



**thermokon**<sup>®</sup>  
Keep in touch with the future



# Products

## 2012·2013

World Edition





## Thermokon at a Glance

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- 1987** Company foundation in Mittenaar
- 1994** New building in Aarstr. 6 in Mittenaar
- 1997** Extension of company building
- 2000** Extension of company building to 2000 sqm office and production space
- 2007** Extension of the building by 600 sqm
- 2011** Another extension of the building by 600 sqm

### Foundation of subsidiaries:

- 1998** Thermokon Components GmbH Austria
- 2002** Thermokon-Danelko Elektronik AB Sweden
- 2011** Thermokon Automation Equipment Co. Ltd., China

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**Managing Directors:** H. Zygan & J. Teichmann      **Number of employees:** 130

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### Export Initiative Energy Efficiency

Thanks to energy-efficient products and services in the field of energy efficiency, Thermokon also contributes internationally to a safe and cost-effective energy supply, which is of paramount importance to the climate protection.

**Thermokon: We build the future – by sensors made in Germany!**





# 25 Years of Energy-efficient Technology at Highest Stage



Thermokon has committed to a responsible use of natural resources and the climate protection. By means of energy-efficient sensors we are contributing actively to a lasting reduction of the CO<sub>2</sub> emission.

## Long-Standing Experience in Technology

Thermokon offers 25 years of international know-how in technology and market experience. Thanks to the core expertise in the field of sensors for heating systems and buildings, our technical know-how can be found in all our products and meets highest demands on technology and quality.

## Strong Export Business

Worldwide presence in the global market is guaranteed by having a headquarter in Germany, branches in Austria, Sweden and China and sales offices as well as various distributors in many parts of the world. Thermokon's portfolio is exported to more than 80 countries.

## Lasting Performance – Continuous Development

Ever since Thermokon was founded, the main pillars of our success in the international market have been a lasting performance and achievement potential as well as continuous further development of our portfolio. Besides new innovative product concepts also redesigns and further developments of existing products towards their marketability are of paramount importance.

## Flexibility, Efficiency, Sustainability

Nowadays, the topic “sustainability” is of paramount importance for strategic corporate planning. In the field of building automation, the idea of “green buildings” is omnipresent and stands for a sustainable and energy-efficient use of existing resources in buildings. Besides flexibility and efficiency, the top requirements on functional buildings are also potentials for energy savings.

*The complete portfolio of Thermokon is designed for intelligent and sustainable buildings which shall make it to premium classifications according to the directives DIN EN 15232, LEED or Green Star.*

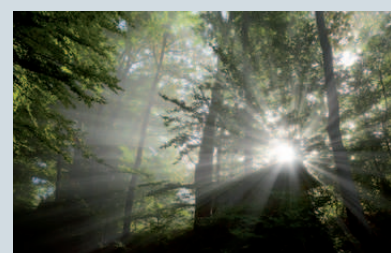
*We are pleased to support our customers to select appropriate products for high energy-efficient buildings.*

## High-Grade Materials – Best Quality

Thanks to a close cooperation with our German partners only high-tensile plastics and stainless steel are used. Last but not least we are guaranteeing best accuracy and compliance with highest safety classes in premium quality which is approved regularly by the certification DIN EN ISO 9001



» Managing Director  
Harald Zygan





## Pressure & Air Velocity

Pressure sensors installed in air-conditioning and cooling systems have to withstand extreme conditions. Thus, tailor made pressure sensors resisting hardest applications are the solution.

