

# FS20

# FLOW SWITCH FS20

FS20R & FS20 Din Weather Proof  
FS20X – Explosion Proof



**FS-20R**



**FS-20 DIN**



**FS-20X**

### Technical Data

**Size:** From 1/2" to 1"  
**Service:** For "Non-corrosive" liquid fluid available  
 (\*Not recommend using in the seawater.)  
**Material:** Wetted parts 316 stainless steel  
**Temperature Limit:** -20 to 150°C  
**Pressure Limit:** 7.0 MPa (70 kg/cm<sup>2</sup>)  
**Enclosure Housing:** FS20R- Weather proof  
 FS20 Din- Weather proof  
 FS20X- Explosion proof  
**Switch Function:** SPDT micro switch  
**Switch Rating:** 3A/250VAC, 3A/30VDC, 0.4A/125VDC  
**Conduit Connection:** Female 1/2", 3/4" G, NPT, and M20xP1.5 or  
 M25xP1.5 available

### Patent No.

M290238

### Approvals:



**UL** Switches with UL & CSA Recognized and File No. E41515.

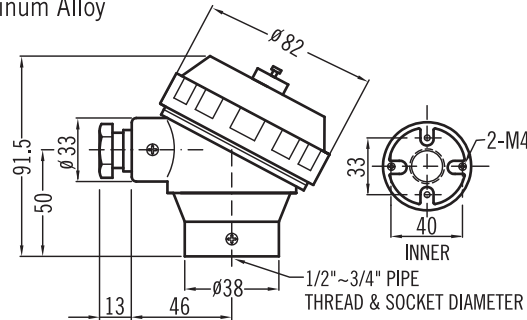
### CAUTION.

If using the FS20 for the Emergency Shower, Please contact with the manufacturer at the first!!

### Head Type

#### FS20R – Weather Proof IP68

**Material:** Aluminum Alloy



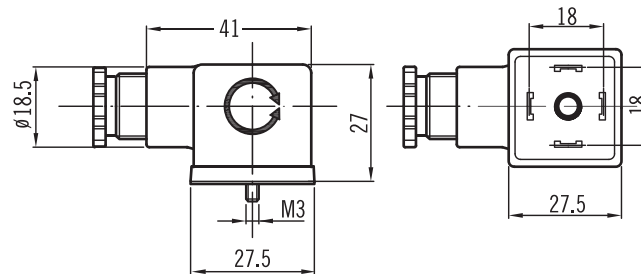
unit=mm

#### FS20 Din – Weather Proof IP65

**Material:** Thermoplastic Rubber

**Cable Gland:** PG9

**Connector:** DIN43650



unit=mm

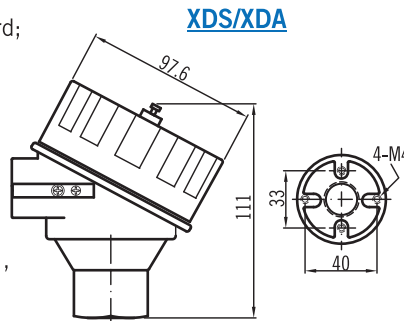
#### FS20X – Explosion Proof

**Material:** Aluminum Alloy- standard;  
 SS316 available

**ATEX directive code:** II 2 G D

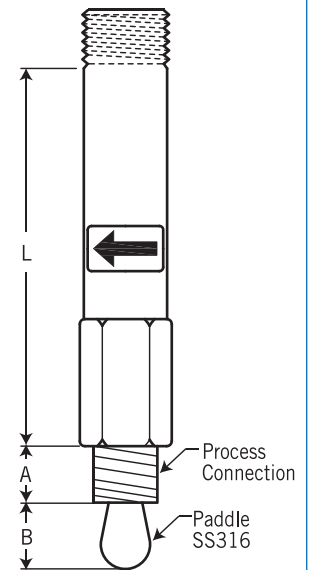
**Standard code:** Ex d IIC T6,  
 Ex tD A21 T100°C IP68

**FM Approvals:** XP/II/1/ABCD/T6;  
 DIP/II, III/1/EF/T6; Type 4X,  
 Explosion proof for Class I,  
 Division 1, Groups A,B,C and D;  
 and dust-ignition proof for class II,  
 III, Division 1, Groups E,F and G,  
 hazardous (classified) locations;  
 indoor/outdoor (NEMA Type 4X).



unit=mm

### Dimensions

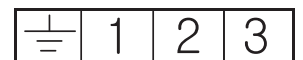


Size	L	A	B
1/2"	90	19	27
3/4"	90	20	32
1"	90	21	42

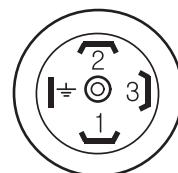
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### Connection Diagram

