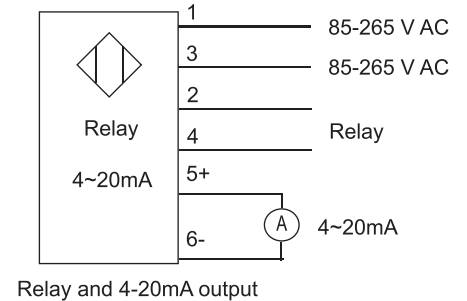
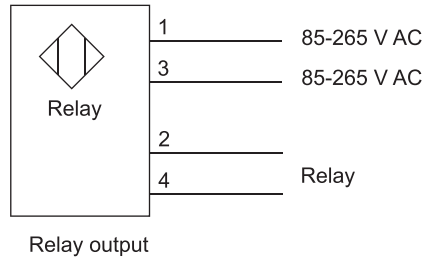
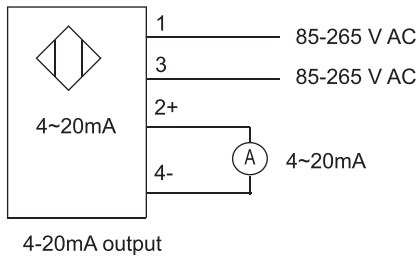


NPN and 4~20mA output



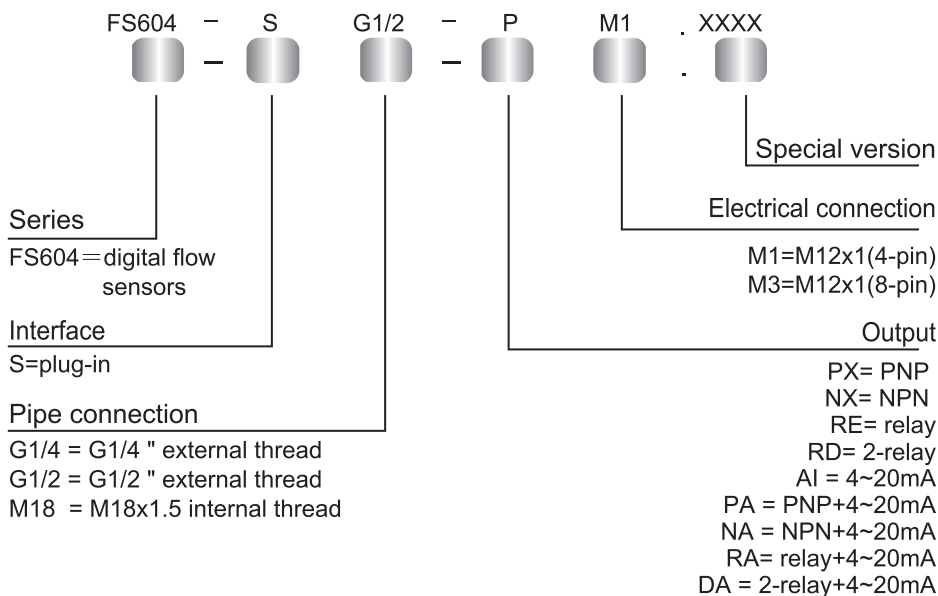
2-relay and 4~20mA output

Electronic Flow Sensors FS604



2-relay and 4-20mA output

Ordering code:



⚠ Please read the following notice carefully before you selecting the model.

- Attn:
1. Added "AC" after M1 for AC
 2. AI/RE/RA/DA optional output for AC
ordering example: FS604-SG1/2-REM1-AC
This is for AC relay NO output.
 3. 8-pin connector for modular signal output
 4. PNP, NPN and relay could fulfill NO/NC output by setting programs
 5. Please contact us in advance if you have other requirements.