



# TX5921 • TX5922 • TX5923 Data Sheet

## Vortex Airflow Sensor

Monitoring of air and gas flow in heavy-duty applications and hazardous areas.

**Environments:** Mining • Tunnelling • Ventilation ducts • Pipelines

### Features

- High stability airflow monitoring
- Vortex monitoring principle with no moving components
- Output signal linearly proportional to flow velocity
- Integral LCD screen with large characters and backlight illumination
- Easily programmable function and display configuration
- Choice of output signals:  
0.4 to 2 V  
4 to 20 mA
- Rangeable flow velocity



ANZEx



### Application

- Fixed point airflow velocity measurement in pipes, ducts and open roadways
- Ventilation, cooling systems and process monitoring in heavy-duty industrial applications and hazardous areas.



TX5921  
Duct monitoring



TX5922  
Roadway monitoring



TX5923  
Remote Sensing





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## Data Sheet

### Technical Details

Flow measuring range:	Rangeable from 0.5 to 5 m/s up to 0.5 to 30 m/s
Accuracy:	+/- 2% within 12.5° rotation of flow axis
Linearity:	+/- 1%
Ambient temperature limits:	-15 °C to +50 °C
Sensor temperature limit:	-20 °C to +150 °C
Humidity::	0 to 95% non-condensing
Protection classification:	Dust and waterproof to IP65
Process media:	Gas, air, steam or saturated vapour
Housing material:	Electrically dissipative polymer
Sensor material	Stainless steel - grade 316
Flexible cable:	PVC-coated armoured flexible conduit
Maximum static pressure:	20 bar
Process fittings:	<ul style="list-style-type: none"> <li>• 1 1/2" BSP mounting bush</li> <li>• 50 mm ANSI mounting flange</li> </ul>
Cable entry:	<ul style="list-style-type: none"> <li>• Rear projecting sensing probe - 2 x M20</li> <li>• Side projecting sensing probe - 1 x M20</li> <li>• Remote mounted sensing probe - 1 x M20</li> </ul>
Nett weight:	<ul style="list-style-type: none"> <li>• Rear projecting sensing probe - 1.5 kg</li> <li>• Side projecting sensing probe - 1.5 kg</li> <li>• Remote mounted sensing probe - 2.5 kg</li> </ul>
Information display:	128 x 64 dot graphic backlit LCD screen
Vibration limits:	<ul style="list-style-type: none"> <li>• 10 to 30 Hz - 1.00 mm total excursion</li> <li>• 31 to 150 Hz - 19.6 m/s<sup>2</sup> acceleration peak</li> </ul>
Impact limits:	20 joules (housing)
Output Signals:	0.4 to 2 V / 4 to 20 mA
For certification details, refer to the user manual	

#### Programmable Information:

- Accuracy
- Linearity
- Ambient temperature limits
- Sensor temperature limit
- Humidity

