We measure it.

Compressed air counter shaft probe DN40 - DN250

testo 6448

- Possibility of installation under pressure
- Measurement of flow velocity in the measuring range from 0 to 160 m/s; consumption measurement in m^3 and media temperature in °C
- Recoil protection and ball valve ensure fast and safe installation and deinstallation
- Highest flexibility thanks to different signal outputs:
  - Analog output 4 to 20 mA (4-wire)
  - Pulse output
  - 2 switching outputs (consumption or volume flow-dependent)
- Integrated totalizer, also without additional evaluation unit
- Operating menu with LED display

Shaft probe

The compressed air counter testo 6448 is designed for the recording and monitoring of compressed air consumption, and thus not only for the identification of leakages in compressed air systems and the allocation of costs by consumption, but also for the implementation of peak load management. The shaft probe can be used for measurements on different pipe diameters.

An optional drilling clamp allows the exact positional installation of the sensor, without the need for welding work. The affected compressed air pipeline can remain pressurized when installing the drilling clamp or for sensor maintenance/exchange.

Patented recoil protection

The recoil protection guarantees high security for the commissioner, and combines three functions in one instrument:

1. the recoil protection, i.e. the sensor can only be inserted in one direction during installation.

2. the seal to the process, i.e. thanks to the O-ring, compressed air cannot escape during installation.

3. the positional fixing, since a penetration depth and positioning which is exact to the millimeter, similar to a car's clutch, is possible.

Technical data

Parameters

Flow velocity	
Selectable units	m/s
Measuring range[1]	0 to 160 m/s
Accuracy	±3 % of meas. value ±3 % of fsv (at room temperature)
Sensor	Thermal, glass-coated ceramic sensor (calorimetric measurement procedure)
Response time	< 0.1 sec (for damping parameter = 0), delayable via operating menu (0 to 1 sec)
(Norm) volume flow	
Selectable units	m^3/h, m^3/min, m^3
Measuring range[1]	Maximum measuring range of volume flow is dependent on inner pipe diameter (see page 3)
Temperature	
Unit	°C
Measuring range	0 to +60 °C / 32 °F to +140 °F

Inputs and outputs

Analog outputs	
Output type	4 to 20 mA (4-wire) freely scalable between zero and measuring range end
Load	max. 500 Ω
Further outputs	
Pulse output	Pulse speed freely settable in 1 m^3 steps
Switch output	2 switch outputs, parameterizable (consumption or volume flow-dependent, NC, NO, hysteresis, window), loadable with max. 20 to 30 VDC or 250 mA each, switch status is displayed via 2 LEDs
Supply	
Voltage supply	19 to 30 V DC
Current consumption	<100 mA
Connection	M12 x 1 plug, loadable up to 250 mA, short-circuit-proof (synchronized), reverse-polarity-proof, overload-proof

