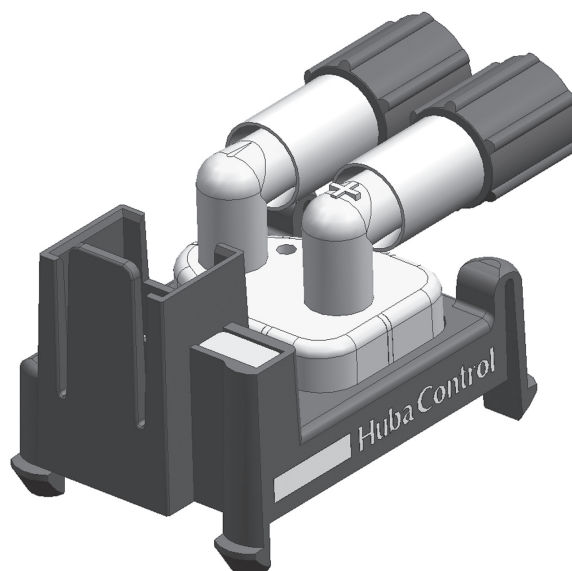
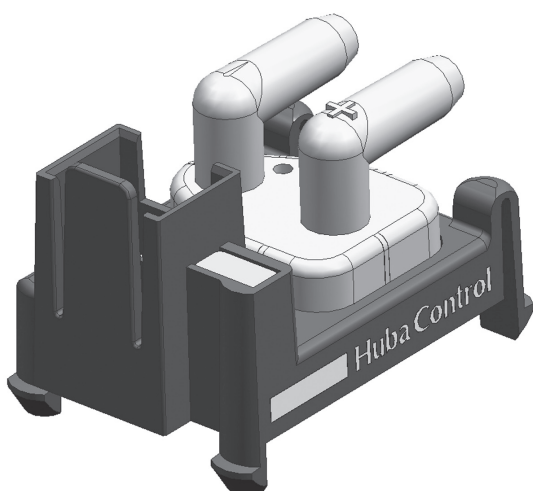
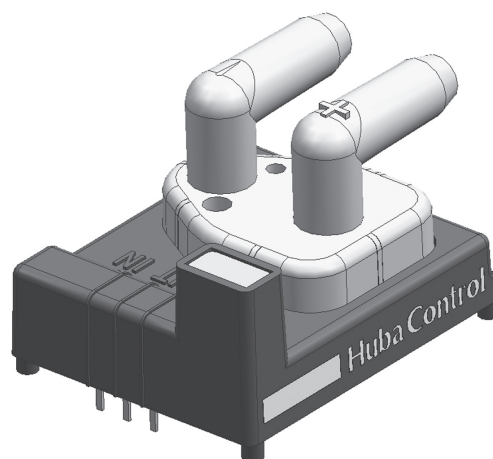
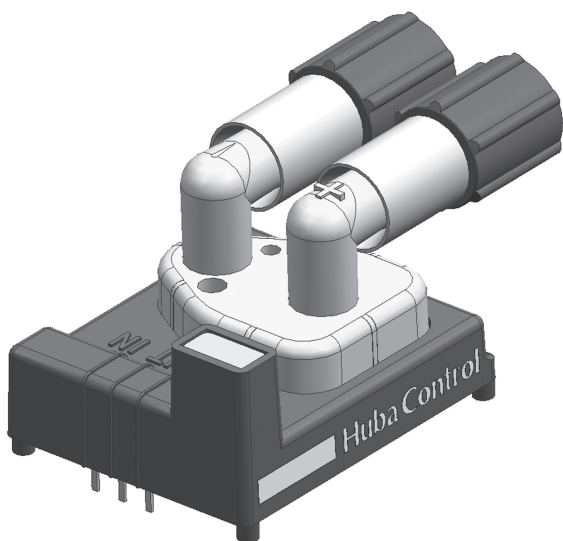


