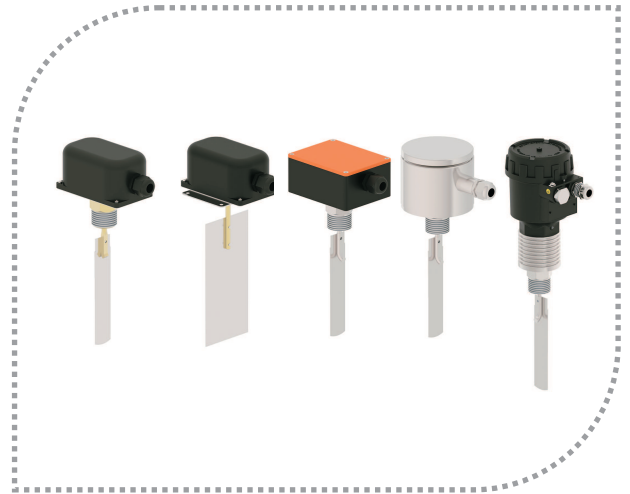


EFS Flow Switches are used for the monitoring of liquid flow in pipes. When the liquid flow stops or starts its paddle actuates a microswitch (NO/NC) , hereby electrical equipments are protected .The flow switch is suitable to use all kinds of non-corrosive liquid.

Flow adjustable via screw mechanism.The products are factory settled.
Users can change the adjustment according to application needs.



EFS FLOW SWITCH

EFS 31

EFS 32 (For Air)

EFS 41

EFS 41x (Complete St.Steel)

EFS 61

Advantages :

- * Hot and cold water can be used
- * Suitable for hot and cold liquids.
- * Air tight design.



Technical Specifications :

	EFS 31	EFS 32
Fluid	Liquid	Air
Working Temperature	(-) 20 °C / (+) 90 °C	(-) 20 °C / (+) 85 °C
Working Pressure	Max. 10 bar	Max. 5 bar
Paddle Material	304 Stainless Steel	304 Stainless Steel
Switch Bracket	Coated Steel	Coated Steel
Connection Material	Brass (MS56)	Chrome Plated Steel
Paddle Rod Material	Brass (MS56)	Brass (MS56)
Housing Material	Polypropylene	Polypropylene
Bellow Material	Bronze	Bronze
Seal Material	NBR	-
Electrical Connection	PG 13,5	PG 13,5
Protection Class	IP 65	IP 65
Connection	1 "NPT Male Thread	Hole Flange
Pipe Diameter	from 1 " to 8 "	Channels greater than 300 cm²
Contact	15 A 250 VAC, NO / NC	15 A 250 VAC , NO / NC
Box Dimension	90 x 150 x 200 mm	110 mm x 150 mm x 200 mm

INSTALLATION :

- * Pay attention for right mounting, direction is shown on the switch housing.
- * Install on the return pipe.
- * The switch must be mounted far from elbows, corners , pumps.

Technical Specifications :

EFS 41

EFS 41x

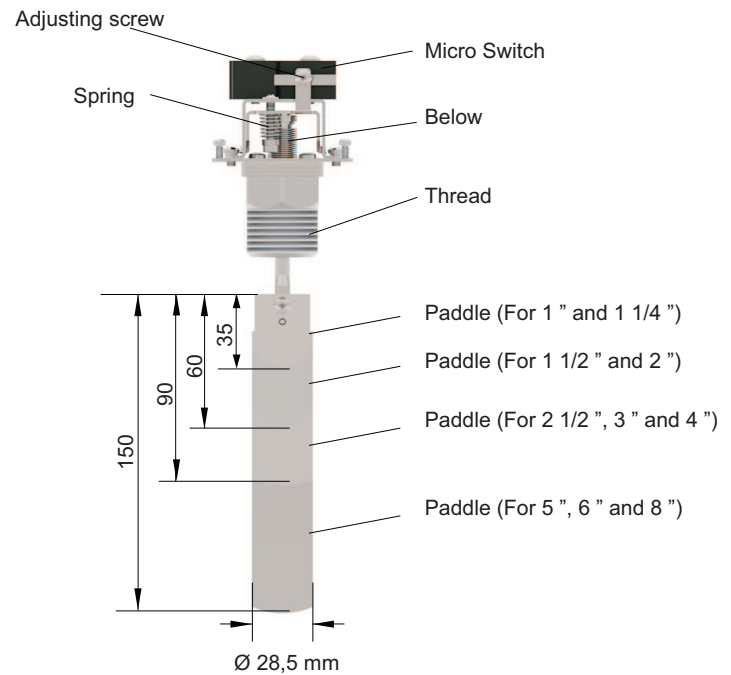
Fluid	Liquid	Liquid
Working Temperature	(-) 40 °C / (+) 200 °C	(-) 40 °C / (+) 200 °C
Working Pressure	Max. 20 bar	Max. 20 bar
Paddle Material	304 Stainless Steel	304 Stainless Steel
Switch Bracket	Coated Steel	Coated Steel
Connection Material	304 Stainless Steel	304 Stainless Steel
PaddleRod Material	304 Stainless Steel	304 Stainless Steel
Case Material	Aluminium	304 Stainless Steel
Bellow Material	316 Stainless Steel	316 Stainless Steel
Electrical Connection	PG 13,5	1/2" NPT Metal
Protection Class	IP 65	IP 65
Connection	1 "NPT Male	1 " NPT Male
Pipe Diameter	from 1 " to 8 "	from 1 " to 8 "
Contact	15 A 250 VAC , NO / NC	15 A 250 VAC , NO / NC
Box Dimension	90 mm x 150 mm x 200 mm	110 x 150 x 200 mm