<b>PS</b>	Differential pressure switch	<b>P. 200</b>	<b>DPG</b>	Differential pressure gauge	<b>P. 206</b>
<b>DPT</b>	Differential pressure transmitter	<b>P. 201</b>	<b>MM</b>	Differential inclined tube manometer	<b>P. 207</b>
<b>DPL</b>	Differential pressure transmitter	<b>P. 202</b>	<b>DPT Flow</b>	Flow meter pressure transmitter	<b>P. 208</b>
<b>DLM</b>	Pressure transmitter	<b>P. 203</b>	<b>AVT</b>	Air velocity transmitter	<b>P. 209</b>
<b>DPI</b>	Electronic pressure transmitter	<b>P. 205</b>			

## » PS – Differential Pressure Switch

### Application

Adjustable differential pressure switch PS for monitoring the differential pressure of air and other nonflammable and non-aggressive gases.

Possible applications: Monitoring of air filters, fans, industrial cooling air cycles as well as overheating protection, control of air and fire dampers, anti-freeze with heat exchangers.



#### TECHNICAL DATA

Measuring ranges	PS 200:	20... 200Pa
	PS 300:	30... 300Pa
	PS 500:	30... 500Pa
	PS1500:	100...1500Pa
	PS4500:	500...4500Pa
Differential gap	PS 200:	10Pa
	PS 300:	20Pa
	PS 500:	20Pa
	PS1500:	80Pa
	PS4500:	180Pa
Max. working overpr.	50kPa	
Operating temperature	-20°C...+60°C	
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>	
Enclosure/Cover	ABS/PC	
Connecting tube	PVC, soft	
Cable entry	M16	
Protection	IP54	
Dimensions (LxBxH)	105mm x 73mm x 63mm	
Standard accessory included	2 fixing screws 2 plastic duct connectors 2m PVC flexible tube	
Notice	Other measuring ranges on request	

#### DIFFERENTIAL PRESSURE SWITCHES

PS		PG1
Type	Art. No.	
PS200	255196	
PS300	269971	
PS500	269995	
PS1500	255202	
PS4500	273138	

#### ACCESSORIES

PS		PG1
Description	Art. No.	
Metal duct connectors MKS40 (L=40mm) (1 piece), 2 pieces necessary per device	265138	
Metal duct connectors MKS100 (L=100mm) (1 piece), 2 pieces necessary per device	302531	

# Differential Pressure Transmitter – DPT-R8 / DPT MODBUS «

## Application

Differential pressure transmitter with 8 selectable measuring ranges and adjustable output (0-10V or 4-20mA) or Modbus output. For monitoring the differential pressure of air and other nonflammable and non-aggressive gases.

Possible applications: Monitoring for air filters, fans, industrial cooling air cycles as well as overheating protection, control of air and fire dampers.



DPTxxx-R8-D



DPTxxx-R8  
DPTxxx-Modbus



### DIFFERENTIAL PRESSURE TRANSMITTER

DPT-R8, DPT-MODBUS			PG1
Type	Out	Art. No.	
DPT2500-R8	4-20mA/0-10V	426572	
DPT2500-R8-D	4-20mA/0-10V	426596	
DPT7000-R8	4-20mA/0-10V	426619	
DPT7000-R8-D	4-20mA/0-10V	426633	
DPT2000-Modbus	Modbus	396660	
DPT5000-Modbus	Modbus	396691	

### OPTION

DPT-R8		PG1
Description		
Autom. zero point calibration		

TYPES AVAILABLE	
Type (-D=Display)	Measuring ranges (adjustable at the device)
DPT2500-R8 DPT2500-R8-D	-100...+100Pa / 0...100Pa / 0...250Pa 0...500Pa / 0...1.000Pa / 0...1.500Pa 0...2.000Pa / 0...2.500Pa
DPT7000-R8 DPT7000-R8-D	0...1.000Pa / 0...1.500Pa / 0...2.000Pa 0...2.500Pa / 0...3.000Pa / 0...4.000Pa 0...5.000Pa / 0...7.000Pa
DPT2000-Modbus	0...100Pa / 0...250Pa / 0...500Pa 0...1.000Pa / 0...2.000Pa
DPT5000-Modbus	0...1.000Pa / 0...2.000Pa / 0...3.000Pa 0...5.000Pa