Relative, absolute and differential pressure transmitter

$\pm 5 \dots \pm 1000 \text{ mbar} / 0 \dots 5 - 2000 \text{ mbar}$

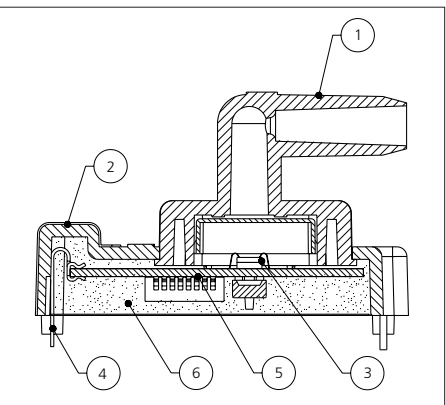


 **Huba Control**

FEINE MESSIDEEN FÜR DRUCK UND STRÖMUNG
FOR FINE PRESSURE AND FLOW MEASUREMENT
LA FINESSE DES MESURES DE PRESSION ET DE DEBIT

Technical overview

The pressure transmitters of product range type 663 have adjusted and temperature compensated sensor signals which are available as voltage output. The amplified linear voltage output signal can be connected directly into an electronic control system. The transmitter can be mounted directly to a pcb board or with a 2.5 mm plug connection.



Legend to cross-section drawing

- 1 Pressure connection
- 2 Housing
- 3 Silicium chip
- 4 Electrical connection
- 5 Amplifier electronics
- 6 Sealing compound

The distinct advantages

- Very low temperature influences due to individually adjusted temperature ranges of -20 to +70°C
- The compensated adjusted and amplified sensor signals make this transmitter easy to work with
- Integrated EMC-protection

Medium

Air and neutral gases

Pressure range

Relative and differential $\pm 5 \dots \pm 1000$ mbar
 $0 \dots 5 - 2000$ mbar

Absolute $0 \dots 500 - 2000$ mbar
 Barometrical sensor

Tolerable overload on one side

10 x full scale at $5 \dots 50$ mbar
 3 x full scale at $100 \dots 2000$ mbar

Rupture pressure

15 x full scale at $5 \dots 50$ mbar
 5 x full scale at $100 \dots 2000$ mbar

Materials in contact with the medium

Housing: Ultem, LCP
 Diaphragm: Silicium
 Adhesives: Silicon, Epoxy, POP
 Substrate: Ceramic Al_2O_3 (96%)
 Plastic screwing: PC

Temperature

Medium and ambient $-40 \dots +85$ °C

Storage $-40 \dots +100$ °C
 Compensated $-20 \dots +70$ °C

Power supply / Output

Power supply $8.5 \dots 30$ VDC
 Output $0.5 \dots 4.5$ VDC

Load

> 10 kOhm (to GND)

Current consumption

At nominal pressure < 5 mA

Dynamic response

Response time < 2 ms
 Load cycle 100 Hz

Electrical connection

Pins for PCB mounting

3-pole connector RAST 2.5
 Recommended: AMP DUOPLUG 2.5™

Polarity reversal protection

Mechanically protected

Protection standard

IP 00

Pressure connection

Hose connector $\varnothing 4.8$ mm
 Plastic screw connection

Installation arrangement

Recommended:
 Vertical, pressure connections lateral

Horizontal, pressure connection upwards:
 Signal approximately 4 Pa higher than actual pressure

Horizontal, pressure connection downwards:
 Signal approximately 4 Pa lower than actual pressure

Mounting

Snap-mounting or PCB mounting
 (Not suitable for mechanical soldering)

Weight

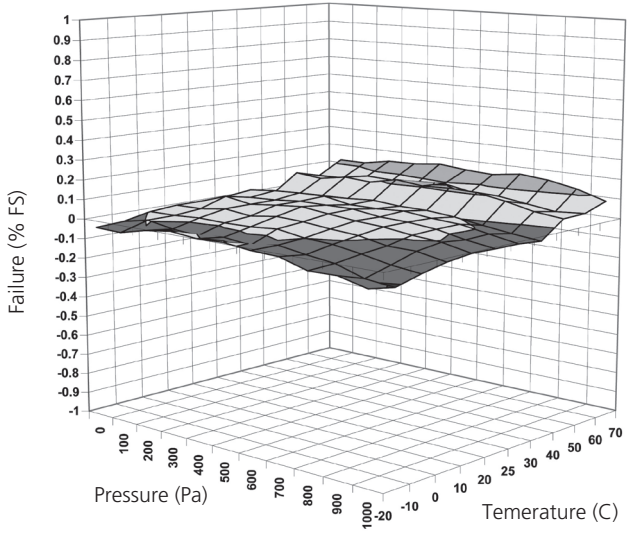
Print version approx. 7.5 g
 Connector version approx. 8.5 g

