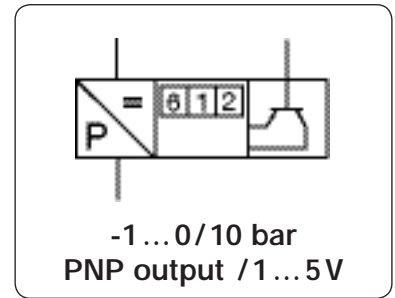


Programmable Vacuum and Pressure Switch Transducer with Display DSB / DSC

Description	Pressure to the unit is continuously monitored by a piezo-resistive sensor and converted into a proportional voltage signal. The signal is then amplified and delivered as a PNP signal.	
Media	dry, lubricated or unlubricated compressed air or non-corrosive gases	
Supply voltage	12... 30 V DC, reverse voltage protection, current consumption max. 30 mA, output current max. 250 mA	
Adjustment	DSB	Mode: hysteresis or window, switching point and hysteresis, NO or NC, closing or opening time, bar, psi, MPa, kg/cm ² etc. Display: current pressure, highest pressure, measurement errors
Switching output	DSB	2x PNP freely programmable as NO or NC, max. contact load 250 mA, short-circuit-proof
Switching output	DSC	1x PNP as at DSB and 1x analogue output signal 1... 5 V, output impedance < 500
Hysteresis	adjustable from 0% to 100% of set switching point	
Repeatability	< 0.2% FS	
LED display	3-digit, red 7-segment display on DSB, no display on DSC	
Error display	via 7-segment display on DSB, via multicolour LED on DSC	
Certifications	CSA-compliant, UL-listed	
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	
Material	Body: ABS-PC plastic, shockproof	
	Linearity	< 1% FS
	Switching frequency	200 Hz
	Mounting position	any
	Shock resistance	10 g
	Protection class	IP 65
	Connection thread:	nickel-plated brass



Dimensions	Digital display	Over-pressure	Output signal	Measurement	Order number
B	Ø	max. bar	type	range	
mm	mm		PNP/analogue	bar	

Sensor pressure switch					connection thread G ¹ / ₈ m, without coupling socket, M8x1, 4-pin	DS	
57	16	with	5	2x PNP	250	0... -1	DSB-V1
			16			-1... +1	DSB-V2
			16			0... 10	DSB-10
			16			-1... 10	DSB-V10
44	16	without	5	1x PNP/1x analogue	250	0... -1	DSC-V1
			16			-1... +1	DSC-V2
			16			-1... 10	DSC-V10



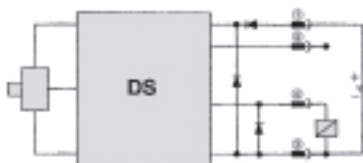
DSB with digital display



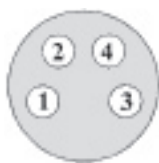
DSC

Accessories, enclosed

coupling socket	M8x1, 4-pin with 5 m cable	straight	KM8-A4-5
		angular	KM8-C4-5

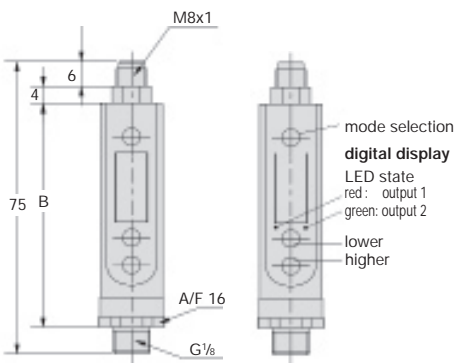
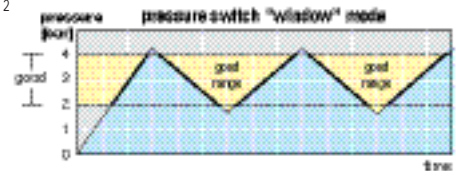
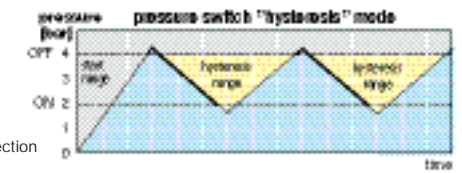
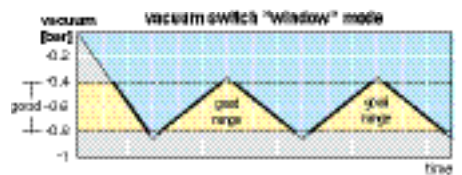
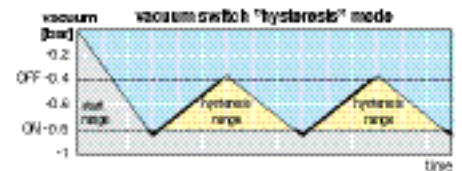


connection diagram

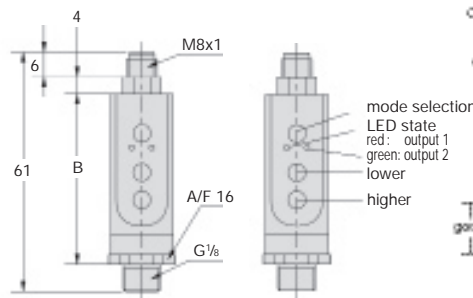


PIN configuration according to DIN EN 50044

PIN configuration DIN EN 50044		
pin	colour	configuration
1	brown	24 V DC (+)
2	white	output 2 / analogue
3	blue	24 V DC (-)
4	black	output 1 / digital