TECHNICAL DATA	
Output	4...20mA and 0-10V (adjustable at device), Modbus
Accuracy	DPT-R8: ±1,5% of measuring range, ±6Pa at measuring range <250Pa DPT-Modbus: ±1,5% from respective highest measuring range
Max. working overpressure	30kPa (DPT2500-R8), 80kPa (DPT7000-R8), 50kPa (DPT-Modbus)
Operating temperature	-10°C...+50°C
Power supply	DPT-R8: 24V= (±10%) or 24V~ (±10%) DPT-Modbus: 24V= (±10%)
Connection	DPT-R8: 3-wire DPT-Modbus: 4-wire
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	ABS, cover PC
Connecting tube	PVC, soft
Cable entry	M16
Protection	IP54
Dimensions (LxWH)	90mm x 71,5mm x 36mm
Standard accessory included	2 fixing screws 2 plastic duct connectors 2m PVC flexible tube
Options	Automatic, periodical zero point calibration for increased long-time stability

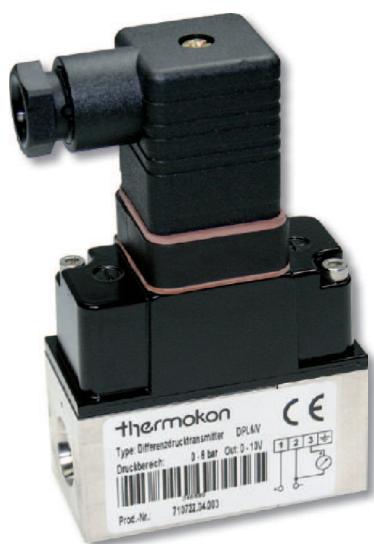
### ACCESSORIES

DPT-R8, DPT-MODBUS		PG1
Description	Art. No.	
Metal duct connectors MKS40 (L=40mm)	265138	
Metal duct connectors MKS100 (L=100mm)	302531	

## » DPL – Differential Pressure Transmitter

### Application

For differential pressure detection in liquid mediums of the air-conditioning, heating and water technique. Also suitable for light aggressive liquids.



TYPES AVAILABLE		
Type	Measuring range	Output
DPL1/A	0...1,0bar	4-20mA
DPL2,5/A	0...2,5bar	4-20mA
DPL4/A	0...4,0bar	4-20mA
DPL6/A	0...6,0bar	4-20mA
DPL1/V	0...1,0bar	0-10V
DPL2,5/V	0...2,5bar	0-10V
DPL4/V	0...4,0bar	0-10V
DPL6/V	0...6,0bar	0-10V

TECHNICAL DATA	
Accuracy	Typ. 1% in temperature range -5...+75°C
Medium temperature	-10...+80°C
Ambient temperature	-10...+50°C
Power supply	4-20mA: 15-24V= (±10%) 0-10V: 15-24V= or 24V~ (±10%)
Pressure connection	G 1/4"
Protection	IP65

### DIFFERENTIAL PRESSURE TRANSMITTER

DPL			PG1
Type	Out	Art. No.	
DPL1/A	4-20mA	346597	
DPL2,5/A	4-20mA	346696	
DPL4/A	4-20mA	346702	
DPL6/A	4-20mA	346719	
DPL1/V	0-10V	346580	
DPL2,5/V	0-10V	346665	
DPL4/V	0-10V	346672	
DPL6/V	0-10V	346689	

### ACCESSORIES

DPL		PG1
Description	Art. No.	
Screw connection set 6mm brass (2 pcs.)	373401	
Screw connection set 6mm stainless steel ( 2 pcs.)	373388	
Screw connection set 8mm brass (2 pcs.)	373418	
Screw connection set 8mm stainless steel (2 pcs.)	373395	





## Application

Pressure transmitter for pressure detection in liquid mediums of the air-conditioning, heating and water technique. Suitable for plants with refrigerants.



