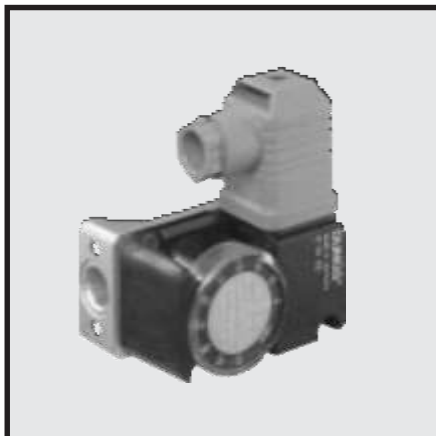
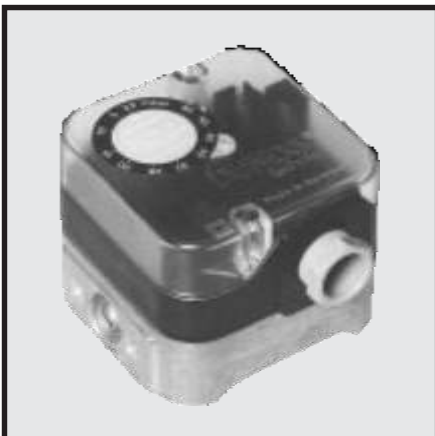


**Pressure switches for gas and air**  
**Pressure sensors Product line overview 5.0**

**DUNGS®**





### Karl Dungs GmbH & Co. - The pressure switch specialists

For decades we have been manufacturing pressure switches for a wide variety of applications. The original application field was firing systems followed by air-conditioning and ventilation systems as well as special machine tools. Today you can select a device tailored to meet your specific requirements from one of the largest pressure switch product lines.

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Brief technical data	Pressure switch for gas and air	Differential pressure switch for air
<b>Max. operating pressures</b>	Refer to individual tables	Refer to individual tables
<b>Temperature ranges</b>	Ambient temperature: -15 °C to +60 °C Medium temperature: -15 °C to +80 °C  <b>Important: Make sure that no condensate can enter into the pressure switch. Icing may occur at temperatures below zero and may lead to a malfunction or failure of the equipment.</b>	Ambient temperature: -15 °C to +85 °C Medium temperature: -15 °C to +85 °C
<b>Materials</b>	Gas-conveying housing: aluminium die casting Diaphragms: NBR basis Protective hood: polycarbonate, for GW../2 design hood made of die-cast aluminium Switching contacts: fine silver Special design: gold-plated fine silver	Housing: polycarbonate Diaphragms: NBR or EPDM Switching contacts: fine silver or gold-plated fine silver
<b>Electrical connection</b>	At terminal screws via PG 11 cable gland, for 7 mm dia. to 12.5 mm dia. cables or plug connection with angle connector as per DIN 43 650, 3-pin and protective contact.	At terminal screws via PG 11 cable gland, for 7 mm dia. to 12.5 mm dia. cables or PG 9 For LGW...A1 and LGW...C3, flat-type connector for 6.3 mm plug-in sleeves as per DIN 46 342 or plug connection with angle connector as per DIN 43 650, 3-pin and protective contact.
<b>Degree of protection</b>	Refer to individual tables	Refer to individual tables

**Conversion table for pressure units**

Unit	Name	Pa	bar	mbar	μbar	N/mm <sup>2</sup>	lbf/in <sup>2</sup>
1Pa = 1 N/m <sup>2</sup>	Pascal	1	10 <sup>-5</sup>	0.01	10	10 <sup>-6</sup>	0.00014
1 bar	Bar	10 <sup>5</sup>	1	1000	10 <sup>6</sup>	0.1	14.5037
1 mbar	Millibar	100	10 <sup>-3</sup>	1	1000	10 <sup>-4</sup>	0.0145
1μbar	Microbar	0.1	10 <sup>-6</sup>	10 <sup>-3</sup>	1	10 <sup>-7</sup>	0.000014
1 N/mm <sup>2</sup>	Newton per mm <sup>2</sup>	10 <sup>6</sup>	10	10 <sup>4</sup>	10 <sup>7</sup>	1	145.03
1lbf/in <sup>2</sup> (psi)	pounds per square inch	6894.76	0.06895	68.95	68948	0.00689	1