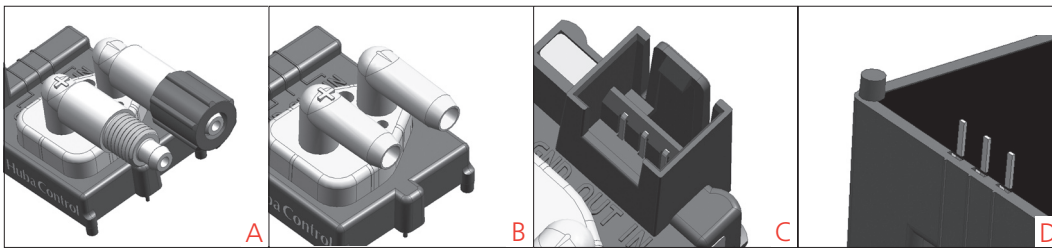
Plastic screw connection additional approx. 1.5 g

Packaging

Film hinge strips to 10 pieces, in covering box (120 pieces)

Typical tolerance of a 10 mbar sample sensor within the compensated temperature range





Versions

- A – Plastic screw connection
- B – Hose connector Ø 4.8 mm
- C – Connector version
- D – Print version

Accuracy

Transmitter-type Parameters	Unit	5 mbar	10 mbar -5 ... +5 mbar	20 mbar	50 mbar	100 ... 2000 mbar	800 ... 1200 mbar (barometrical)
Tolerance zero point	typ ¹⁾	% fs	± 0.4	± 0.3	± 0.3	± 0.2	± 0.2
Tolerance zero point	max ¹⁾	% fs	± 2.5	± 1.5	± 1	± 0.8	± 1.25
Tolerance full scale	typ ¹⁾	% fs	± 0.4	± 0.3	± 0.3	± 0.2	± 0.2
Tolerance full scale	max ¹⁾	% fs	± 2.5	± 1.5	± 1	± 0.8	± 1.25
Resolution		% fs	0.01	0.01	0.01	0.01	0.01
Linearity	max	% fs	± 0.5	± 0.5	± 0.5	± 0.3	± 0.2
Hysteresis	max ¹⁾	% fs	± 0.15	± 0.15	± 0.15	± 0.15	± 0.15
Long term stability acc. to DIN IEC 60770	max	% fs	± 1.6	± 0.8	± 0.8	± 0.8	± 1.2

¹⁾Over-all temperature ranges of -20...+70°C

Test conditions: 25 °C, 45 % rF, Power supply 12 VDC

Order code selection table

663. X X X X X X X X X

Relative pressure			9																
Differential pressure																			
Absolute pressure			5																
Pressure range ²⁾	-5 ... + 5 mbar		9	L	1														
	0 ... + 5 mbar		9	L	2														
	0 ... + 10 mbar		9	L	3														
	0 ... + 20 mbar		9	0	0														
	0 ... + 50 mbar		9	0	1														
	0 ... + 100 mbar		9	0	2														
	0 ... + 200 mbar		9	0	3														
	0 ... + 500 mbar			1	0														
	0 ... + 1000 mbar			1	1														
	0 ... + 2000 mbar			1	3														
	+800 ... + 1200 mbar	Barometrical sensor	5	2	0														
Adjustment	Factory						0												
Output and power supply	0.5 ... 4.5 V	8.5 ... 30 VDC						0											
Electrical connection	Print version																		1
	Connector version																		2
Pressure connection	Hose connector Ø 4.8 mm																		1
	Plastic screw connection																		2
Pressure range variation	Indicate W and state range on order																		W

²⁾Customer specific pressure ranges as well as ± ranges are available. Our customer support will be pleased to advise you.

