



TRX40-C
TRX50-C
TRX80-C

Ultrasonic Flow Meter for Air

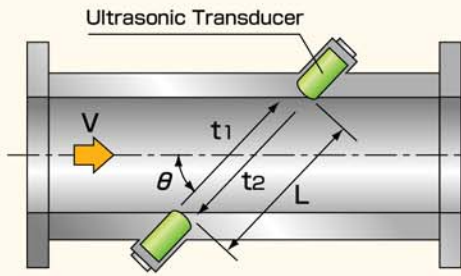


- Negligible pressure drop (equivalent to straight pipe)
- Robust against oilmist and dust
- Turndown ratio 50:1
- Ultrasonic sensor is integrated
- Easy to read LCD which can be oriented at a right angle for easy viewing
- 2 outputs for easy integration with other system
- Lower cost than vortex flowmeters or clamp - on type flowmeters
- Options for power supply :
 - Built-in batteries (10 years of continuous operation)
 - DC power

■ Overview

Model		TRX40-C	TRX50-C	TRX80-C	
Size	mm	40A	50A	80A	
	in.	1 1/2	2	3	
Measurable fluids		Air			
Max.pressure	MPa	1			
	Bar (PSI)	10 (145)			
Flow range	m ³ /h	1 to 50	2.4 to 120	5 to 250	
	US gal/min	4.4 to 220	10.6 to 528	22 to 1100	
Accuracy	±2% of rate	m ³ /h	5 to 50	12 to 120	
		US gal/min	22 to 220	52.8 to 528	
	±5% of rate	m ³ /h	1 to 5	2.4 to 12	5 to 25
		US gal/min	4.4 to 22	10.6 to 52.8	22 to 110
Fluid temperature range		-10 to 60°C (14°F to 140°F)			
Display	Main	Cyclic display : Total integrated flow/Trip integrated flow			
	Sub	Integrated flow	LCD 10digit		
Output	Pulse	Pulse per 0.1m ³ or Pulse per 10 USgals (open drain unit pulse)			
	Analog	4 to 20mA (for DC power only)			
Power supply	Battery	Lithium battery with a life of 10 years			
	External	24V DC			
Connection		Wafer			
Installation position		horizontal,vertical			
Materials in contact with fluid		PPS, Aluminum Alloy,etc.			
Protection class		IPX4			
Weight		1.1kg (2.4lbs)	1.3kg (2.9lbs)	1.8kg (4.0lbs)	

Measurement principle



$$t_1 = \frac{L}{C + V \cos \theta}$$

$$t_2 = \frac{L}{C - V \cos \theta}$$

$$V = \frac{L}{2 \cos \theta} \left(\frac{1}{t_1} - \frac{1}{t_2} \right)$$

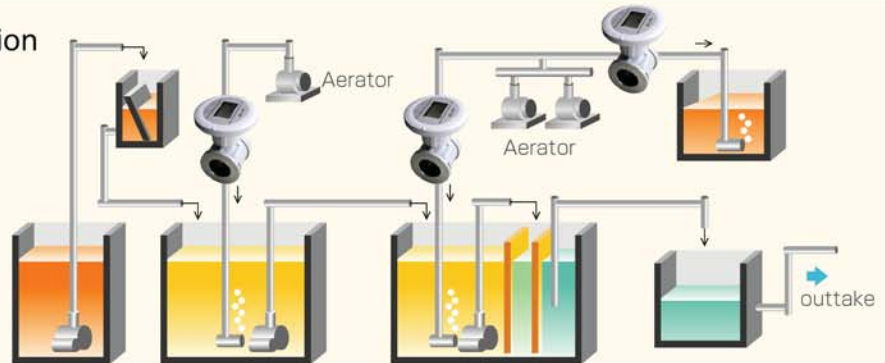
Flow-rate

$$Q = A \cdot K \cdot V$$

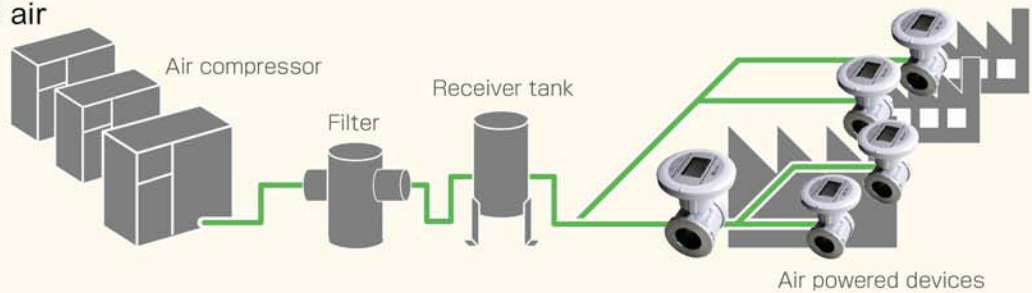
L : Distance between two sensors
 C : Sound velocity
 V : Mean current velocity
 θ : Angle of the ultrasonic propagation axis and the measuring pipe's center axis
 A : Cross section area
 K : Correction coefficient

Examples of applications

Monitoring air flow for aeration

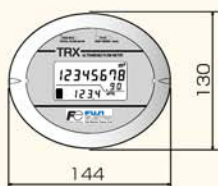


Control of air flow to machines which run on compressed air

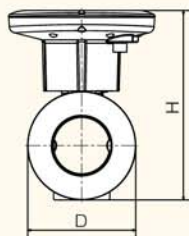
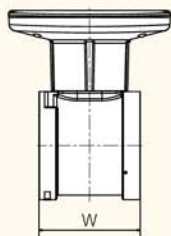


External dimensions

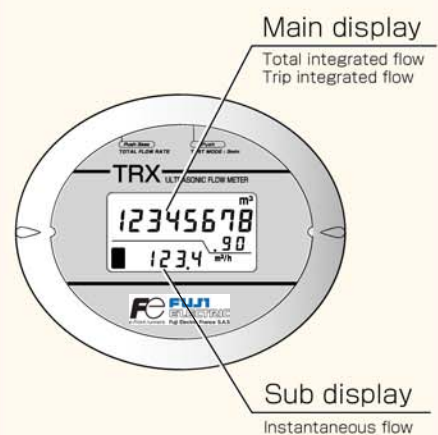
Unit : mm (in.)



Model	W	D	H
TRX40-C	76 (2.99)	80 (3.15)	159 (6.26)
TRX50-C	90 (3.54)	96 (3.78)	168 (6.61)
TRX80-C	117 (4.61)	126 (4.96)	217 (8.54)



Display



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