## Type overview

### Pressure switches for gases and air, $p_{max} \leq 600$ mbar

<b>LGW...A4/2</b>	Square shape • IP 65 • Die-cast hood • Epoxy coating • G 1/4 threaded connection • Switching pressure adjustable by hand wheel
<b>GW...A2</b>	Square shape • Gas pressure switch for DUNGS multiple actuators • O ring flange connection
<b>GW...A3</b>	Square shape • Gas pressure switch for multiple actuators • O ring flange connection
<b>GW...A4</b>	Square shape • Gas pressure switch • G 1/4 threaded connection • Switching pressure adjustable by hand wheel
<b>GW...A5</b>	Rectangular shape • Compact pressure switch for DUNGS multiple actuators • O ring flange connection
<b>GW...A6</b>	Rectangular shape • Compact pressure switch • G 1/4 threaded connection • Switching pressure adjustable by hand wheel

### Double pressure switches for gases and air (Überdruckbereich)

<b>GW...A6/...A6</b>	Rectangular shape • Flanged single housings • Switching pressures adjustable by hand wheel
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### Pressure switches for gases and air, $p_{max} \geq 2,0$ bar, Metallmembrane

<b>GW 500/2000/6000 A4</b>	Round shape • G 1/4 threaded connection • Switching pressure adjustable by hand wheel
<b>GW 500 A4/2, GW 2000 A4/2, GW 6000 A4/2</b>	

### Pressure limiters for gas and air

<b>NB...A2</b>	Square shape • Interlocked as pressure falls • Pressure switch for DUNGS multiple actuators
<b>NB...A4</b>	Square shape • Interlocked as pressure falls • Switching pressure adjustable by hand wheel • Compact pressure switch
<b>ÜB...A2</b>	Square shape • Interlocked as pressure rises • Pressure switch for DUNGS multiple actuators
<b>ÜB...A4</b>	Square shape • Interlocked as pressure rises • Switching pressure adjustable using hand wheel • Compact pressure switch

### Differential pressure switches for gases and air

<b>GGW...A4</b>	Square shape • Differential pressure switch for gas in pressure range • G 1/4 and G 1/8 threaded connections • Switching pressure adjustable by hand wheel
<b>GGW...A4/U</b>	Square shape • Differential pressure switch for gas in vacuum range • G 1/4 and G 1/8 threaded connections • Switching pressure adjustable by hand wheel
<b>LGW...A4</b>	Square shape • Differential pressure switch for air, pressure switch for gas • G 1/4 and G 1/8 threaded connections • Switching pressure adjustable by hand wheel

### Differential pressure switches for air

<b>LGW...A1</b>	Square shape • Fixed adjustment at factory • Connection for 4 mm dia. hose
<b>LGW...A2</b>	Square shape • Switching pressure adjustable by hand wheel • Connection for 4 mm dia. hose
<b>LGW...A2P</b>	Square shape • Test button • Switching pressure adjustable by hand wheel • G 1/4 (tapered) and G 1/8 threaded connections
<b>LGW...C2</b>	Round shape • Large diaphragm diameter • Switching pressure adjustable by hand wheel • Connection for 4 mm dia. and 6 mm dia. hoses
<b>LGW...C3</b>	Round shape • Fixed adjustment at factory • Connection for 6 mm dia. hose
<b>LGW...A4/2</b>	Square shape • IP 65 • Die-cast hood • Powder-coated • G 1/4 and G 1/8 threaded connection • Switching pressure adjustable by hand wheel

### Klima-Set (differential pressure switch for ventilation and air-conditioning systems with complete range of accessories)