Accessories

		Order number
AMP DUOPLUG 2.5™ Connector with cable	30 cm	111668
AMP DUOPLUG 2.5™ Connector with cable	110 cm	101817
AMP DUOPLUG 2.5™ Connector with cable	150 cm	112282
Calibration certificate		104551

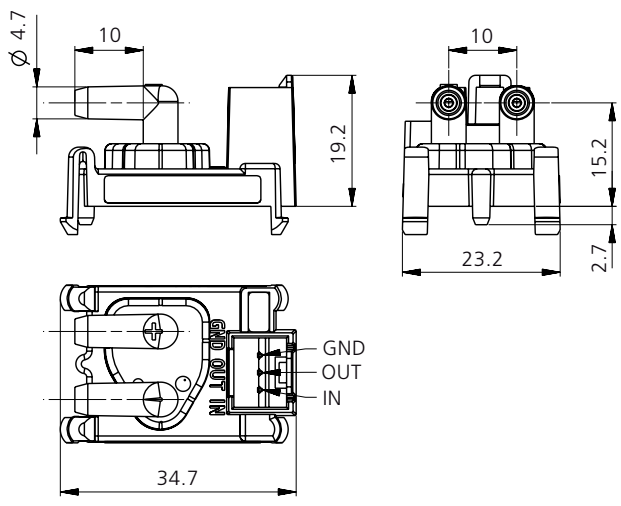
Accessories supplied loose

Recommended tubes

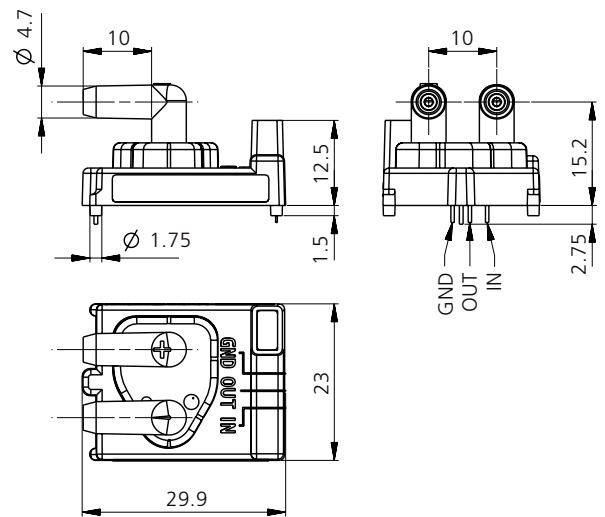
Hose connector Ø 4.8 mm:	Material: Silicon	Plastic screw connection:	Material: Polyamid
	Ø inside: 4 mm		Ø inside: 2.9 mm
	Ø outside: 6 mm		Ø outside: 4 mm
	Temperature: -40 ... +85 °C		Temperature: -40 ... +85 °C
	max. pressure: 0.5 bar		max. pressure: 6 bar

Please note: max. admissible pressure and temperature can be limited with the applied tube. It is essential to consider the manufacturers' instruction for the tube.