General technical data

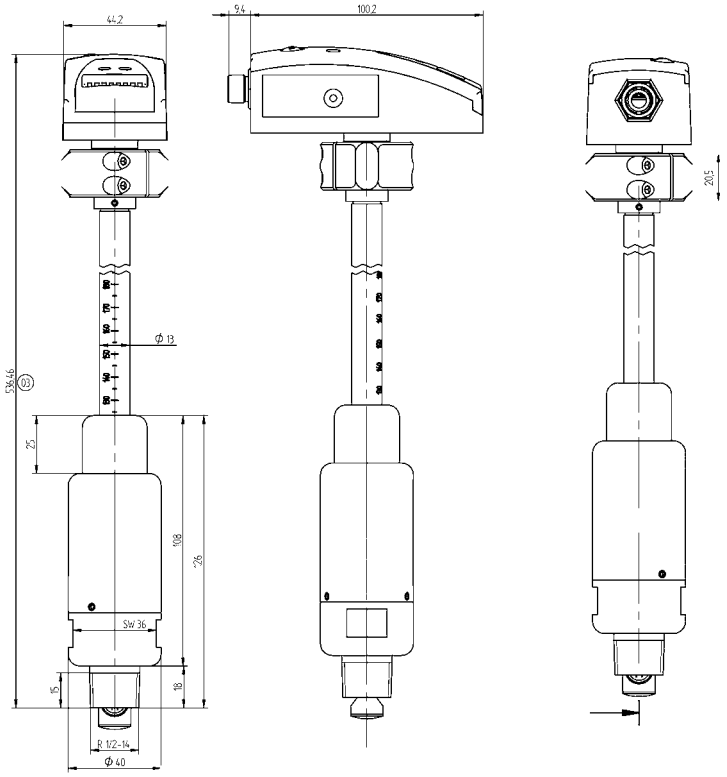
Design	
Material housing	PBT-GF 20, PC (APEC), Makrolon, V2A (1.4301), Viton
Weight	850 g
Display	
Display	4-figure alphanumerical display, two operating buttons, operating menu, LED (4 x green for phys. units, 3 x yellow for display x 1,000 or switch status)
Operation	
Parameterization	2 operating buttons
Miscellaneous	
Protection class	IP 65/III
EMC	according to guideline 89/336 EEC
Media contact	V2A (1.4301), PEEK, polyester, Viton, anodized aluminium, glass-coated ceramics
Norm reference	Calculation of volume flow due to manual input possibility of temperature, humidity and pressure. Works settings: 15 °C, 1013.25 hPa, 0 %RH

Operating conditions

Humidity (sensor)	rel. humidity < 90 %RH
Operating temperature (housing)	0 to +60 °C (+32 to +140 °F)
Storage temperature	-25 to +85 °C (-13 to +185 °F)
Measurement medium	Compressed air, with special calibration also CO2 or N2
Process pressure	PN 16 (max 16bar/232psi)
Pressure tightness/ pipe clamp	16 bar (max.) for DN40-DN200; 10 bar (max.) for DN250
Air quality	ISO 8573: recommended classes 1-4-1

[1] Specifications according to DIN 2533 (+15 °C, 1013.25 hPa, 0 %RH)

