Type:
Flowgas TMS 500

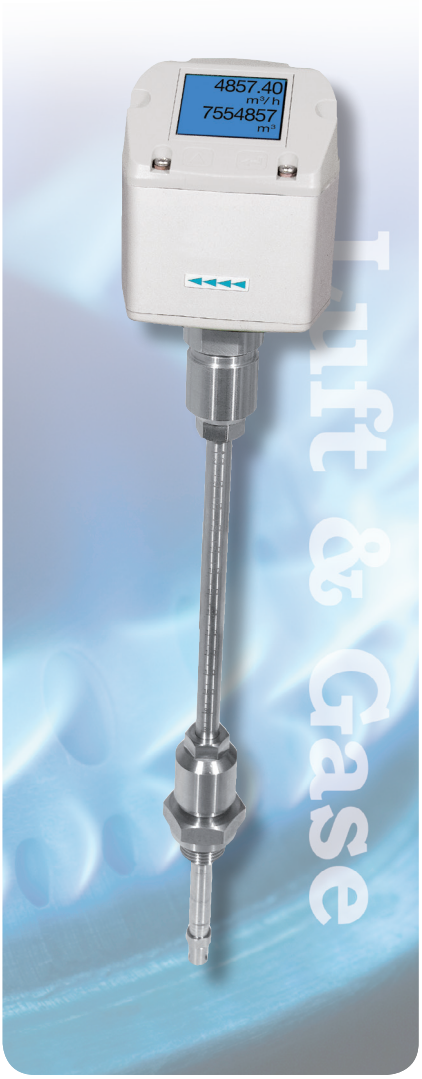
Consumption sensor for compressed air and gases
Screw-on pipe diameters up to DN300

Description

The affordable consumption counter TMS 500 works according to the proven calorimetric measuring principle. A heated sensor is cooled by the gas flowing around him. The flow-dependent cooling is utilized as a measuring scale while the degree of cooling is directly dependent on the passing air or gas mass. An additional pressure and temperature compensation is therefore not necessary.

For larger pipe diameters from DN 50 to DN 300 the consumption sensors TMS 500 are available. In addition to pressure air, other gases can be measured e.g. Nitrogen, oxygen, CO2.

The installation of the TMS 500 via a standard G 1/2 „ball valve under pressure. The retaining ring prevents the probe is thrown out uncontrollably during installation and removal by the operating pressure. For installation in different pipe diameters the TMS 500 can be associated with different probe lengths. The exact positioning of the sensor in the center of the pipe is possible via an engraved depth scale.



Application

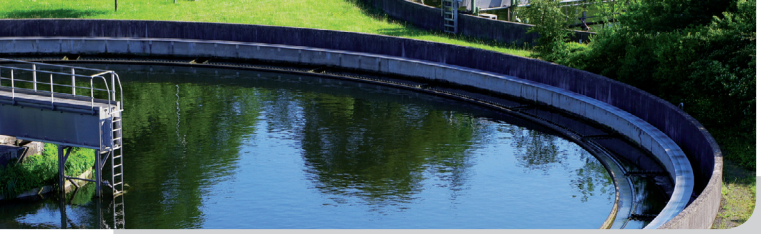
- Mobile compressed air measurement in front of single machines / systems
- Flow measurement of process gases such as Nitrogen, CO2, Oxygen, argon, nitrous oxide
- Flow measurement at nitrogen generators
- Determine leakage air / leak rate
- For accounting and consumption measurement of compressed air
- Display shows 2 values: Current consumption in m3 / h, l / min ... Total consumption (meter reading) in m^3, l
- Units freely selectable via keypad: m^3 / h, m^3 / min, l / min l / s, kg / h, kg / s, cfm
- Compressed air meter up to 1,999,999,999 m^3, resetable to „zero" via keyboard

Your benefits

- Depth scale for accurate installation
- *Easy installation* under pressure
- Inner diameter adjustable via keys
- *Consumption counter resettable*
- High accuracy
- Negligible small pressure loss