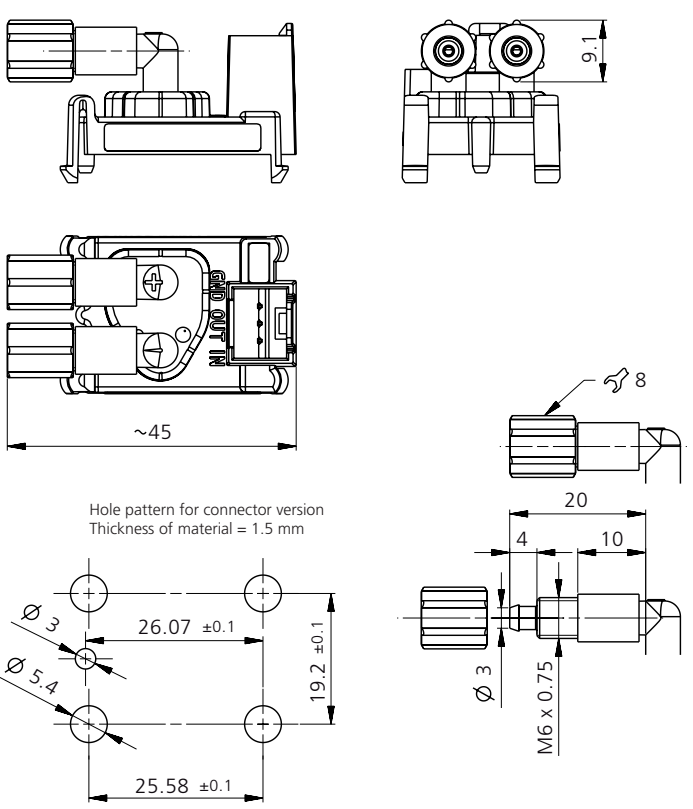
Connector version with hose connector



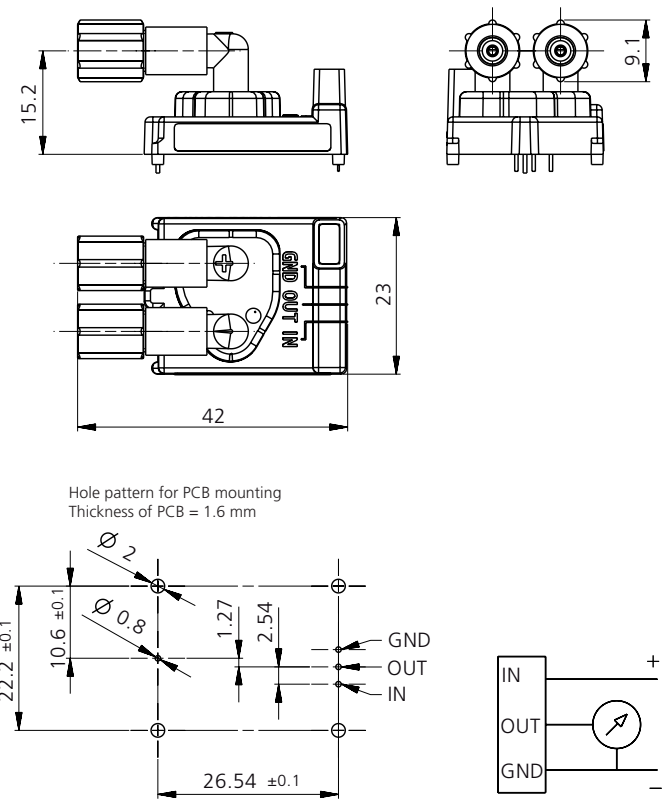
Print version with hose connector



Connector version with plastic screw connection



Print version with plastic screw connection



Further information is mentioned in the mounting instructions.

Electromagnetic compatibility
 The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.

Headquarters
Huba Control Schweiz
Industriestrasse 17
CH-5436 Würenlos
Telefon ++41 (0) 56 436 82 00
Telefax ++41 (0) 56 436 82 82
info.ch@hubacontrol.com

Huba Control Deutschland
Schlattgrabenstrasse 24
72141 Walddorfhäslach
Telefon (07127) 23 93-00
Telefax (07127) 23 93-20
info.de@hubacontrol.com

Huba Control France
Rue Lavoisier
Technopôle Forbach-Sud
57602 Forbach Cedex
Téléphone 03 87 84 73 00
Télécopieur 03 87 84 73 01
info.fr@hubacontrol.com

Huba Control Nederland
Hamseweg 20A
3828 AD Hoogland
Telefoon 033 433 03 66
Telefax 033 433 03 77
info.nl@hubacontrol.com

Huba Control United Kingdom
Unit 3 Network Point, Range Road
Witney Oxfordshire OX29 0YD
Tel 01993 776667
Fax 01993 776671
info.uk@hubacontrol.com

www.hubacontrol.com

 **Huba Control**

FEINE MESSIDEEN FÜR DRUCK UND STRÖMUNG
FOR FINE PRESSURE AND FLOW MEASUREMENT
LA FINESSE DES MESURES DE PRESSION ET DE DEBIT