### Electrical Details

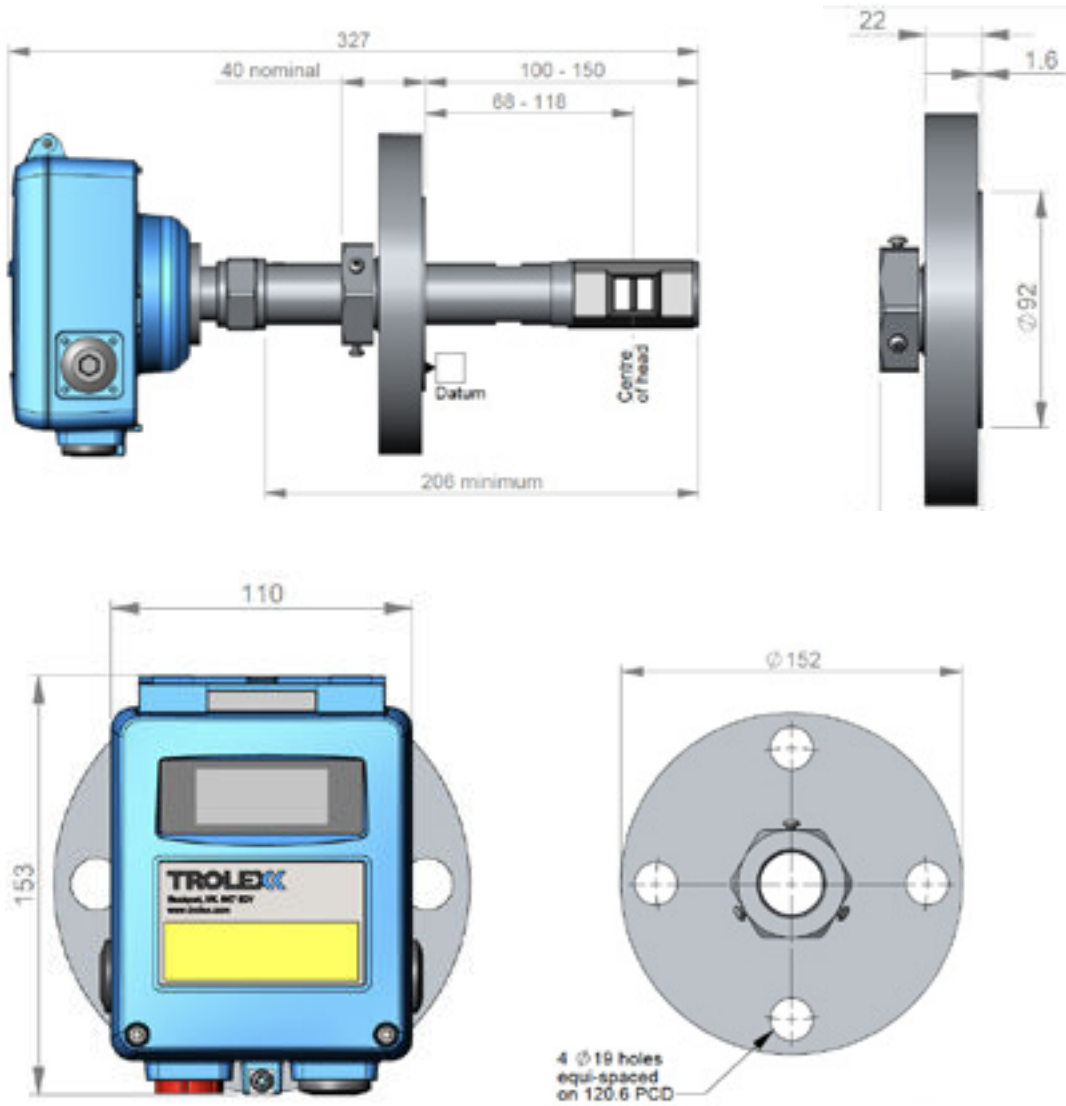
General Purpose Applications		
Output signal:	4 to 20 mA	
Maximum load:	600 Ω at 24 V dc	
Power supply:	10 to 30 V dc	
Maximum current:	40 mA	
Group I applications (when powered from approved apparatus)		
Output signal:	4 to 20 mA	0.4 - 2 V dc
Maximum load:	300 Ω at 12 V dc	10 kΩ at 12 V dc
Power supply:	6.5 to 16.5 V dc	6.5 to 16.5 V dc
Maximum current:	15 mA	15 mA
Group II applications (when powered from approved safety barriers)		
Output signal:	4 to 20 mA	
Maximum load:	600 Ω at 24 V dc	
Power supply:	10 to 30 V dc	
Maximum current:	40 mA	