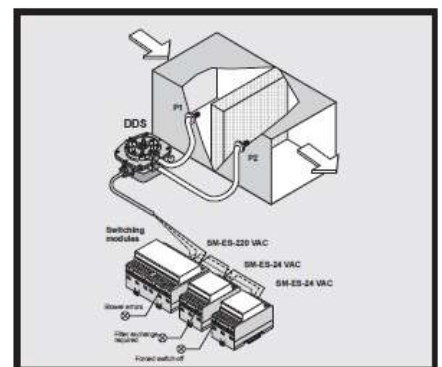
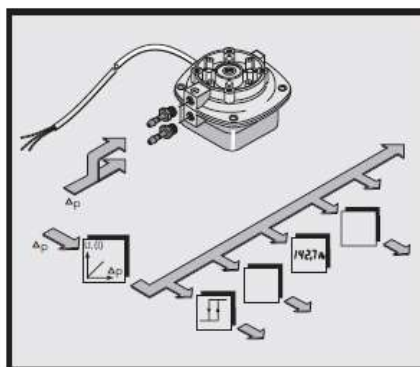
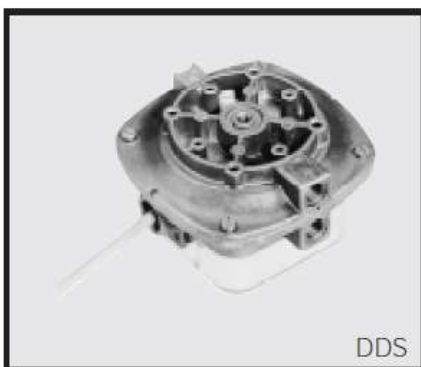
<b>KS...C2</b>	Round shape • Switching pressure adjustable by hand wheel • Suitable for DDC applications
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### Electronic differential pressure sensor for gases and air

<b>DDS</b>	Non-contacting transformer (pressure to voltage) with continuous output 0 - 10 V • Round shape, aluminium version • Different measuring ranges possible • G 1/8 threaded connection
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Differential pressure sensor for gas and air  
 Pressure sensor in compliance with DIN 3398.  
 For gases of families 1, 2, 3 and other neutral media.

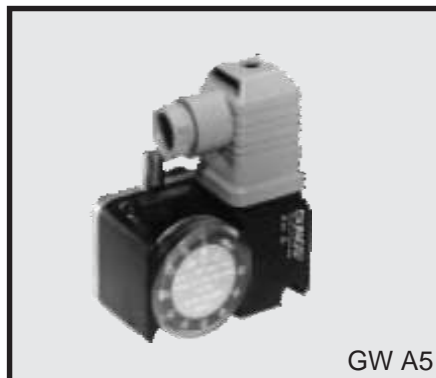
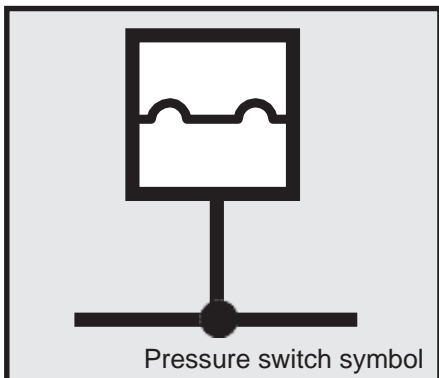
Product	Type	Order No.	Setting ranges [Pa]	Air	Gas	Degree of protection	Max. operating pressure [kPa]
<b>Differential pressure sensor</b>	DDS 100-M2	215 052	0 - 100	X	X	IP 54	5
	DDS 150-M2	216 538	0 - 150	X	X	IP 54	5
	DDS 500-M2	215 055	0 - 500	X	X	IP 54	5
	DDS 1000-M2	215 056	0 - 1000	X	X	IP 54	5
	DDS 1500-M2	215 057	0 - 1500	X	X	IP 54	5
	DDS 3000-M2	231 313	0 - 3000	X	X	IP 54	5
<b>Differential pressure sensor with mounting kit</b>	DDS 100-M2	219 099	0 - 100	X	—	IP 54	5
	DDS 150-M2	219 102	0 - 150	X	—	IP 54	5
	DDS 500-M2	219 105	0 - 500	X	—	IP 54	5
	DDS 1000-M2	219 108	0 - 1000	X	—	IP 54	5
	DDS 1500-M2	219 111	0 - 1500	X	—	IP 54	5
	DDS 3000-M2	231 284	0 - 3000	X	X	IP 54	5
<b>Mounting kit, complete</b>		216 992		X			
<b>Mounting bracket</b>		230 288		X			
<b>Connection hose <math>\varnothing</math> 4 (10 x)</b>		230 303		X			



**Pressure switch for firing systems**

Pressure switch as per EN 1854 for gases of families 1, 2, 3 and other neutral gaseous media. EU type test approval as per EU Gas Appliance Directive.

