

## VORTEX GAS FLOW SENSOR/ TRANSMITTER

*Smart, programmable, analogue flow sensor for flow velocity/volume measurement of air, gases and vapours in ventilation ducts, pipelines, roadways and tunnels.*

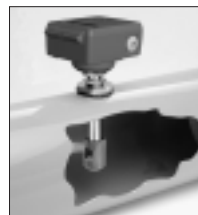
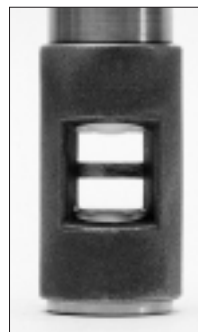
- No moving parts, self-cleaning Vortex sensing head gives long term stability. Standardised output for simple servicing.
- High accuracy response with dynamic linearity correction.
- Choice of analogue output signal:-  
4...20mA • 0.4...2V • 5...15Hz.
- Keypad programmable function calibration.
- LCD information display of signal values and all function mode parameters.
- Simple pushbutton scaling to match on-site parameters.  
Offset • elevated zero, etc.
- Programmable signal turndown and response linearity expressed in true engineering units.
- Programmable signal damping and display suppression.
- Volumetric flow calculation facility.
- Intrinsically safe to Euronorm standards.




TX 5921



TX 5922



### Technical Details

Flow Measuring Range:	Rangeable from 0.5...5m/s up to 0.5...30m/s.
Accuracy:	±2%. Characterised to the sensing element. (within 12.5° rotation of flow axis).
Linearity:	±1%.
Ambient Temperature Limits:	Housing: -15...50°C. Sensor: -15...150°C.
Humidity:	0...95% non-condensing.
Protection Classification:	Dust and waterproof to IP66.
Housing Material:	Stainless steel filled Polyamide 6.
Sensing Probe Material:	Stainless steel. (PTFE coated versions available to specification).
Maximum Static Pressure:	20 bar. (Limited to 2 bar max with standard mounting accessories. Available with welded process fittings for high pressure applications to specification).
Nett Weight:	0.8kg.
Cable Entries:	M20 x 1.5.
Connecting Cable: (TX5923)	2m – 3 core cable with flexible conduit protection. (Cable lengths up to 10m can be supplied to specification).
Electrical Connections:	4mm Barrier/clamp terminals.
Information Display:	Dot Matrix alpha numeric LCD 17 characters.
Operation:	Microprocessor controlled with non-volatile data retention.
Menu System:	Keycode Protection.  Programming of Span and Zero, On-site scaling, Signal offset, Turndown, Volumetric Calculation, Engineering units, Signal damping, Display contrast, Display suppression, Signal fix.  Master Reset.  Text Language:  English German French Spanish

### Certification and Approval



Group I EEx ia I

Group II EEx ia IIC T4

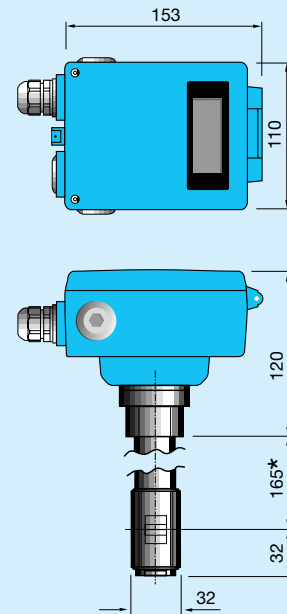


Designed to comply with the requirements of the EC directive on:

- ATEX directive 94/9/EEC
- EMC directive 89/336/EEC

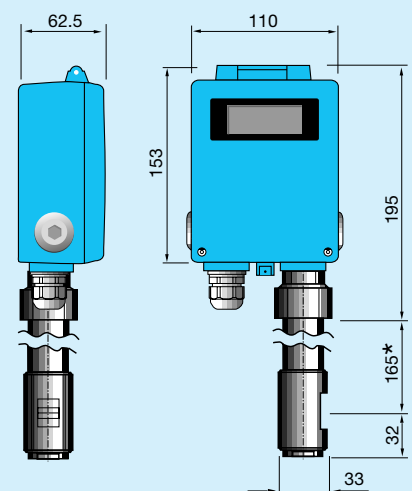
### Dimensions

TX5921 REAR PROJECTING SENSOR.



\*Probe length:  
min = 165mm (standard)  
max = 2m

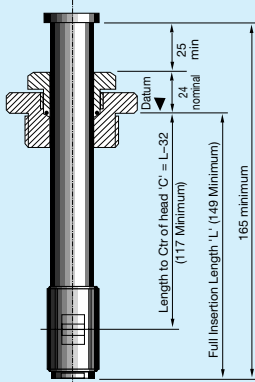
TX5922 SIDE PROJECTING SENSOR.