Specials

Ordercode . . . . . page |04|

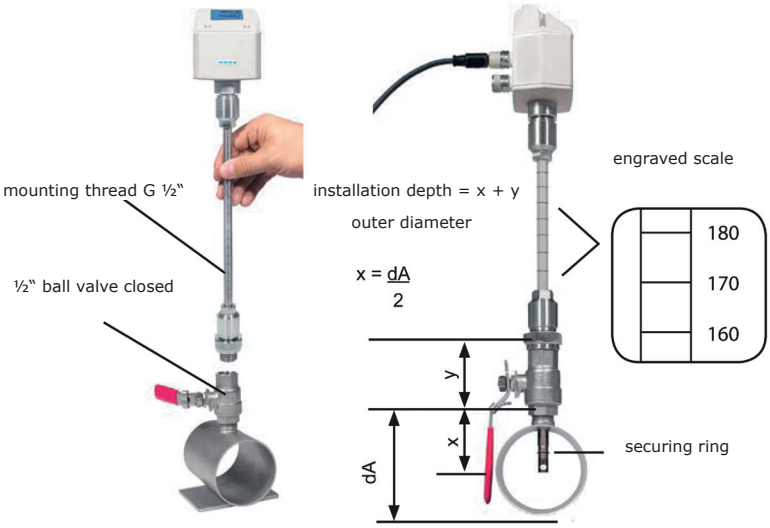


Technical data

Technical data	
Measurement:	Flow, Consumption and Velocity
Reference:	Standard settings ex works: DIN 1945, ISO 1217 at 20°C and 1000 mbar other standards can be adjusted by Display keys (optional) or means of the Service Software.
Selectable Units:	m³/h (Standard settings ex- factory) m³/min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min, kg/s
Measuring principle:	calorimetric measurement
Sensor:	Pt45, Pt1000
Measuring medium:	Air, gases
Operating temperature:	-30 ... 80°C
Operating pressure:	up to 50 bar
Power supply:	18 to 36 VDC
Power consumption:	max. 5W
Digital output:	RS 485 interface (Modbus RTU)
Analog output:	4...20 mA (see tables page 13 -18), max. burden < 500 Ohm
Pulse output:	pulse output potential free (dry contact) passive: max. 48Vdc, 500mA; 1 pulse pro m³ resp. pro l Valency adjustable with the display keys
Accuracy:	± 1,5 % m.v.*, ± 0,3 % f.s.* (* m.v. = measured values; f.s. = full scale)
Display:	optional TFT 1.8" Resolution 220 x 176
Mounting thread:	G ½"
Material:	Stainless steel 1.4301 / 1.4404
Protection class:	IP65