Technical Specifications :

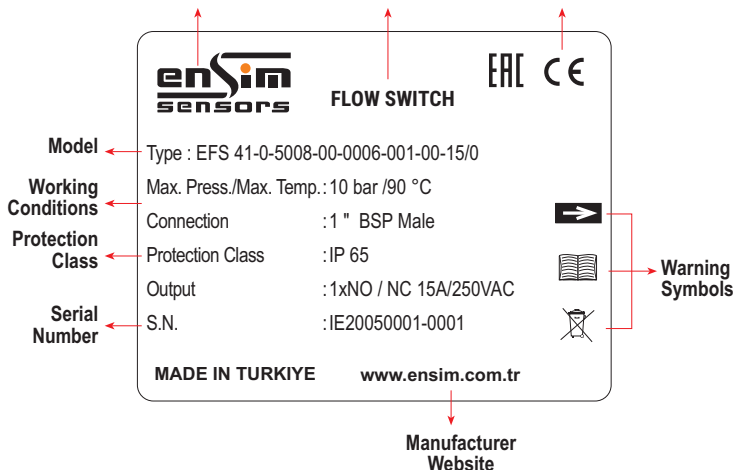
EFS 61

Fluid	Liquid
Working Temperature	(-) 40 °C / (+) 300 °C
Working Pressure	Max. 20 bar
Paddle Material	304 Stainless Steel
Switch Bracket	304 Stainless Steel
Connection Material	304 Stainless Steel
Paddle Rod Material	304 Stainless Steel
Case Material	Alüminyum
Bellow Material	316 Stainless Steel
Electrical Connection	M 20 x 1,5 mm ²
Protection Class	IP 66
Connection	1 " NPT Male
Pipe Diameter	from 1 " to 8 "
Contact	15 A 250 VAC , NO / NC
Box Dimension	90 mm x 150 mm x 200 mm

For EFS 31 , EFS 41 , EFS 41x and EFS 32



Product Label :



For EFS 31 , EFS 41 , EFS 41x and EFS 61

DIAMETER (inch)	PALLET LENGHT (mm)	Q max (m3/h)	MINIMUM ADJUSTMENT (m3/h)		MAXIMUM ADJUSTMENT (m3/h)	
			SWITCH ACTION	SWITCH RETURN	SWITCH ACTION	SWITCH RETURN
1	35	3,6	0.8	0.5	1.9	1.6
1 1/4	35	6	1.2	0.6	2.7	2.2
1 1/2	60	9	1.8	1.0	3.8	3.4
2	60	15	3.0	2.3	6.4	5.5
2 1/2	90	24	4.2	3.8	7.5	6.5
3	90	42	6.2	4.4	11.8	10.0
4	90	60	14.0	11.5	28	27.1
5	150	94	27	22	55	53
6	150	120	40	35	84	80
8	150	240	80	70	170	160

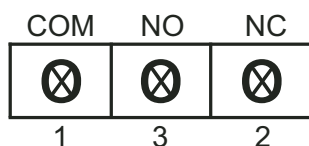
For EFS 32

METHOD ASSEMBLY	HORIZONTAL		VERTICAL	
CROSS SECTION	For the channel cross-section greater than 300 cm ² (m/sec.)	For the channel cross-section smaller than 300 cm ² (m/sec.)	For the channel cross-section greater than 300 cm ² (m/sec.)	For the channel cross-section smaller than 300 cm ² (m/sec.)
INCREASING FLOW	7,9 / 9	3,5 / 4,5	8 / 9	4 / 6
DECREASING FLOW	1 / 2,5	0,5 / 1,2	2 / 3,5	1 / 2

For EFS 31 , EFS 41 , EFS 41x and EFS 32

SWITCH :

