

# MASS FLOW METERS EXPLOSION PROOF TYPE ETSF SERIES – WITH LCD DISPLAY

**±2% Accuracy**  
**Linear Output**  
**Thermal Technology**  
**For Using In Non Corrosive Gas**  
**For Flow Rates up to 100 SLM**  
**Power Supply Included**

The NEW-FLOW ETSF Series-Explosion proof type thermal mass flow meter provide high performance. Thermal technology offers advantages in accuracy, sensitivity and turn quality components and the latest technology are combined to provide reliable, compact meters and controllers. The ETSF Series comes with and LCD diplay, and all models come with linear 0-5VDC and 4~20mA output. The ETSF Series measures the mass flow rate of gases in 23 ranges from 0-10 SCCM to 0-100 SLM as range table.

### Technical Data

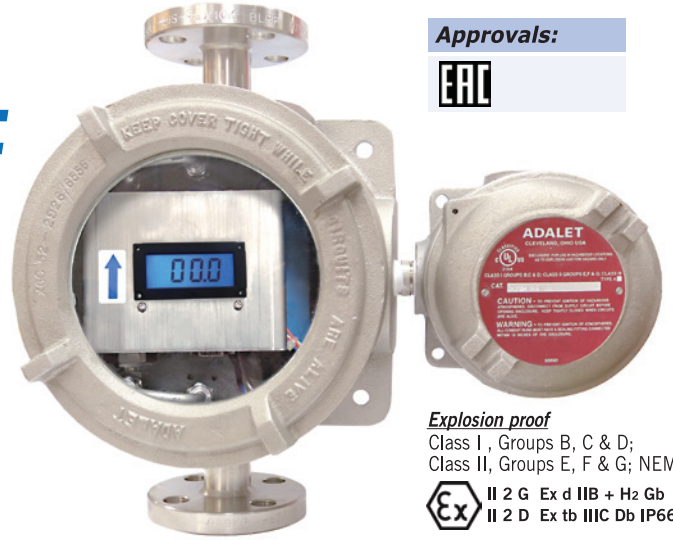
**Wetted Parts Material:** Standard flowbody– 316 Stainless steel; option available. O-Ring: Viton or FFKM available  
**Output Signal:** 0-5 VDC Linear min. load 1000Ω or 4-20mA Linear, loop resistance 500Ω  
**Input Power:** 24 VDC Standard, optional power supply 15 VDC 115VAC, 220 VAC @500mA  
**Accuracy:** ±2% F.S (including Linearity)  
**Turn Down Ratio:** 100:1  
**Repeatability:** ±0.15% F.S or better  
**Electric Connection:** 9 Pin Sub "D"  
**Process Connection:** 1" NPT female; Flange type available  
**Range:** 0-10 SCCM to 0-100 SLM  
**Minimum Pressure:** 100" H2O  
**Max Pressure:** 500 PSIG  
**Temperature Range:** 0~50°C  
**Response Time:** 1 Second  
**Temp. Coefficient:** 0.05% full scale per 1°C or better  
**Pressure Coefficient:** 0.01% full scale per PSIG or better  
**Weight:** app. to 6.5 kg with power supply

### Range Table

Code	SCCM	Code	SLM	Code	SLM
00	0-10	06	0-1	14	0-35
01	0-20	07	0-2	15	0-40
02	0-50	08	0-5	16	0-45
03	0-100	09	0-10	17	0-50
04	0-200	10	0-15	18	0-55
05	0-500	11	0-20	19	0-60
		12	0-25	20	0-65
		13	0-30	21	0-70
				22	0-75
				23	0-100
				24	*Custom Flow Rate

**NOTE.**

\*Please notice that the max. flow rate is 100 SLM.



**Approvals:**



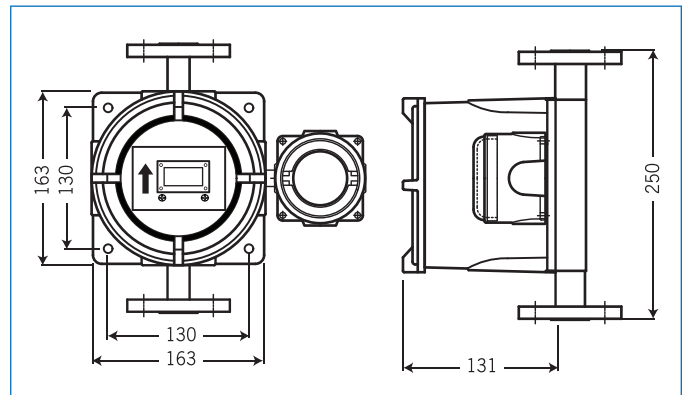
**Explosion proof**

Class I , Groups B, C & D;  
Class II, Groups E, F & G; NEMA 4, 7, 9

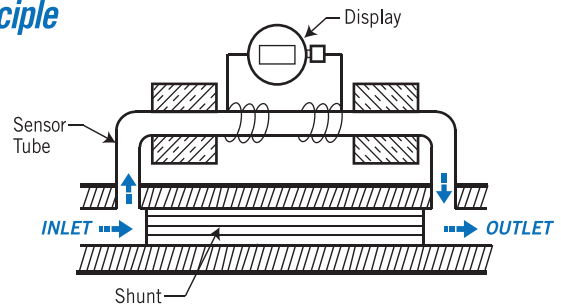


II 2 G Ex d IIB + Hz Gb  
II 2 D Ex tb IIIC Db IP66

### Dimensions—mm



### Principle



### Ordering Information

ETSF	Code	Flow Range
	00~23	Please refer to the measure range table.
	24	*Custom range (please directly fill in the requested range)
	<b>Code</b>	<b>Wetted Parts Material</b>
		(A) SS316 (Viton o-ring) (B) SS316 (FFKM o-ring) (O) option
	<b>Code</b>	<b>Process Connection</b>
	1	1" NPT(F)    0    Option (Flange type available)
	<b>Code</b>	<b>Display</b>
	W	With display
	B	With display + Blue back-lighted
	O	Without display
	<b>Code</b>	<b>Output Signal</b>
		(1) 0~5VDC (2) 4~20mA
	<b>Code</b>	<b>Input Power</b>
		(1) 24VDC (2) 15VDC
	<b>Code</b>	<b>Power Supply for 24VDC</b>
	(1)	with
	(2)	without