Product	Type	Order No.	Setting ranges [mbar]	Switching difference $\Delta p$ [mbar]	Air	Gas	Degree of protection	Max. operating pressure [mbar]
Pressure switch for gas and air	GW 3 A2	215 230	0,4 - 3	$\leq 0,3$	X	X	IP 54	500
	GW 10 A2	215 231	1 - 10	$\leq 0,5$	X	X	IP 54	500
	GW 50 A2	215 232	2,5 - 50	$\leq 1$	X	X	IP 54	500
	GW 50 A2	215 233	5 - 50	$\leq 1$	X	X	IP 54	500
	GW 150 A2	215 234	5 - 150	$\leq 3$	X	X	IP 54	500
	GW 150 A2	215 235	30 - 150	$\leq 3$	X	X	IP 54	500
	GW 500 A2	215 236	100 - 500	$\leq 10$	X	X	IP 54	600
	GW 10 A3	as per Spez.	1 - 10	$\leq 1,0$	X	X	IP 00-54	150
	GW 50 A3	as per Spez.	2,5 - 50	$\leq 2,5$	X	X	IP 00-54	150
	GW 100 A3	as per Spez.	20 - 100	$\leq 8,0$	X	X	IP 00-54	150
[AG 3 V12]	GW 3 A5	229 250	0,7 - 3	$\leq 0,7$	X	X	IP 54	500
	GW 10 A5	225 938	2 - 10	$\leq 1$	X	X	IP 54	500
	GW 50 A5	225 939	5 - 50	$\leq 2,5$	X	X	IP 54	500
	GW 150 A5	225 940	10 - 150	$\leq 5$	X	X	IP 54	500
	GW 500 A5	227 639	100 - 500	$\leq 15$	X	X	IP 54	600
[AG 3 V 2]	GW 500 A5	227 639	100 - 500	$\leq 15$	X	X	IP 54	600
	GW 500 A4/2237 804	100 - 500	100 - 500	$\leq 10$	X	X	IP 65	600
[AG M M\$9 V0 VS]								



**Pressure switch for firing systems**

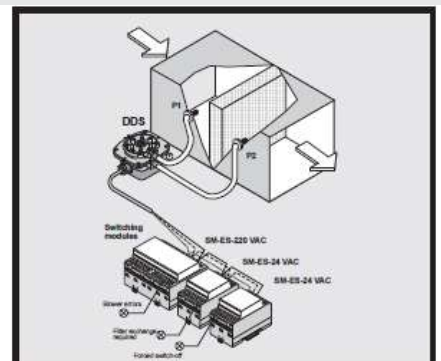
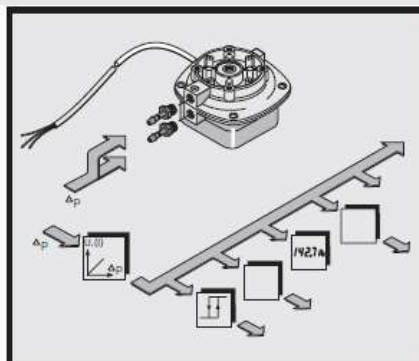
Double pressure switch as per EN 1854 for gases of families 1, 2, 3 and other neutral gaseous media. EU type test approval as per EU Gas Appliance Directive.