Details

Inner diameter adjustable via keys



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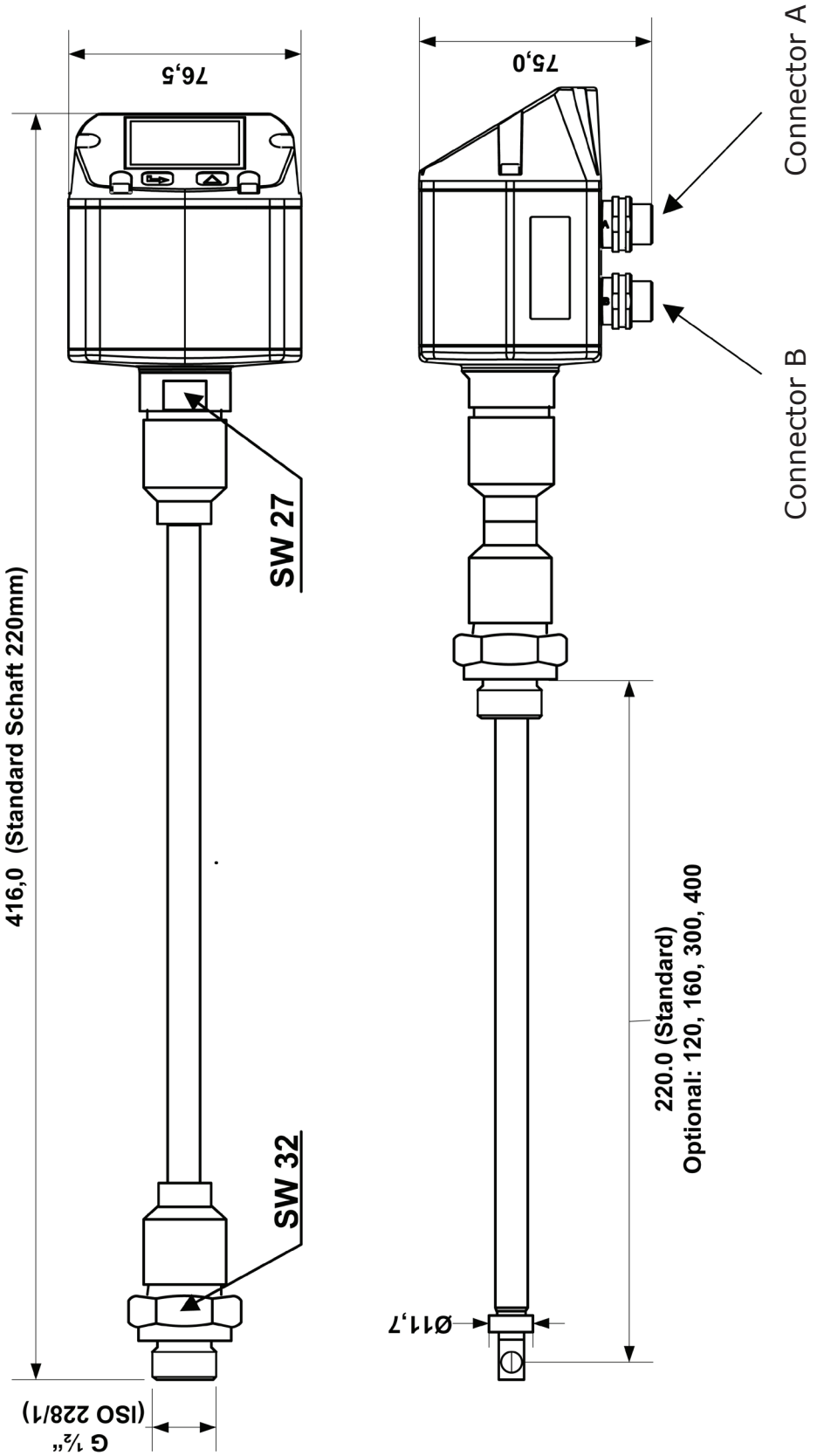
Dimension drawings

Type:
Flowgas TMS 500



Order Code

model
500 standard

connection thread
1 ½"
Y special version

material (medium contact)
V2 1.4301 stainless steel
Y special version

probe length pipe
A 220 mm
B 120 mm
C 160 mm
D 300 mm
E 400 mm
F 500 mm
G 600 mm
H 700 mm
Y special version

gas type standard measuring range
LUFT air - measuring range according to DIN 1945/ ISO 1217 please specify
11AR argon measuring range according to DIN 1343 please specify
1CO2 carbon dioxide CO2 measuring range according to DIN 1343 please specify
11O2 oxygen incl. cleaning oil and fat free
measuring range according to DIN 1343 please specify
111N nitrogen measuring range according to DIN 1343 please specify
111Y special medium

accuracy calibration
A +/-1,5% of measured value (Standard)
B +/-1,0% of measured value
Y on request: special calibration via 5-point ISO-certificate

output
AP analog output: 4 .. 20 mA for m³/h resp. l/min
impulse output: 1 impulse pro m³ resp. per liter galvanically isolated
digital output: RS 485 interface (Modbus-RTU)
5-pol. cable socket M12 included
Y special version

supply
2 24 VDC smoothed +/- 15%
5-pol. cable socket M12 included
Y special version

measuring range
S standard measuring range up to 92,7m/s
M max version measuring range up to 185m/s
H high speed version measuring range up to 224m/s
Y special version

display
S without display
D LCD-Display
Y special version

Order code	
Flowgas	500

Equipment

If no suitable measuring site with 1/2 „ball valve is present, there are two easy ways to set up a measuring point. Either by welding an 1/2 „ threaded connector and screwing an 1/2" ball valve or by mounting a tapping sleeve including ball valve. With the help of a special drilling device, after welding a 1/2 „ball valve within minutes a measuring point can be established.

Drilling device

Threaded connection

Tapping sleeve

Tapping under pressure

Stand 03/2016

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