- * 1-2 contacts are normally open (NO) (When the flow switch is working the contacts are normally open , not connected)
- * 1-3 contacts are normally close (NC) (When the flow switch is working the contacts are normally close , become connected)



Instruction of the switching set;

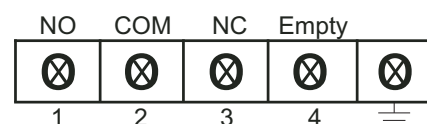
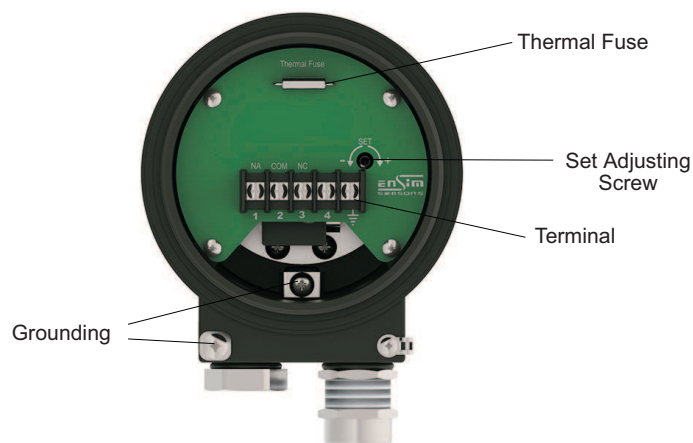
Open the switch cover.

To set high flow , turn opposite of the clockwise the adjustment screw.

To set low flow , turn clockwise the adjustment screw.

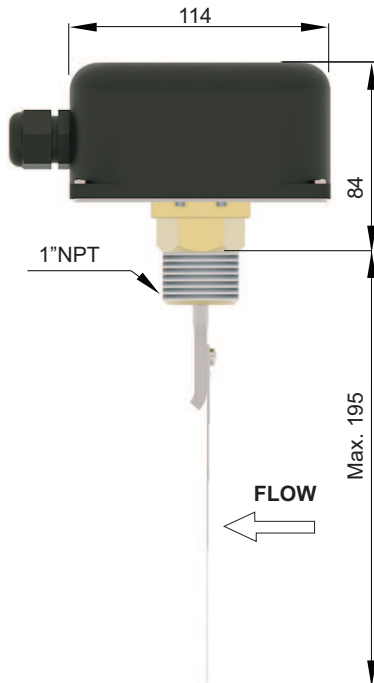
Close the switch cover.

For EFS 61

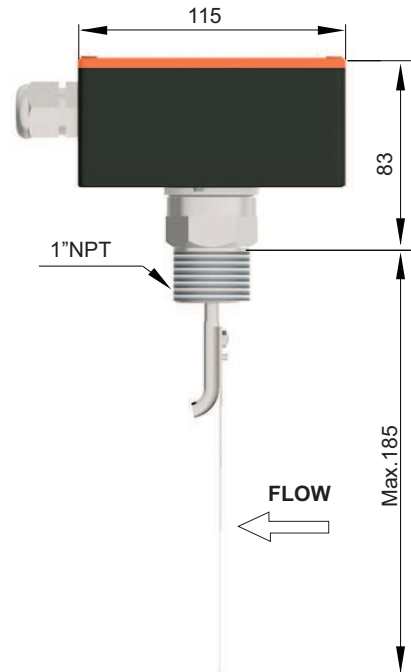


Models:

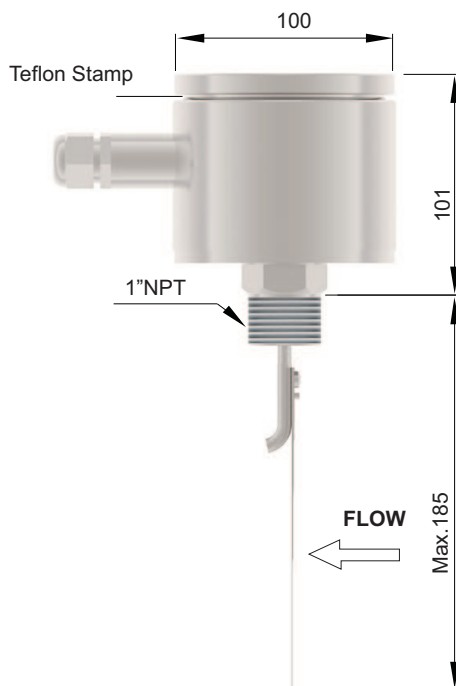
EFS 31



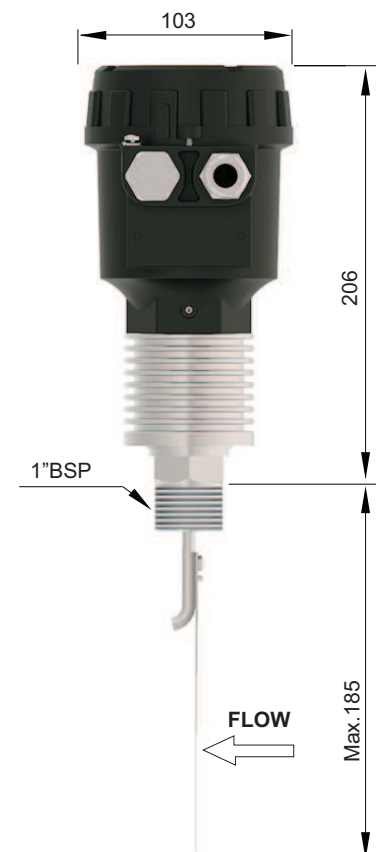
EFS 41



EFS 41x

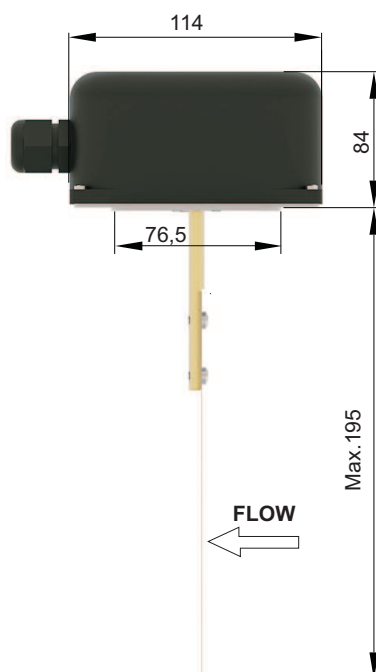
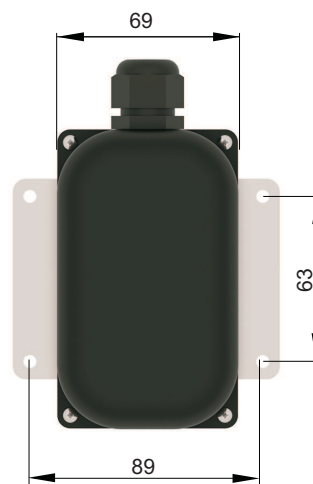
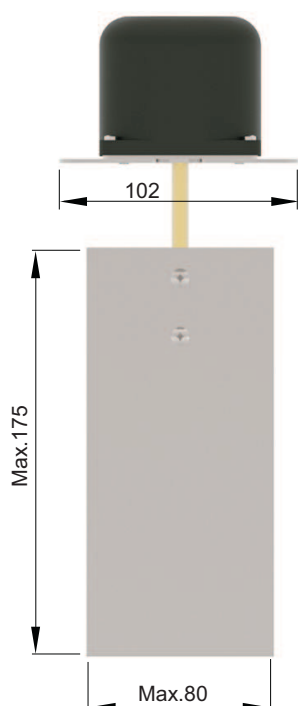


EFS 61



Models:

EFS 32



Order Form : **Please consider sample models when coding.**

1 MODEL EFS

Standard.....	31	Stainless Type.....	41
For Air.....	32	Complete Stainless Type.....	41x
		High Temperature Type.....	61

2 CERTIFICATE

None.....	0	(EN10204-3-1) Material Certification.....	1
-----------	---	---	---

3 HOUSING

Plastic Housing , B31p	190	AluminiumHousing , B22x.....	750
Aluminium , B20x.....	603	Stainless Steel Housing, B41x.....	850
Aluminium , B115.....	802	Special.....	x

4 ELECTRICAL CONNECTION

Terminal (For Housing Models).....	00	Special.....	x
-------------------------------------	----	--------------	---

5 CONNECTION

Thread 1 " BSP Male (Std.).....	0006	For Flanged EFS 32	1404
		Special.....	x

6 CONNECTION MATERIAL

304 Stainless Steel.....	001	Brass.....	041
316 Stainless Steel.....	002	Special.....	x

7 PADDLE

(35-60-90-150 mm) Four Paddle (Std.).....	00	Special.....	x
(80-175 mm) Air Paddle.....	01		

8 OUTPUT

Relay NO / NC (15 A).....	15	Special.....	x
---------------------------	----	--------------	---

9 OPTIONAL

None.....	/ 0	Special.....	/ x
-----------	-----	--------------	-----

EXAMPLE

EFS 41-0-190-00-0006-001-00-15/0

EFS 41 - Stainless Steel , Flow Switch , 1 " NPT Thread Male , Four Paddle , NO / NC Relay Output