Product	Type	Order No.	Setting ranges [mbar]	Switching difference $\Delta p$ [mbar]	Air	Gas	Degree of protection	Max. operating pressure [mbar]		
Pressure switch for gas and air [AG G3 MS9 V0]	GW 3 A6	228 723	0,7 - 3	$\leq 0,7$	X	X	IP 54	500		
	GW 10 A6	228 724	2 - 10	$\leq 1,0$	X	X	IP 54	500		
	GW 50 A6	228 725	5 - 50	$\leq 2,5$	X	X	IP 54	500		
	GW 150 A6	228 726	10 - 150	$\leq 5$	X	X	IP 54	500		
	GW 500 A6	228 727	100 - 500	$\leq 15$	X	X	IP 54	600		
Double pressure switch for gas and air [MIN: G3 M9 VS3 VS0] [MAX: G3 MS9 V3 V0]	GW3A6/3A6	229 235	0,7 - 3	0,7- 3	$\leq 0,7$	$\leq 0,7$	X	X	IP 54	500
	GW3A6/10A6	229 236	0,7 - 3	2 - 10	$\leq 0,7$	$\leq 1,0$	X	X	IP 54	500
	GW10A6/10A6	229 237	2 - 10	2 - 10	$\leq 1,0$	$\leq 1,0$	X	X	IP 54	500
	GW10A6/50A6	229 238	2 - 10	5 - 50	$\leq 1,0$	$\leq 2,5$	X	X	IP 54	500
	GW10A6/150A6	229 239	2 - 10	10 -150	$\leq 1,0$	$\leq 5$	X	X	IP 54	500
	GW50A6/50A6	229 240	5 - 50	5 - 50	$\leq 2,5$	$\leq 2,5$	X	X	IP 54	500
	GW50A6/150A6	229 241	5 - 50	10 -150	$\leq 2,5$	$\leq 5,0$	X	X	IP 54	500
	GW150A6/150A6	229 242	10 - 150	10 -150	$\leq 5$	$\leq 5$	X	X	IP 54	500
GW500A6/500A6	229 243	100 - 500	100-500	$\leq 15$	$\leq 15$	X	X	IP 54	600	

**Pressure switch for firing systems**

Pressure switch as per DIN 3398, DIN EN 3398, Part 3 and DIN EN 1854 for gases of families 1, 2, 3 and other neutral gaseous media. EU type test approval as per EU Gas Appliance Directive.

Product	Type	Order No.	Setting ranges [mbar]	Switching difference $\Delta p$ [mbar]	Air	Gas	Degree of protection	Max. operating pressure [mbar]
Pressure switch	GW 500 A4	232 034	100 - 500	$\leq 15$	X	X	IP 54	2000
	GW 500 A4/2	232 105	100 - 500	$\leq 15$	X	X	IP 65	2000
	GW 2000 A4	232 037	300 - 2000	$\leq 30$	X	X	IP 54	4000
	GW 2000 A4/2	232 106	300 - 2000	$\leq 30$	X	X	IP 65	4000
	GW 6000 A4	232 039	1000 - 6000	$\leq 300$	X	X	IP 54	7200
	GW 6000 A4/2	232 107	1000 - 6000	$\leq 300$	X	X	IP 65	7200



**Pressure switch for firing systems**

Pressure switch as per DIN 3398, Part 1, EN 1854 for gases of families 1, 2, 3 and other neutral gaseous media.  
 EU type test approval as per EU Gas Appliance Directive.

Product	Type	Order No.	Setting ranges[mbar]	Switching difference $\Delta p$ [mbar]	Air	Gas	Degree of protection	Max. operating pressure [mbar]
<b>Pressure limiter</b> [AG G3 V12] ↓	NB 50 A2	215 237	2,5 - 50	—	X	X	IP 54	500
	NB 150 A2	215 240	30 - 150	—	X	X	IP 54	500
	NB 500 A2	215 241	100 - 500	—	X	X	IP 54	600
<b>Pressure limiter</b> [AG PG MS9 V0] ↓	NB 50 A4	210 534	2,5 - 50	—	X	X	IP 54	500
	NB 150 A4	210 931	30 - 150	—	X	X	IP 54	500
	NB 500 A4	210 971	100 - 500	—	X	X	IP 54	600
<b>Pressure limiter</b> [AG G3 V12] ↑	ÜB 50 A2	215 242	2,5 - 50	—	X	X	IP 54	500
	ÜB 150 A2	215 245	30 - 150	—	X	X	IP 54	500
	ÜB 500 A2	215 246	100 - 500	—	X	X	IP 54	600
<b>Pressure limiter</b> [AG PG MS9 V0] ↑	ÜB 50 A4	210 537	2,5 - 50	—	X	X	IP 54	500
	ÜB 150 A4	138 630	30 - 150	—	X	X	IP 54	500
	ÜB 500 A4	210 970	100 - 500	—	X	X	IP 54	600





**Pressure switch for firing systems**

Differential pressure switch as per EN 1854 for gases of families 1, 2, 3 and other neutral gaseous media. EU type test approval as per EU Gas Appliance Directive.

