TROLEX

TX5920 series

VORTEX
GAS FLOW SENSOR/ TRANSMITTER

FLOW VELOCITY/VOLUME
measurement of air, gases & vapours in heavy duty applications

– numerous mounting options; pipe insertion, open flow & in-line versions

ANZEx

MASC

TUNNELS
•
PIPELINES
•
ROADWAYS
•
VENTILATION DUCTS
•
MINING
•
PROCESS INDUSTRIES

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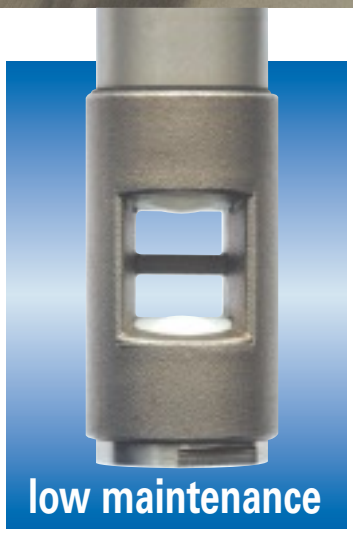

low maintenance

No moving parts, self-cleaning vortex sensing head gives long term stability.

precise
High accuracy response with dynamic linearity correction.

configurable
Choice of analogue output signal:
4 to 20 mA • 0.4 to 2 V • 5 to 15 Hz.
• Configurable signal turndown & response linearity in true engineering units.
• Configurable signal damping and display suppression.
• Volumetric flow calculation facility.

convenient
Clear LCD readout of signal values and all function mode parameters.
• Simple pushbutton scaling to match on-site parameters – signal offset, elevated zero, etc.

intrinsically safe
Certified Ex ia for use in Group I (Category M1) and Group II (Category 1) hazardous areas.

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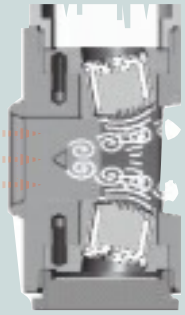


...reliable, accurate response

technical details...

INSERTION FLOW SENSORS	TX5921 REAR PROJECTING SENSOR	TX5922 SIDE PROJECTING SENSOR	TX5923 REMOTE SENSOR
			
Application	Insertion into gas pipes, ventilation ducts & vapour tubes.	Suspend in roadways & passages for open flow monitoring of ventilation.	Remote connected control unit for systems where space is restricted at the flow monitoring point.
Process Media	Gas, air, steam, saturated gases and vapours.		
Flow Measuring Range	Rangeable from 0.5 to 5 m/s up to 0.5 to 30 m/s linear flow velocity.		
Accuracy	±2% characterised to the sensing element (within 12.5° rotation of flow axis).		
Linearity	±1% (within 12.5° rotation of flow axis).		
Housing Temperature	–15 to +50°C.		
Sensor Temperature	–15 to 150°C (200°C available to specification).		
Humidity	0 to 95% non condensing.		
Protection Classification	Dust and waterproof to IP66.		
Housing Material	Stainless steel reinforced polymide 6.		Stainless steel reinforced polymide 6 with PVC coated flexible conduit to the sensor.
Sensor Material	Stainless steel (PTFE coated versions available to specification).		
Sensor Static Pressure	20 bar.		
Process Fitting	• 1 1/2" BSP mounting bush. • 50 mm ANSI Flange. (also available with welded process fittings for high pressure applications to specification).	Wall mounting	• 1 1/2" BSP mounting bush. • 50 mm ANSI Flange. (also available with welded process fittings for high pressure applications to specification).
Cable Entry	2 x M20.		
Nett Weight	1.5 kg.	1.5 kg.	2.5 kg.
Information Display	17 character dot matrix LCD		
Setup Functions	• Zero • Span • Signal offset	• Turndown • Volumetric Calculation • Engineering units	• Signal damping • Display suppression • Text language

electrical details...

GENERAL PURPOSEAPPLICATIONS

Output Signal:	4 to 20 mA
Max. Load:	600 ohms at 24 dc
Power Supply:	10 to 30 V dc
Max. Current:	40 mA

GROUP II APPLICATIONS

Output Signal:	4 to 20 mA	GROUP II
Max. Load:	600 ohms at 24 V dc	
Power Supply:	10 to 30 V dc	
Max. Current:	40 mA	

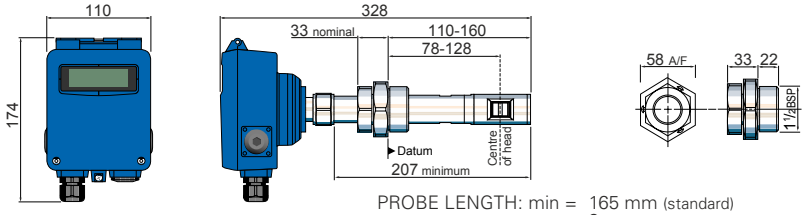
GROUP I APPLICATIONS

Output Signal:	4 to 20 mA	0.4 to 2 V	5 to 15 Hz	GROUP I
Max. Load:	300 ohms at 12 V dc	10K ohms at 12 V dc	Opto isolated 2 mA max.	
Power Supply:	6.5 to 16.5 V dc			
Max. Current:	40 mA	15 mA	30 mA	

...choice of mounting options

choice of mounting options...