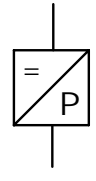


DSB



DSC

Description	The operating pressure is converted into a proportional, electrical signal by a silicon pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.	
Media	compressed air or non-corrosive gases compatible with aluminium, silicone and glass	
Supply voltage	12...36 V DC, residual ripple 5%, with reverse voltage protection	
Electrical connector	plug according to DIN 43650A, contact gap 18 mm, 3-pin, with coupling socket	
Output signal	4...20 mA: max. current consumption 260 mW	0...10 V: max. current consumption 50 mW
Linearity/Hysteresis	< 0.2 % FS typical	< 0.5 % FS
Repeatability	< 0.1 % FS typical	< 0.2 % FS
Long-term stability	< 0.5 % FS typical	< 1 % FS
Temperature sensitivity	< 0.02% FS typical per °C at 50 to 70 °C / 122 to 158 °F,	< 0.04% FS per °C at 0 to 50 °C / 32 to 122 °F
Response time	1 ms for 10...90% of pressure range	Shock resistance 50 g
Vibration resistance	2 g at 5...500 Hz	Protection class IP 65 according to DIN 40050
Mounting position	any	Material Body: aluminium
Temperature range	-40 °C to 100 °C / -40 °F to 212 °F	



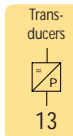
-1...20 bar, accurate to 0.5% compressed air or gases

Dimensions			Operating pressure max. bar	Measurement range mbar/bar	Order number for output signal	
B mm	Ø mm	A/F mm			4...20 mA	0...10 V

Pressure transducer G ^{3/8} m				open sensor, gauge pressure, with angular coupling socket	D4A	D4V
127	30	24	2	0... -1 bar	D4A-V0	D4V-V0
			2	-1... 1 bar	D4A-V1	D4V-V1
			1.4	0...-350 mbar	D4A-V3	D4V-V3
			1.4	-350... 350 mbar	D4A-V4	D4V-V4
			1.4	-70... 70 mbar	D4A-V7	D4V-V7
			1.4	0... 70 mbar	D4A-B7	D4V-B7
			1.4	0... 350 mbar	D4A-C3	D4V-C3
			2	0... 1 bar	D4A-01	D4V-01
			2	0.2... 1 bar	D4A-D1	D4V-D1
			4	0... 2 bar	D4A-02	D4V-02
			10	0... 5 bar	D4A-05	D4V-05
			12	0... 6 bar	D4A-06	D4V-06
			16	0... 10 bar	D4A-10	D4V-10
			32	0... 16 bar	D4A-16	D4V-16
			40	0... 20 bar	D4A-20	D4V-20

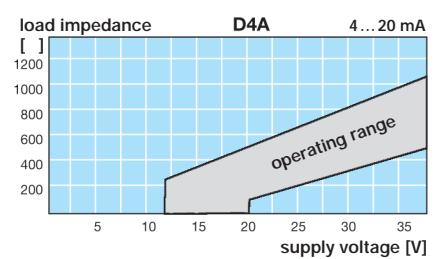
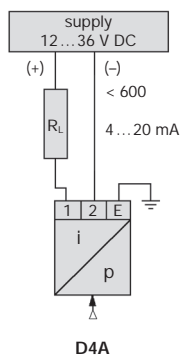
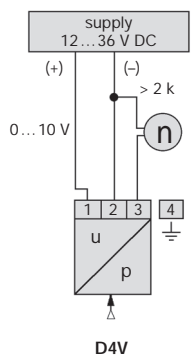
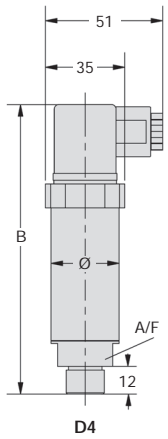


D4

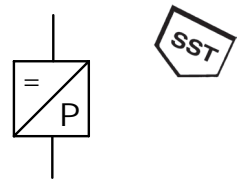


Special options, add the appropriate letter

deviant pressure range	measurement range to be indicated in clear text	D4 . -XX
absolute pressure	lowest measurement range: 0...1 bar _{abs}	D4 . . . A
G^{1/4}m	connection thread	D4 . . . 02
G^{1/2}m	connection thread	D4 . . . 04