Product	Type	Order No.	Setting ranges [mbar]	Switching difference $\Delta p$ [mbar]	Air	Gas	Degree of protection	Max. operating pressure [mbar]
Pressure [AG M MS9 V0 VS3 NH <sub>3</sub> best.] ↑	GGW 3 A4	232 108	0,4 - 3	≤ 0,3	X	X	IP 54	500
	GGW 10 A4	232 109	1 - 10	≤ 0,5	X	X	IP 54	500
	GGW 50 A4	232 110	2,5 - 50	≤ 1	X	X	IP 54	500
	GGW 150 A4	232 111	30 - 150	≤ 3	X	X	IP 54	500
Vacuum [AG M MS9 V0 VS3 NH <sub>3</sub> best.] ↑	GGW3 A4-U	232 991	-0,4 - -3	≤ 0,3	X	X	IP 54	-500
	GGW 10 A4-U	232 992	-1 - -10	≤ 0,5	X	X	IP 54	-500
	GGW50 A4-U	232 993	-2,5 - -50	≤ 1	X	X	IP 54	-500
	GGW 150 A4-U	232 994	-30 - -150	≤ 3	X	X	IP 54	-500



Differential pressure switches for air, flue and exhaust gases in firing systems  
 Differential pressure switches per DIN 3398 Part 2; LGW A4 DIN EN 1854  
 EU type test approval as per EU Gas Appliance Directive.

Product	Type	Order No.	Setting ranges [mbar]	Switching difference $\Delta p$ [mbar]	Air	Gas	Degree of protection	Max. operating pressure [mbar]
<b>Differential pressure switch for air</b>	LGW 3 A1	as per Spez.	0,4 - 3	$\leq 0,35$	X	—		100
	LGW 10 A1	as per Spez.	1 - 10	$\leq 0,5$	X	—		100
	LGW 50 A1	as per Spez.	2,5 - 50	$\leq 1$	X	—		100
[AG PG V9]	LGW 3 A2	107 409	0,4 - 3	$\leq 0,35$	X	—		500
	LGW 10 A2	107 417	1 - 10	$\leq 0,5$	X	—		500
	LGW 50 A2	107 425	2,5 - 50	$\leq 1$	X	—		500
	LGW 150 A2	107 433	30 - 150	$\leq 3$	X	—		500
[AG PG V9]	LGW 3 A2P	120 204	0,4 - 3	$\leq 0,35$	X	—		500
	LGW 10 A2P	120 212	1 - 10	$\leq 0,5$	X	—		500
	LGW 50 A2P	120 220	2,5 - 50	$\leq 1$	X	—		500
	LGW150 A2P	120 238	30 - 150	$\leq 3$	X	—		500
[AG PG MS9 VS3 V0]	LGW 3 A4	221 590	0,4 - 3	$\leq 0,3$	X	X**		500
	LGW 10 A4	221 591	1 - 10	$\leq 0,5$	X	X**		500
	LGW 50 A4	221 592	2,5 - 50	$\leq 1$	X	X**		500
	LGW 150 A4	221 593	30 - 150	$\leq 3$	X	X**		500
[AG PG V3]	LGW 1,5 C2	212 200	0,2 - 1,5	$\leq 0,2$	X	—		50
	LGW 3 C2	212 571	0,4 - 3	$\leq 0,3$	X	—		50
	LGW 10 C2	212 572	1 - 10	$\leq 0,5$	X	—		50
	LGW 1,5 C3	as per Spez.	0,2 - 1,5	$\leq 0,07-0,3$	X	—		50
	LGW 3 C3	as per Spez.	0,4 - 3	$\leq 0,12-0,4$	X	—		50
	LGW 10 C3	as per Spez.	1 - 10	$\leq 0,20-0,6$	X	—		50
[AG M MS9 V0]	LGW 3 A4/2	232 041	0,4 - 3	$\leq 0,3$	X	X**		500
	LGW 10 A4/2	232 046	1 - 10	$\leq 0,5$	X	X**		500
	LGW 50 A4/2	232 048	2,5 - 50	$\leq 1$	X	X**		500
	LGW 150 A4/2	232 050	30 - 150	$\leq 3$	X	X**		500

\* optionally IP 42 or IP 20. Pressure switch with IP 10 or IP 20 must be installed so that degree of protection IP 44 is ensured during operation.