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## Dimensions

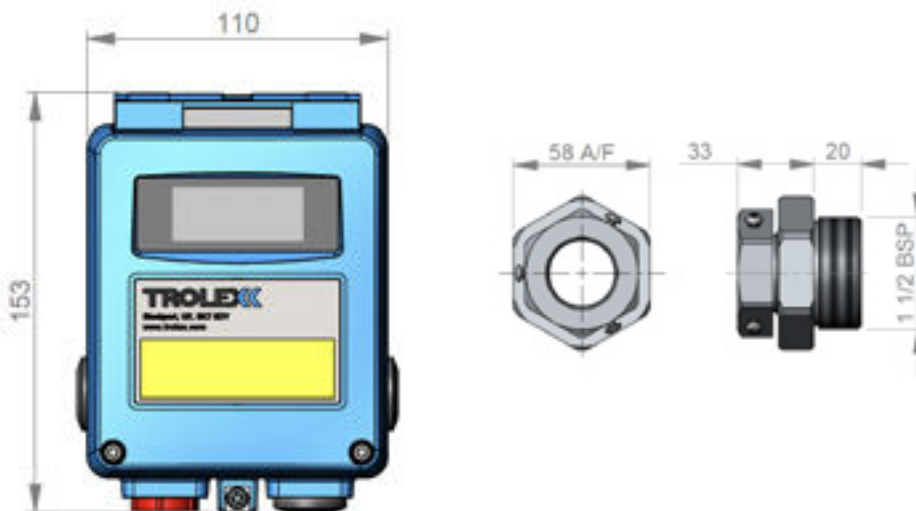
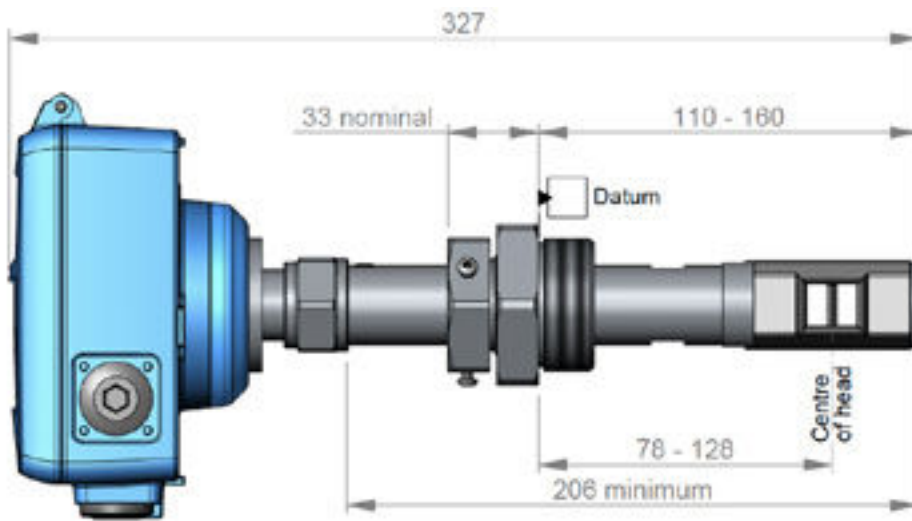
### TX5921 Rear Projecting Sensor





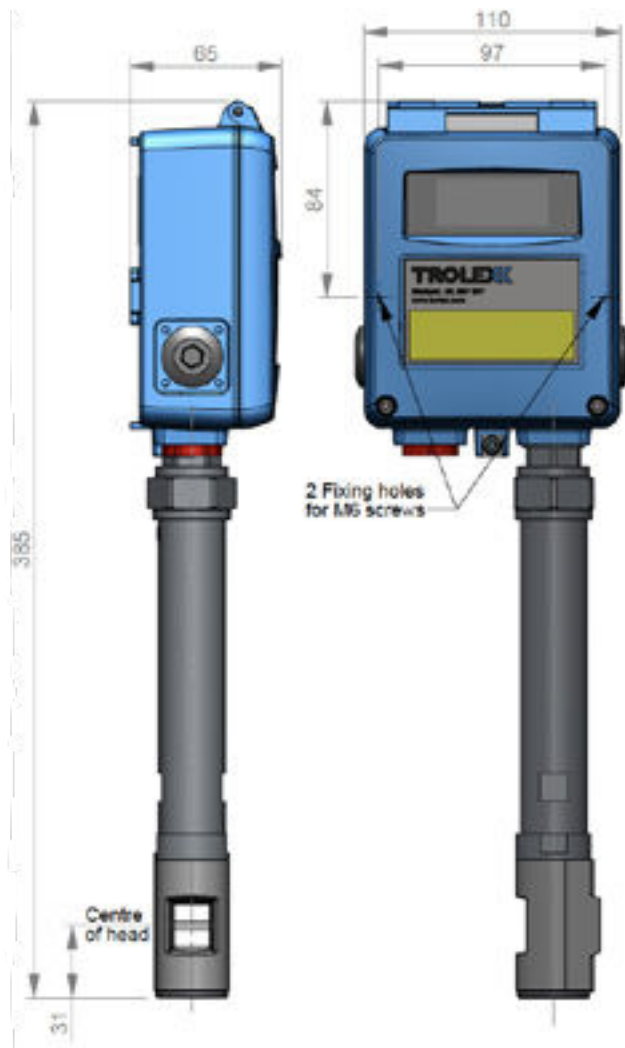
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## TX5921 Rear Projecting Sensor





