

Ask about
Traceable Calibration

Huba Control

Huba Relative and Differential Pressure Transmitter 699

Features

- Fast, easy mounting. Housing incorporates integral bracket for wall or ceiling mounting
- Available with or without LCD display
- Adjustable measurement range
- Switchable output signals
- Switchable response curve (linear or root-extracted)
- Resettable Zero Point (Reset button)
- Full scale adjustable
- Attractive price / performance ratio
- Application at over and low pressure range possible



The type 699 transmitters are available in switchable pressure ranges and with or without display. The full-version includes customer specific adjustment possibilities. Especially developed sensors for each pressure range ensure accurate long term stable measurement and the large variety of options provide the perfect platform for use in air conditioning technology as well as for fine measurement in the industrial and medical environment.

SPECIFICATIONS

Medium

Air and neutral gases

Pressure range

-1 ... 1 mbar
0 ... 0.3 to 50 mbar

Tolerable overload on one side

Application at over pressure range
p1=100 mbar, p2= 4 mbar

Application at under pressure range
p1= -4 mbar, p2= -100mbar

Rupture pressure

2 x overload at ambient temperature
1.5 x overload at 70 °C

Ranges of adjustable

The Zero point is adjustable by reset button
The Full scale is adjustable by DIP-Switch
by the turbopoti.

Materials in contact with medium

Housing: Polycarbonate PC
Diaphragm: Silicone
Sensor: Ceramic Al₂O₃ (96%)

Temperature

Medium and ambient 0 ... +70 °C
Storage -10 ... +70 °C
No condensation

Adjustability

Optional version with self configurable parameters
(see order code selection table)

Output

3-wire
0 ... 10 V
0 ... 20 mA
4 ... 20 mA
0 ... 5V³

2-wire
4 ... 20 mA

Power Supply

13.5... 33 VDC/ 24 VAC ±15%
13.5... 33 VDC/ 24 VAC ±15%
13.5... 33 VDC/ 24 VAC ±15%
6.5... 33 VDC/ 24 VAC±15%

8.0 ... 33 VDC

Load

3- wire
0 ... 10V > 10k Ohm
0 ... 20 mA < 500 Ohm
4 ... 20 mA < 500 Ohm
0 ... 5V³ > 10k Ohm

2wire

4-20 mA ≤ $\frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}}$ [Ohm]

Current consumption

At nominal pressure

3- wire
0 ... 10V < 10 mA
0 ... 20 mA < 30 mA
4 ... 20 mA < 30 mA
0 ... 5V³ < 10 mA

2-wire

4 ... 20 mA < 20 mA

Filter

Response time switchable by off/ 0.2s / 1s / 5s / 20s

Dynamic response

Suitable for dynamic measurements
Response time < 20 ms
Load cycle < 10 Hz

Electrical connection

Screw terminals for wire and stranded conductors up to 1.5 mm²,
cable gland with built-in strain relief PG11

Polarity reversal protection

Short circuit proof and protected against polarity reversal. Each
connection is protected against crossover up to max. supply voltage.

Protection standard

Without cover IP00 / With cover IP 54 or IP 65

Pressure connections

Connection pipe Ø 6.2 mm

Installation arrangement

Recommended
Vertical, with pressure connections downwards (± types forcible)

Mounting

Mounting bracket (integrated in case)

Display

LCD Double spaced per 8 digit alphanumeric / At additional
Display backlight LCD-Display 30 mA current consumption
Module RTU RS-485
MODBUS

Tests / Admissions

UL CE-conformity acc. EN 61326-2-3
Electromagnetic compatibility

Weight

Without display approx. 90 g / With display approx. 100g

Packaging

Single packaging in cardboard

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Depending on the version parameters are adjustable by customer

Versions	Variable parameters
Dual DIP-Switch	Pressure ranges in grades
Tenfold DIP-Switch	Pressure ranges in grades; stepless adjustable with Turbo-Poti/ output signals / Filter (off/ 1s) / response curve (linear / root extracted)
Tenfold DIP-Switch with display	Pressure ranges in grades; stepless adjustable with Turbo-Poti/ pressure range character / out signals; additional 0 ... 5 V / Filter (off/ 0.2s / 1s / 5s / 20s) / response curve (linear / root extracted) / Backlight (off/ 5s / on)