DLM G 1/4"



DLM 7/16" Schrader

### TYPES AVAILABLE

Type	Measuring range	Output
DLM-1...0/A	-1...0bar	4-20mA
DLM1/A	0...1bar	4-20mA
DLM1,6/A	0...1,6bar	4-20mA
DLM2/A	0...2bar	4-20mA
DLM2,5/A	0...2,5bar	4-20mA
DLM4/A	0...4bar	4-20mA
DLM6/A	0...6bar	4-20mA
DLM10/A	0...10bar	4-20mA
DLM16/A	0...16bar	4-20mA
DLM25/A	0...25bar	4-20mA
DLM40/A	0...40bar	4-20mA
DLM60/A	0...60bar	4-20mA
DLM100/A	0...100bar	4-20mA
DLM-0,5...9/A 7/16"	-0,5...9bar	4-20mA
DLM0...40/A 7/16"	0...40bar	4-20mA
DLM-1...0/V	-1...0bar	0-10V
DLM1/V	0...1bar	0-10V
DLM1,6/V	0...1,6bar	0-10V
DLM2/V	0...2bar	0-10V
DLM2,5/V	0...2,5bar	0-10V
DLM4/V	0...4bar	0-10V
DLM6/V	0...6bar	0-10V
DLM10/V	0...10bar	0-10V
DLM16/V	0...16bar	0-10V
DLM25/V	0...25bar	0-10V
DLM40/V	0...40bar	0-10V
DLM60/V	0...60bar	0-10V
DLM100/V	0...100bar	0-10V

### TECHNICAL DATA

Accuracy	Typ. 0,7% in temperature range -20...+85°C
Overload range	double nominal pressure
Medium temperature	-40...+125°C
Ambient temperature	-40...+105°C
Power supply	4-20mA: 15-24V= (±10%) 0-10V: 15-24V= oder 24V~ (±10%)
Pressure connection	G 1/4" oder G 1/2", 7/16" Schrader
Protection	IP65
Notice	Other measuring ranges on request



## » DLM – Pressure Transmitter

PRESSURE TRANSMITTER G $\frac{1}{4}$ "		
DLM	PG1	
Type	Out	Art. No.
DLM-1...0/A	4-20mA	507561
DLM1/A	4-20mA	400794
DLM1,6/A	4-20mA	293198
DLM2/A	4-20mA	507578
DLM2,5/A	4-20mA	293204
DLM4/A	4-20mA	277020
DLM6/A	4-20mA	270960
DLM10/A	4-20mA	276627
DLM16/A	4-20mA	277037
DLM25/A	4-20mA	277044
DLM40/A	4-20mA	266574
DLM60/A	4-20mA	353328
DLM100/A	4-20mA	269261
DLM-1...0/V	0-10V	-
DLM1/V	0-10V	309066
DLM1,6/V	0-10V	-
DLM2/V	0-10V	-
DLM2,5/V	0-10V	310260
DLM4/V	0-10V	276993
DLM6/V	0-10V	265409
DLM10/V	0-10V	265461
DLM16/V	0-10V	277006
DLM25/V	0-10V	277013
DLM40/V	0-10V	507585
DLM60/V	0-10V	464185
DLM100/V	0-10V	464192

PRESSURE TRANSMITTER 7/16" SCHRADER		
DLM	PG1	
Type	Out	Art. No.
DLM-0,5...9/A 7/16"	4-20mA	396059
DLM0...40/A 7/16"	4-20mA	396073