Description	The operating pressure is converted into a proportional, electrical signal by a silicon pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.
Media	all media compatible with stainless steel 316L, material no. 1.4404
Supply voltage	12...30 V DC, residual ripple 5%, reverse voltage protection, max. current consumption 1 mA
Electrical connection	plug M12x1, 4-pins, with coupling socket
Outlet signal	4...20 mA: max. power consumption 260 mW 0...10 V: max. power consumption 50 mW
Linearity/Hysteresis	< 0.2 % FS typ. < 0.5 % FS
Repeatability	< 0.1 % FS typ. < 0.2 % FS
Long-term stability	< 0.1 % FS typ. < 0.2 % FS
Temperature sensitivity	< 0.03% FS typical per °C / K at 0 °C to 70 °C / 32 °F to 158 °F < 0.05% FS typical per °C / K at 0 °C to 70 °C / 32 °F to 158 °F
Response time	1 ms at 10...90% of measuring range
Vibration sensitivity	10 g at 5...500 Hz
Mounting position	any
Material	Body/Diaphragm: stainless steel 316L, material no. 1.4404
	Shock resistance 50 g
	Protection class IP 64 according to DIN 40050
	Temperature range -40 °C to 100 °C / -40 °F to 212 °F



0...35 bar, accurate to 0.5% corrosive media

Dimensions		Operating pressure max. bar	Measurement range mbar / bar	Order number for output signal	
B mm	Ø mm			4...20 mA	0...10 V

For corrosive media		G½m, SST, gauge pressure, with angular coupling socket	D9A	D9V
65	22	1	0...350 mbar	D9A-C3 D9V-C3
		2	0... 1 bar	D9A-01 D9V-01
		4	0... 2 bar	D9A-02 D9V-02
		10	0... 5 bar	D9A-05 D9V-05
		20	0... 10 bar	D9A-10 D9V-10
		32	0... 16 bar	D9A-16 D9V-16
		40	0... 20 bar	D9A-20 D9V-20
		70	0... 35 bar	D9A-35 D9V-35



D9

Special options, add the appropriate letter

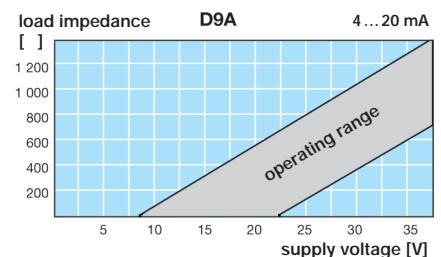
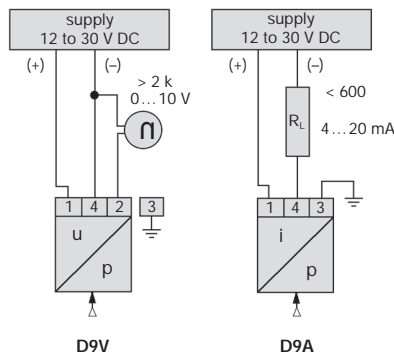
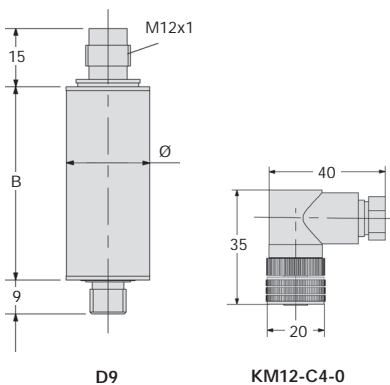
deviant pressure range	measurement range to be indicated in clear text	D9 .-XX
absolute pressure range	lowest measurement range: 0...1 bar abs	D9 .- . . A
G¼m	connection thread	D9 .- . . 02
G¾m	connection thread	D9 .- . . 03
for oxygen	specially cleaned	D9 .- . . 15



KM12-C4-0

Accessories, enclosed

coupling socket, 4-pin	M12x1, straight	KM12-A4-0	angular	KM12-C4-0
socket with cable	2 m, straight	KM12-A4-2	angular	KM12-C4-2
	5 m, straight	KM12-A4-5	angular	KM12-C4-5