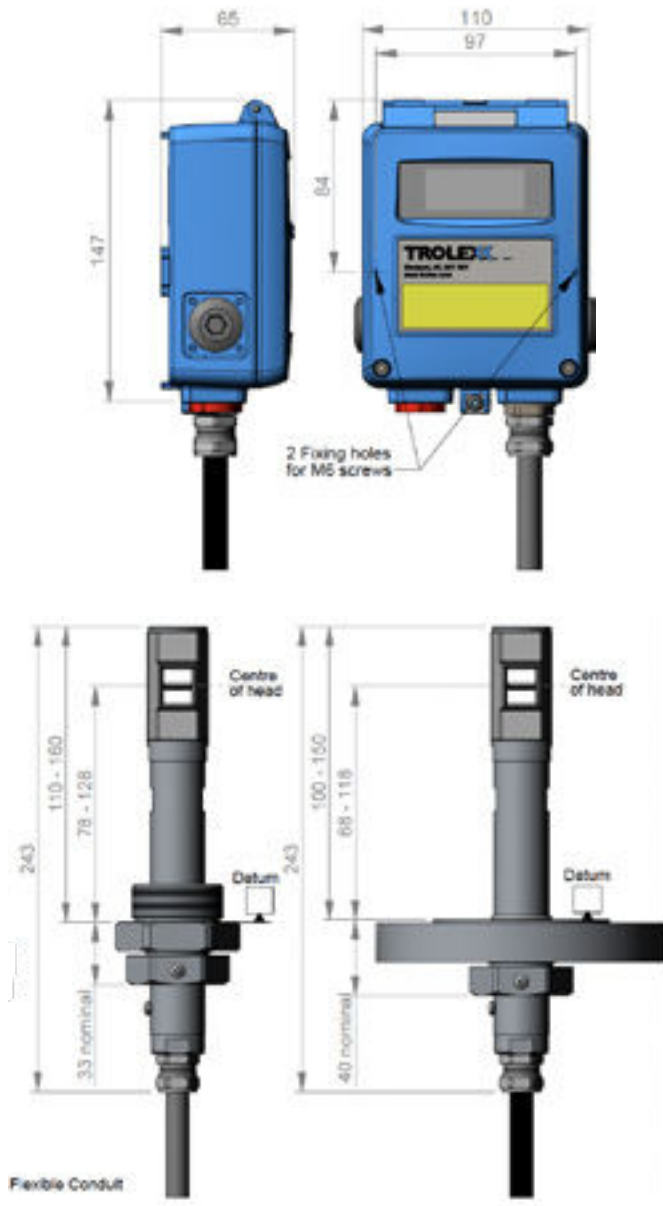
TX5922 Side Projecting Sensor





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## TX5923 Remote Mounted Sensor





## Product Options

Vortex Air Flow Sensor	
Sensor Configuration	Product Code
Rear projecting sensor	TX5921
Side projecting sensor	TX5922
Remote sensor	TX5923

Certification		Option Code
General Purpose		.00
ATEX	Grp I	.35.01
MASC	Grp I	.05
ANZEx	Grp I	.10
EAC	Grp I	.14
CIMFR	Grp I	.21
ATEX	Grp II	.35.02
MASC	Grp II	.16
ANZEx	Grp II	.11
EAC	Grp II	.15
Ukraine	Grp I	.24

Output Signal	Option Code	
0.4 - 2 V	.11	Grp I Only
4 - 20 mA	.12	

Process Fitting	Option Code
None	.00
50 mm ANSI flange	.21
11½ " BSP bush	.22



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Probe Length	Option Code
165 mm (standard)	.00
500 mm	.02
1000 mm	.03
1800 mm	.04

Velocity Range	Option Code
5 m/s	.01
10 m/s	.02
15 m/s	.03
20 m/s	.04
25 m/s	.05
30 m/s	.06

Cable Length (TX5923 Only)	Option Code
0 m	.00
1 m	.01
2 m (standard)	.02
3 m	.03
4 m	.04
5 m	.05
6 m	.06
7 m	.07
8 m	.08
9 m	.09
10 m (max)	.10