PRESSURE TRANSMITTER G $\frac{1}{2}$ "		
DLM	PG1	
Type	Out	Art. No.
DLM-1...0/A	4-20mA	350525
DLM1/A	4-20mA	306508
DLM1,6/A	4-20mA	449489
DLM2/A	4-20mA	287753
DLM2,5/A	4-20mA	449496
DLM4/A	4-20mA	277242
DLM6/A	4-20mA	277228
DLM10/A	4-20mA	277211
DLM16/A	4-20mA	277204
DLM25/A	4-20mA	277198
DLM40/A	4-20mA	460422
DLM60/A	4-20mA	327459
DLM100/A	4-20mA	494755
DLM-1...0/V	0-10V	-
DLM1/V	0-10V	370929
DLM1,6/V	0-10V	-
DLM2/V	0-10V	-
DLM2,5/V	0-10V	462730
DLM4/V	0-10V	277181
DLM6/V	0-10V	277174
DLM10/V	0-10V	277167
DLM16/V	0-10V	277150
DLM25/V	0-10V	277143
DLM40/V	0-10V	345378
DLM60/V	0-10V	507608
DLM100/V	0-10V	507622

OPTION	
DLM	PG1
Description	Art. No.
Adaptor G $\frac{1}{4}$ " to G $\frac{1}{2}$ "	277068

## Application

Electronic differential pressure switch with 4 adjustable measuring ranges (0-10V) and up to 2 relays outputs. For monitoring and indicating low pressures of air or non-flammable and non-aggressive gases. Possible applications: Monitoring of air filters, fans, industrial cooling air cycles as well as overheating protection, flows in air ducts.



### TYPES AVAILABLE

Type	Measuring range (adjustable)
DPI2500	0...100Pa / 0...250Pa / 0...1.000Pa 0...2.500Pa with 1 relay output
DPI2500-2R	0...100Pa / 0...250Pa / 0...1.000Pa 0...2.500Pa, with 2 relay outputs

### TECHNICAL DATA

Output	DPI2500: 0-10V, 1x relay (250V~/ 30V= / 6A) DPI2500-2R: 0-10V, 2x relais (250V~/ 30V= / 6A)
Accuracy	±1,5% from respective highest range
Max. overpressure	30kPa
Ambient temperature	-10°C...+50°C
Power supply	21-35V= (±10%) or 24V~ (±10%), 24V~/24V~ (±10%) (with autom. zero point calibration)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	ABS, cover PC
Connection tube	PVC, soft
Cable entry	M16 and M20
Protection	IP54
Dimensions (LxBxH)	90mm x 71,5mm x 36mm
Inklusive standard accessory	2 fixing screws 2 plastic duct connectors 2m PVC-flexible tube
Optional	Automatic, periodical zero point calibration for improved long-time stability
Notice	Further ranges on request

## ELECTRONIC DIFFERENTIAL PRESSURE SWITCH

DPI			PG1
Type	Out	Art. No.	
DPI2500	0-10V / 1x Relay	466844	
DPI2500-2R	0-10V / 2x Relais	466868	

## OPTION

DPI		PG1
Description		
Automatic zero point calibration		

## ACCESSORIES

DPI		PG1
Description		Art. No.
Metal duct connectors MKS40 (L=40mm)		265138
Metal duct connectors MKS100 (L=100mm)		302531

## » DPG / DPG PS – Differential Pressure Gauge



DPG1k



DPG600/PS600

### DIFFERENTIAL PRESSURE GAUGES

DPG	PG1
Type	Art. No.
DPG60	384438
DPG100	384445
DPG250	255264
DPG500	255271
DPG1k	285025

### DIFFERENTIAL PRESSURE GAUGE / SWITCH

DPG PS	PG1
Type	Art. No.
DPG200/PS200	255233
DPG600/PS600	267205
DPG1,5k/PS1500	338066

## Application

Differential pressure gauges for monitoring the differential pressure of air and other nonflammable and non-aggressive gases. Possible applications: Monitoring of air filters and fans, monitoring of industrial air cycles and flows in air ducts.