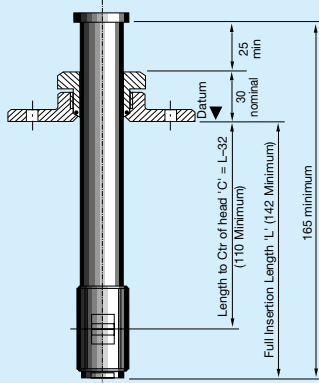
\*Probe length:  
min = 165mm (standard)  
max = 2m

## Electrical Details

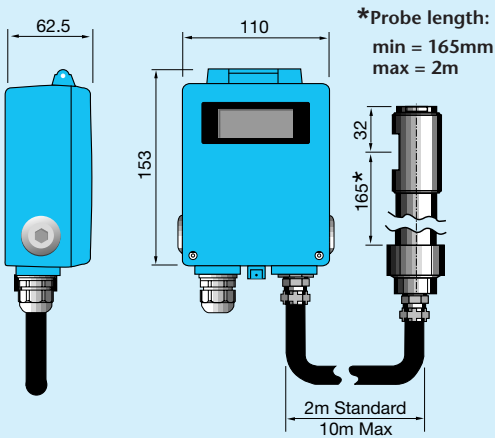
TX5921 REAR PROJECTING SENSOR WITH MOUNTING BUSH.



TX5921 REAR PROJECTING SENSOR WITH MOUNTING FLANGE.



TX5923 REMOTE SENSOR.



All dimensions in mm

### GENERAL PURPOSE AND Ex GROUP II APPLICATIONS (24V dc)

TX5921 • TX5922 • TX5923

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

### Ex GROUP I APPLICATIONS (12V dc)

TX5921 • TX5922 • TX5923

Output	0.4...2V	
Min Load	10k ohms at 12V dc	
Supply	6.5...16.5V dc	
Max Current	15mA	

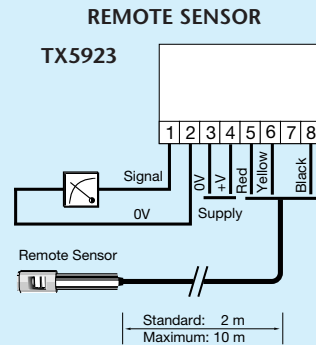
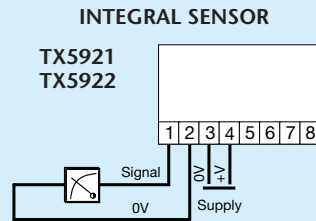
TX5921 • TX5922 • TX5923

Output	4...20mA	
Max Load	300 ohms at 12V dc	
Supply	6.5...16.5V dc	
Max Current	40mA	

TX5921 • TX5922 • TX5923

Output	5...15Hz	
Load	Opto isolated. 2mA max	
Supply	6.5...16.5V dc	
Max Current	30mA	

### Connections:



## Order Reference

- TX5921** **VORTEX GAS FLOW SENSOR/TRANSMITTER.**  
 Rear Projecting Sensor.  
 Flange mount version shown (21).



- TX5922** **VORTEX GAS FLOW SENSOR/TRANSMITTER.**  
 Side Projecting Sensor.  
 Bush mount version shown (22).



- TX5923** **VORTEX GAS FLOW SENSOR/TRANSMITTER.**  
 Remote Sensor.



- TX5925** **VORTEX GAS FLOW SENSOR REMOTE HEAD.**



Please specify additional information:

**Options:**

**CERTIFICATION:**

Intrinsically Safe Group I	(01)
Intrinsically Safe Group II	(02)
General Purpose	(03)

**OUTPUT SIGNAL:**

0.4...2V	(11)
4...20mA	(12)
5...15Hz	(13)

**MOUNTING:**

Flange Mount	(21)
Bush Mount	(22)

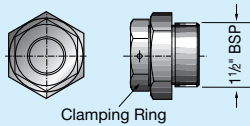
**N.B.** Version TX5922 can be wall mounted, when being used for open flow monitoring in Roadways and Tunnels, using the rear fitting bracket provided with the housing. In this case a mounting flange or bush will not be necessary.

**ADDITIONAL INFORMATION:**

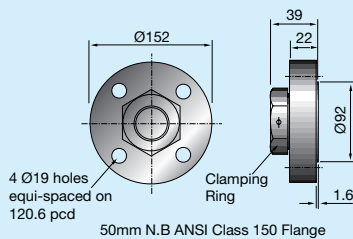
Non Standard Probe Length	mm
Non Standard Temperature Limit	°C
Non Standard Pressure Limit	bar
Non Standard Cable Length (TX5923)	metres
PTFE Corrosion Protection	
Non Standard Flange or Mounting Bush to specification	

## Standard process mounting devices

**MOUNTING BUSH**



**MOUNTING FLANGE**



All dimensions in mm

## Accessories

**TX9200.11** **PIPE MOUNTING BRACKET.**

For use with TX5922 and TX5923 Vortex Gas Flow Sensor/Transmitter.