ACCURACY

Transmitter Type Parameter	Unit	± 0.5 mbar	0 ... 1 mbar	0 ... 3 mbar	0 ... 5 mbar	0 ... 10-50 mbar
Tolerance zero point	max. % fs	± 1.0	± 1.0	± 0.7	± 0.7	± 0.7
Tolerance full scale	max. % fs	± 1.0	± 1.0	± 0.7	± 0.7	± 0.7
Resolution	% fs	0.2	0.2	0.1	0.1	0.1
Total of linearity, hysteresis and repeatability	max. % fs	± 1.0	± 1.0	± 1.0	± 1.0	± 0.6
Long term stability acc. to DIN IEC 60770	% fs	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0
TC zero point ⁴⁾	typ. % fs/10 K	± 0.2	± 0.2	± 0.2	± 0.1	± 0.1
TC zero point ⁴⁾	max. % fs/10 K	± 1.0	± 1.0	± 0.5	± 0.4	± 0.4
TC sensitivity ⁴⁾	typ. % fs/10 K	± 0.3	± 0.3	± 0.2	± 0.1	± 0.1
TC sensitivity ⁴⁾	max. % fs/10 K	± 0.6	± 0.6	± 0.5	± 0.5	± 0.2

ORDERING TABLE		699.	X	X	X	X	X	X	X	X	X	X
Pre-adjustment	max.range middle range min. range		g									
			B									
			C									
Pressure range switchable	pressure range of 0 % bis 100% fs pressure range of -10 % bis 90% fs pressure range of -100 % bis 100% fs			1								
				2								
				3								
Pressure ranges (switchable)	mbar (hPa) Pa mmWC(mmH ₂ O) InH ₂ O											
	0 ... 0.3/0.5 30/50 3/5 0.1/0.2					0						
	0 ... 0.3/0.5/1 30/50/100 3/5/10 0.1/0.2/0.3					1						
	0 ... 0.5/1/3 50/100/300 5/10/30 0.3/0.5/1					2						
	0 ... 1/3/5 100/300/500 10/30/50 0.5/1/2					3						
	0 ... 3/5/10 300/500/1000 30/50/100 1/2/3					4						
	0 ... 5/10/16 500/1000/1600 50/100/160 2/3/5					5						
	0 ... 10/16/25 1000/1600/2500 100/160/250 3/5/10					6						
	0 ... 16/25/50 1600/2500/5000 160/250/500 5/10/20					7						
Unit of pressure	mbar hPa Pa kPa mmWS InH ₂ O									0		
										4		
										2		
										5		
										3		
										6		
Output signal/ adjustment	Linear without Filter Linear with Filter (transposable) Square root extracted without Filter Square root extracted with Filter (transposable)										1	0
											2	
											4	0
											3	
Outputs / Power supply	0 ... 10 V 13.5 ... 33 VDC / 24 VAC ±15 % 0 ... 20 mA 13.5 ... 33 VDC / 24 VAC ±15 % 4 ... 20 mA 13.5 ... 33 VDC / 24 VAC ±15 % 4 ... 20 mA 8.0 ... 33 VDC Output signal complimentary selectable, at delivery no pre-adjustment											1
												3
												4
												5
												6
Option	Without In pressure unit chosen above In % fs Module MODBUS											0
												1
												2
												3
												0
												1
												2
												3
												4
												5
												6
Pressure connections/ pressure orifices	Connection pipe Ø 6.2 mm without pressure orifice Connection pipe Ø 6.2 mm pressure orifice on P1 Connection pipe Ø 6.2 mm pressure orifice on P2 Connection pipe Ø 6.2 mm pressure orifice on P1 and P2											1
												2
												3
												4
Accessories / Connection Kit	IP 54: Without connection kit IP 54: With connection kit (metal), 90°C angled including tube 2m long (Fig.1) IP 54: With connection kit (plastic) straight including tube 2m long (Fig.2) IP 65: Without connection kit IP 65: With connection kit (metal), 90°C angled including tube 2m long (Fig.1) IP 65: With connection kit (plastic) straight including tube 2m long (Fig.2)											0
												1
												2
												3
												4
												5
Pressure range variation	Indicate W and state on order (e.g. W0 ... +8 mbar / Out 1 ... 6V)											w
												9
												1

Accessories	Order no.
Connection kit for vent duct (metal), 90°C angled including tube 2m long (Fig.1)	104312
Connection kit for vent duct (plastic) straight including tube 2m long (Fig.2)	100064
DIN-rail mounting adaptor	112854
Calibration certificate	104551

MODEL	DESCRIPTION
699	Pressure, vacuum and differential transmitter. (Kindly provide full model from the ordering selection table)

- Temperature
- Calibrator
- Pressure
- Humidity
- Recorder & Dataloggers
- Air Flow
- Level & Flow
- Portable Instruments
- EX Proof / IS
- Environment
- Aerospace