3-Wire



NC NO COM



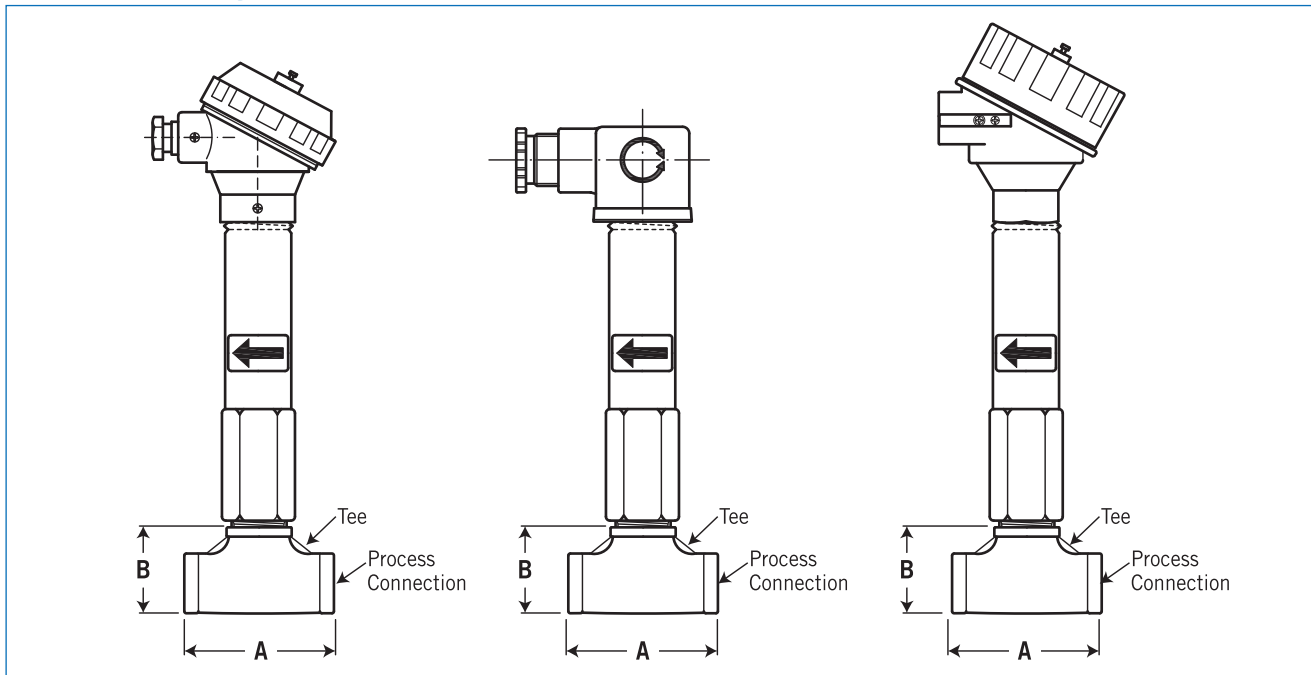
DIN

Flow Rate Table

Process Connection (Female with Tee Fitting)	Flow Rates Required Water at 25°C		Dimensions for Tee		
	Acuate (on) ℓ/hour	Deacuate (off) ℓ/hour	A (mm)	B (mm)	REMARK
½"NPT	380,...460	150,...210	52	45	---
¾"NPT 1"NPT	550,...610	140,...240	64	47	¾" Paddle & ¾" Tee
			67	49	¾" Paddle & 1" Tee
1"NPT	930,...1010	750,...780	72	49	---

**NOTE.** The Flow Rate Table is only for reference. Please consult with manufacturer for the accurate flow rate if without tee fitting.

With Tee Drawings



Ordering Information

Model	Code	Type
↓	FS-20R	Weather Proof Type
		FS-20 DIN
	Code	Weather Proof Type
		FS-20X
	Process Connection	Explosion Proof Type
		Code
	A	With Tee (Material: SS316) (1) ½"NPT (2) ¾"NPT (3) 1"NPT (4) 1"NPT (but ¾" paddle)
	B	Without Tee (4) ½"NPT (5) ¾"NPT (6) 1"NPT
	Code	Head Housing Type
		Code
	Weather Proof (1) HN (only for FS-20R) (2) DIN 43650 (only for FS-20 DIN) (0) Option	
	Explosion Proof (3) XDS (4) XDA (0) Option	
Code	Conduit Size	
	Code	Conduit Size
	(1) ½"NPT(F), standard (2) PG9 cable gland (only for FS-20 DIN) (0) Option	
Code	Explosion Proof Type / Head Housing Type	
	Code	Explosion Proof Type / Head Housing Type
N	For Weather Proof Type, FS-20R and FS-20 DIN	
S	<b>Certificate on Housing Only / XDS &amp; XDA:</b> Class I, Groups B, C & D; Class II, Groups E, F & G; NEMA 4, 7, 9	
↓		Complete Ordering Code