### TECHNICAL DATA – DPG

Display range	DPG60: 0... 60Pa DPG100: 0...100Pa DPG250: 0...250Pa DPG500: 0...500Pa DPG1k: 0... 1kPa
Accuracy (at 20°C)	DPG250/DPG500/DPG1k <±2% of measuring range DPG100 <±3% of measuring range DPG60 <±4% of measuring range
Operating temperature	-5°C...+60°C
Enclosure/Cover	ABS/PC
Connecting tube	PVC, soft
Display panel	Ø100mm
Standard accessory included	2 fixing screws 2 plastic duct connectors 2m PVC flexible tube
Notice	Other display ranges on request

### TECHNICAL DATA – DPG PS

Display range	DPG200/PS200: 0... 200Pa DPG600/PS600: 0... 600Pa DPG1,5k/PS1500: 0...1500Pa
Differential gap	DPG200/PS200: 20... 200Pa DPG600/PS600: 40... 600Pa DPG1,5k/PS1500: 100...1500Pa
Accuracy (at 20°C)	<±2% of measuring range
Operating temperature	-5°C...+60°C
Enclosure/Cover	ABS/PC (DPG and PS)
Connecting tube	PVC, soft
Protection	IP54
Display panel	Ø100mm
Standard accessory included	2 fixing screws 2 plastic duct connectors 2m PVC flexible tube incl. wall mounting plate

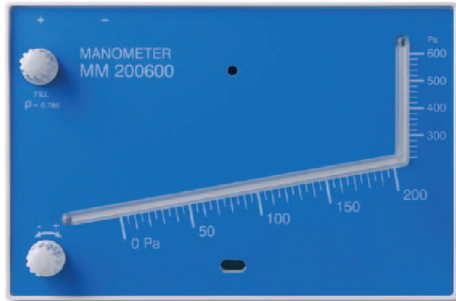
### ACCESSORIES

DPG / DPG PS	PG1
Description	Art. No.
Metal duct connectors MKS40 (L=40mm)	265138
Metal duct connectors MKS100 (L=100mm)	302531

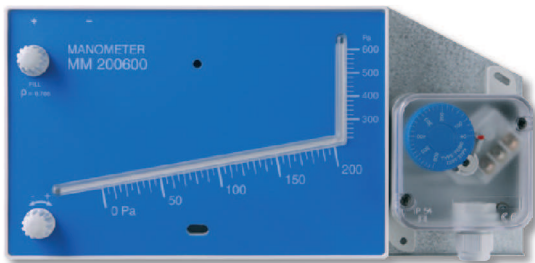
# Differential Pressure Inclined Tube Manometers – MM / MM PS «

## Application

Differential included tube manometers for monitoring of the differential pressure of air and other nonflammable and non-aggressive gases. Possible applications: Monitoring of air filters and fans, monitoring of industrial air cycles and flows in air ducts.



MM200600



MM200600/PS600

### TECHNICAL DATA – MM

Display range	MM±50:	-50...50Pa
	MM100:	-10...100Pa
	MM±100:	-100...500Pa
	MM200600:	0...600Pa
	MM5001500:	0...1500Pa
Accuracy	MM±50:	1Pa
	MM100:	1Pa
	MM±100:	5Pa/25Pa
	MM200600:	5Pa/25Pa
	MM5001500:	10Pa/50Pa

Max. working overpressure 200kPa

Operation temperature -40°C...+60°C

Enclosure/Cover ABS/PMMA

Connecting tube PVC, soft

Dimensions (LxBxH) 210mm x 140mm x 34mm

Standard accessory included  
2 fixing screws  
2m PVC-flexible tube  
30ml gauge fluid  
2 indication stickers (red/green)

### TECHNICAL DATA – MM PS

Display range	MM200600/PS600:	0... 600Pa
	MM5001500/PS1500:	0...1500Pa
Differential gap	MM200600/PS600:	40... 600Pa
	MM5001500/PS1500:	100...1500Pa

Max. working overpressure 50kPa

Operation temperature -20°C...+60°C

Enclosure/Cover  
ABS/PMMA (MM)  
ABS/PC (PS)