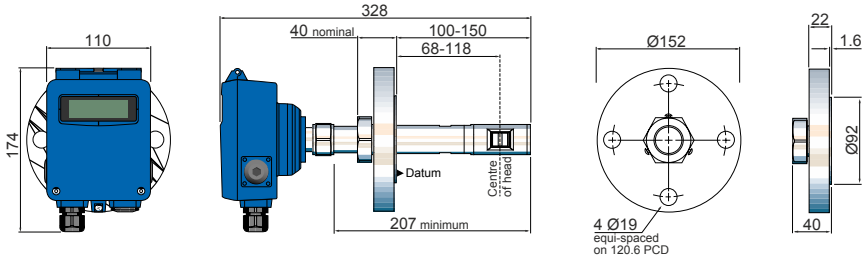
TX5921 REAR PROJECTING SENSOR with 1 1/2" BSP MOUNTING BUSH



PROBE LENGTH: min = 165 mm (standard)
max = 2 m

NB:
Housing can be rotated through 300° with respect to the sensing head.

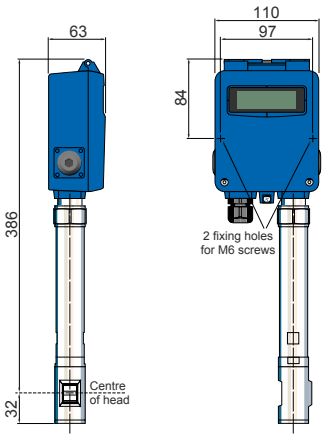
TX5921 REAR PROJECTING SENSOR with 50 mm ANSI MOUNTING FLANGE



PROBE LENGTH: min = 165 mm (standard)
max = 2 m

NB:
Housing can be rotated through 300° with respect to the sensing head.

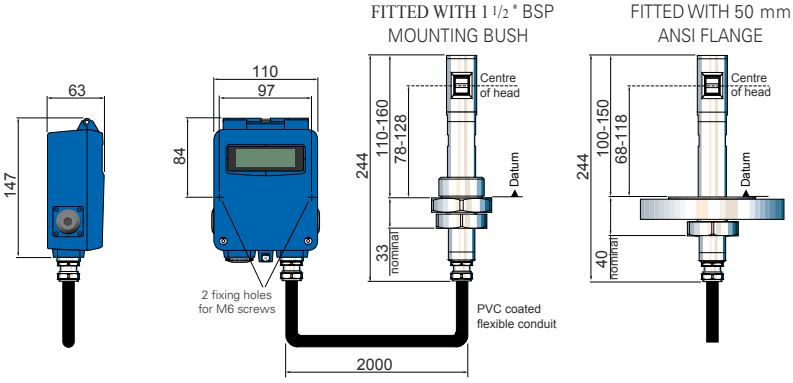
TX5922 SIDE PROJECTING SENSOR



PROBE LENGTH: min = 165 mm (standard)
max = 2 m

NB:
Housing can be rotated through 300° with respect to the sensing head.

TX5923 REMOTE SENSOR



PROBE LENGTH: min = 165 mm (standard)
max = 2 m

All dimensions in mm

certification & approval...

Europe (ATEX)

Group I TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: I M1 Ex ia I Ma (-20°C ≤ Ta ≤ +60°C)

Group II TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: II 1G Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +60°C)

Designed to comply with the requirements of the EC directive: ATEX Directive (94/9/EC)

Australia/New Zealand (ANZEx)

Group I TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: Ex ia I (-20°C ≤ Ta ≤ +60°C)

Group II TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: Ex ia IIC T4 (-20°C ≤ Ta ≤ +60°C)

Russia (Customs Union)

Group I TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: PO Ex ia I Ma X

Group II TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: 0 Ex ia IIC Ga T4 X

India Test Report (CIMFR)

Test report number: CIMFR/TC/P/H553

South Africa (MASC)

Group I TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: Ex ia I (-20°C ≤ Ta ≤ +60°C)

Group II TX5920 VORTEX GAS FLOW SENSOR/TRANSMITTER: Ex ia IIC T4 (-20°C ≤ Ta ≤ +60°C)

order reference...

INSERTION VORTEX GAS FLOW SENSORS

Please specify additional information:

		CERTIFICATION	OUTPUT SIGNAL	MOUNTING
TX5921	**VORTEX GAS FLOW SENSOR/TRANSMITTER** Rear Projecting Sensor. 	Ex Group I (01)	4 to 20 mA (12) 0.4 to 2 V (11) 5 to 15 Hz (13)	• 1 1/2" BSP Bush (22)
		Ex Group II (02)	4 to 20 mA	• 50 mm ANSI Flange (21)
		General Purpose (03)	4 to 20 mA	
TX5922	**VORTEX GAS FLOW SENSOR/TRANSMITTER** Side Projecting Sensor. 	Ex Group I (01)	4 to 20 mA (12) 0.4 to 2 V (11) 5 to 15 Hz (13)	• Wall Mounting
		Ex Group II (02)	4 to 20 mA	
		General Purpose (03)	4 to 20 mA	
TX5923	**VORTEX GAS FLOW SENSOR/TRANSMITTER** Remote Sensor. 	Ex Group I (01)	4 to 20 mA (12) 0.4 to 2 V (11) 5 to 15 Hz (13)	• 1 1/2" BSP Bush (22)
		Ex Group II (02)	4 to 20 mA	• 50 mm ANSI Flange (21)
		General Purpose (03)	4 to 20 mA	

...for use in arduous conditions

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