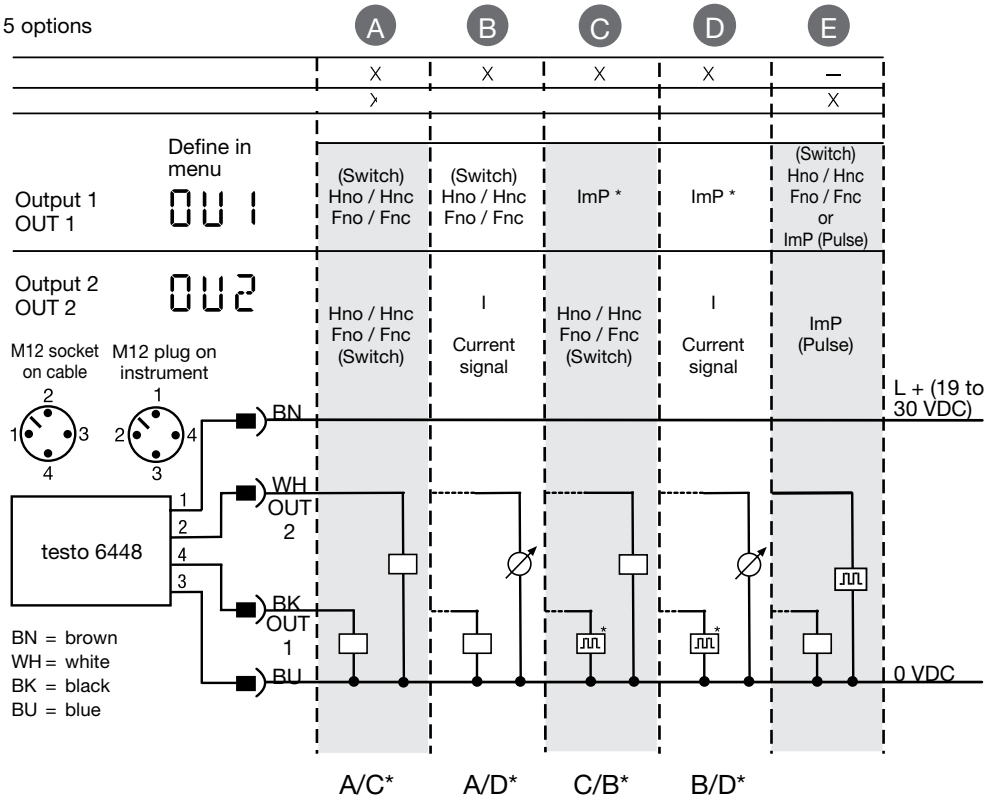
Technical drawings



Measuring range volume flow according to DIN2533

Version	160 m/s
DN 40	600 m³/h
DN 50	1000 m³/h
DN 65	1880 m³/h
DN 80	2600 m³/h
DN 100	4400 m³/h
DN 125	6700 m³/h
DN 150	9950 m³/h
DN 200	17000 m³/h
DN 250	25650 m³/h

Electrical connection



Terminal allocation	
1	Supply connection 19 to 30 VDC (+) / brown
2	OUT 2 (analog output (4 to 20 mA) or switch output / white
3	Supply connection 0 V (-) / blue
4	OUT 1 (pulse output or switch output) / black
Wire colours for cable 0699 3393	

* If menu selection ImPR = Yes -> Pulse output
If menu selection ImPR = No -> Switch output
(pre-selection counter)

Options / Ordering example

Order data testo 6448

AXXX configuration
BXX Drilling clamp selection
CXX Measurement fitting selection
DX Drilling tool selection

AXXX configuration

A0 accessories only *
A1 with transmitter
AA1 160 m/s
AB0 without positional fixing
AC0 Air (compressed air)
AC1 Alternative gas: nitrogen
AC2 Alternative gas: CO_2
AD1 ISO calibration protocol m/s at 6 points
AD2 ISO calibration protocol m^3/h at 6 points for specific nominal diameter (pls. indicate diameter)
AE0 Standard length 285 mm (for DN40 to DN100)
AE1 Length variant 435 mm (for DN125 to DN250)

BXX Drilling clamp selection

B00 without drilling clamp
B01 drilling clamp DN40
B02 drilling clamp DN50
B03 drilling clamp DN65
B04 drilling clamp DN80
B05 drilling clamp DN100
B06 drilling clamp DN125
B07 drilling clamp DN150
B08 drilling clamp DN200
B09 drilling clamp DN250
B10 drilling clamp DN300

CXX Measurement fitting selection

C00 without measurement fitting / without ball valve
C01 measurement fitting (incl. ball valve for other meas. parameter, e.g. dewpoint transmitter testo 6740)
C02 ball valve (DN15)

DX Drilling tool selection

D0 without drilling tool
D1 with drilling tool

* If this selection is made, further configuration AXX is not necessary. Continue with BX.
**Further Configuration necessary! Continue with AXX.
***A connection cable, e.g. order no. 0699 3393 is required for operation.

Ordering example

Order code for transmitter testo 6448 – Compressed air counter shaft probe
- With transmitter incl. recoil protection
- 160 m/s
- Air (compressed air)
- 6 point calibration
- Length variant 435 mm (for DN125 to DN250)
- Without drilling clamp
- Without measurement fitting / without ball valve
- without drilling tool

-> 0555 6448 A1 AA1 AC0 AD1 AE1 B0 C0 D0

Order code for transmitter testo 6448 – drilling clamp DN40:
- Accessories
- With drilling clamp DN40
- Without measurement fitting / without ball valve
- without drilling tool

-> 0555 6448 A0 B01 C0 D0

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