\*\* applies only to connection to G 1/4, lower pressure chamber

**Pressure switch for ventilation and air-conditioning systems**  
**Differential pressure switch for air**  
**DUNGS Klima-Set with complete mounting kit**

Product	Type	Order No.	Setting ranges [Pa]	Switching difference $\Delta p$ [Pa]	Air	Gas	Degree of protection	Max. operating pressure [kPa]
<b>Klima-Set</b>	KS 150 C2	217 773	↓ □ 20 - 150	≤ 18	X	—	IP 54	5
	KS 300/1 C2	224 390	↓ □ 20 - 300	≤ 20	X	—	IP 54	5
	KS 300 C2	217 774	↑ □ 40 - 300	≤ 20	X	—	IP 54	5
	KS 500 C2	226 885	↑ □ 30 - 500	≤ 25	X	—	IP 54	5
	KS 600 C2	217 775	↑ □ 70 - 600	≤ 30	X	—	IP 54	5
	KS 1000 C2	217 776	↑ □ 100 - 1000	≤ 40	X	—	IP 54	5
	KS 3000 C2	217 777	↑ □ 250 - 3000	≤ 80	X	—	IP 54	5



**Centrifugal switch**  
**Air supply loss protection for forced-air burner and ventilator motors as per DIN 32 726**  
**DIN-tested and registered to DIN-DVGW**

Product	Type	Order No.	Degree of protection	Speeds	Electrical data
<b>Centrifugal switch</b>	FW 100/2	210 312	IP 44	Switch-on speed (as speed increases), DIN 32 726: $n \leq 2565 \text{ rpm}^{-1}$	Voltage: 220 VAC Nominal current: 5 A (ohmic load)
	FW 100/2	211 523	IP 54	Switch-off speed (as speed decreases), DIN 32 726: $n \geq 2160 \text{ rpm}^{-1}$ Special speeds on request Range: 800 - 4000 rpm	



**Pressure switches for gas and air  
 Pressure sensors Typeplat**

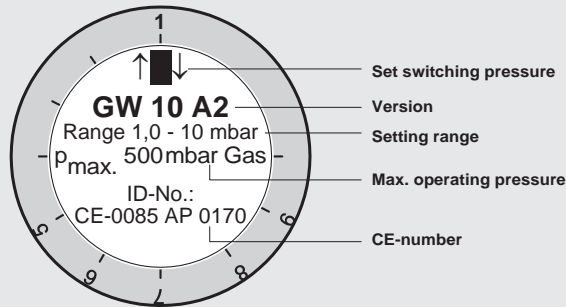


**Gas pressure typeplate**

All the information is indicated on the pressure switch setting wheel.

The setting wheel for **gas pressure switches** is always **yellow**.

Types: GW...A2, GW...A4, GW...A5, GW...A6, ÜB...A2, ÜB...A4, NB...A2, NB...A4

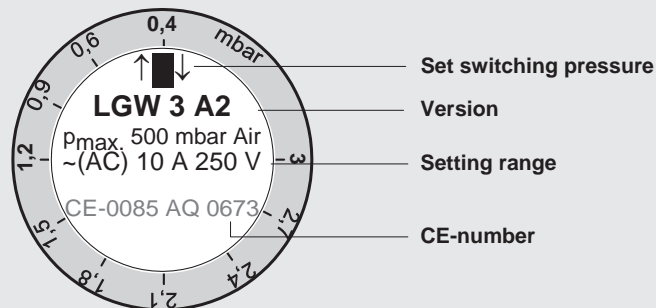


**Typeplate for differential pressure switches for gases and/or air**

The setting wheel for **gas pressure switches** is **yellow**.

It is always **blue** for differential pressure switches for **air**.

Types: LGW, LGW...A2, LGW...A2P, LGW...A4, LGW...C2, KS...C2



**Differential pressure switches for air, flue and exhaust gases**

The LGW...A1 differential pressure switch is only manufactured to customer-specific switching values.

Each differential pressure switch therefore has an individual typeplate. The typeplate is affixed to the equipment.