Connecting tube PVC, soft

Protection IP54

Dimensions (LxBxH) 290mm x 140mm x 65mm

Standard accessory included  
2 fixing screws  
2m PVC-flexible tube  
30ml gauge fluid  
2 indication stickers (red/green)

### DIFFERENTIAL PRESSURE MANOMETER

MM	PG4
Type	Art. No.
MM±50	268912
MM100	284516
MM±100	384452
MM200600	255240
MM5001500	270908

### DIFFERENTIAL PRESSURE MANOMETER/SWITCH

MM PS	PG4
Type	Art. No.
MM200600/PS600	255257
MM5001500/PS1500	285889



## » DPT Flow – Flow Meter for Fan Control

### Application

DPT Flow is an ideal device for monitoring and controlling the air flow and for measuring flow rate of centrifugal fans.

The flow rate measurement is based on differential pressure values measured directly from the fan. DPT Flow can be used to display the flow value on-site and to send the output value to a control system.



#### TYPES AVAILABLE

Type	Measuring ranges
DPT Flow-D-1000 (with Display)	0...1.000Pa
DPT Flow-D-5000 (with Display)	0...5.000Pa

#### TECHNICAL DATA

Supported fan manufacturers	Comferi, EBM-Pabst, Fläkt Woods, Gebhardt, Nicotra, Rosenberg, Ziehl-Abegg
Output	Volume flow: 0-10V Differential pressure: 0-10V
Accuracy	DPT Flow-1000/5000 ±5Pa and ±1,5% of display
Max. working overpressure	50kPa
Ambient temperature	-5°C...+50°C
Power supply	24V= (±10%) or 24V~ (±10%)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	ABS
Connecting tube	PVC, soft
Cable entry	M16
Protection	IP54
Dimensions (LxBxH)	90mm x 71,5mm x 36mm
Standard accessory included	2 fixing screws 2 plastic duct connectors 2m PVC flexible tube
Notice	Device has an automatical, periodical zero point calibration for increased long-time stability  Other measuring ranges on request

#### FLOW METER

##### DPT FLOW

PG1

Type	Art. No.
DPT Flow-D-1000	370509
DPT Flow-D-5000	377546

#### ACCESSORIES

##### DPT FLOW

PG1

Description	Art. No.
Metal duct connectors MKS40 (L=40mm)	265138
Metal duct connectors MKS100 (L=100mm)	302531

## Application

Air velocity transmitter for measuring and monitoring of air velocities in supply air/exhaust air plants, at ventilators, regulation flaps and electro damper registers.



### TYPES AVAILABLE

Type	Range (selectable on device)	Display	Relay
AVT	0...2m/s, 0...10m/s, 0..20m/s		
AVT-D	0...2m/s, 0...10m/s, 0..20m/s	X	
AVT-D-R	0...2m/s, 0...10m/s, 0..20m/s	X	X

### TECHNICAL DATA

Output 1	4...20mA and 0-10V (selectable on device), 0...2m/s, 0...10m/s, 0...20m/s (selectable on device)
Output 2	4...20mA and 0-10V (selectable on device), 0...50°C
Output optionally	Relay (floating), 230V AC, 6A/30V DC, 6A
Working temperature	-20°C...+70°C
Enclosure	ABS, cover PC
Terminal	Screwing terminal, max. 1,5mm <sup>2</sup>
Cable entry	2x M16
Sensor pocket	Stainless steel, Mat. 1.4571, L=210mm
Protection	IP54
Dimensions (LxBxH)	90mm x 71,5mm x 36mm
Notice	Incl. mounting flange

## AIR VELOCITY TRANSMITTER

AVT			PG1
Type	Out	Art. No.	
AVT	2x 4-20mA/0-10V	430005	
AVT-D	2x 4-20mA/0-10V	430036	
AVT-D-R	2x 4-20mA/0-10V, Relay	430067	