Transducers
13

Description	The operating pressure is converted into a proportional, electrical signal by a ceramics pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.	
Media	D7: all non-corrosive media compatible with stainless steel, nylon, silicon, silicone and epoxy D8: compressed air, non-corrosive gases or liquids compatible with ceramics and NBR/Buna-N	
Supply voltage	12...30 V DC, residual ripple 5%, with reverse voltage protection, max. current consumption 1 mA	
Electrical connector	plug M12x1, 4-pin, with coupling socket	
Output signal	4...20 mA: max. power consumption 260 mW	0...10 V: max. power consumption 50 mW
	D7	D8
Linearity/Hysteresis	< 0.2 % FS typ. < 0.5 % FS	< 0.1 % FS typ. < 0.2 % FS
Repeatability	< 0.1 % FS typ. < 0.2 % FS	< 0.1 % FS typ. < 0.2 % FS
Long-term stability	< 0.5 % FS typ. < 1 % FS	< 0.3 % FS typ. < 0.6 % FS
Temperature sensitivity	< 0.03% FS typ./°C < 0.08% FS/°C (0...50 °C)	< 0.03% FS typ./°C < 0.05% FS/°C (0...70 °C)
Vibration resistance	2 g at 5...500 Hz	10 g at 5...500 Hz
Temperature range	-40 °C to 85 °C / -40 °F to 185 °F	-40 °C to 100 °C / -40 °F to 212 °F
Response time	1 ms for 10...90% of pressure range	Shock resistance 50 g
Material	Body: stainless steel 316L, mat. no. 1.4404	Measuring cell (D8): ceramics AL ₂ O ₃ and NBR/Buna-N o-ring

accurate to 0.2% or 0.5% compressed air or liquids

Dimensions		Operating pressure	Measurement range	Order number for output signal	
B	Ø	max. bar	mbar / bar	4...20 mA	0...10 V
mm	mm				

For non-corrosive media			G ¹ / ₄ m, open sensor, gauge pressure, with angular coupling socket	D7A accurate to 0.5%	D7V
52	22	0.25	0... 10 mbar	D7A-B1	D7V-B1
		0.25	-10... 10 mbar	D7A-B1V	D7V-B1V
		0.35	0... 25 mbar	D7A-B2	D7V-B2
		0.35	-25... 25 mbar	D7A-B2V	D7V-B2V
		1	0... 70 mbar	D7A-B7	D7V-B7
		1	-70... 70 mbar	D7A-B7V	D7V-B7V
		1	0... 350 mbar	D7A-C3	D7V-C3
		1	-350... 350 mbar	D7A-C3V	D7V-C3V
		2	0... 1 bar	D7A-01	D7V-01
		2	-1... 1 bar	D7A-V1	D7V-V1
		4	0... 2 bar	D7A-02	D7V-02
		10	0... 5 bar	D7A-05	D7V-05
		10	0... 7 bar	D7A-07	D7V-07



D7 D8

For compressed air or liquids			G ¹ / ₄ m, ceramic sensor, with angular coupling socket	D8A accurate to 0.2%	D8V
52	22	2	0... -1 bar	D8A- V0	D8V- V0
		2	-1... 1 bar	D8A- V1	D8V- V1
		2	0... 1 bar	D8A- 01	D8V- 01
		4	0... 2 bar	D8A- 02	D8V- 02
		10	0... 5 bar	D8A- 05	D8V- 05
		20	0... 10 bar	D8A- 10	D8V- 10
		32	0... 16 bar	D8A- 16	D8V- 16
		40	0... 20 bar	D8A- 20	D8V- 20
		50	0... 25 bar	D8A- 25	D8V- 25
		70	0... 35 bar	D8A- 35	D8V- 35
		100	0... 50 bar	D8A- 50	D8V- 50
		140	0... 70 bar	D8A- 70	D8V- 70
		200	0... 100 bar	D8A-100	D8V-100



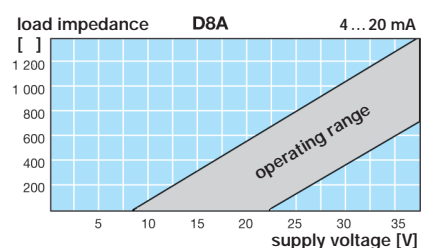
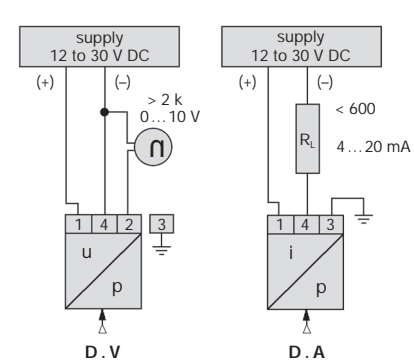
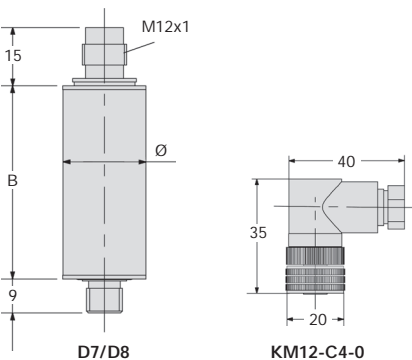
KM12-C4-0

Special options, add the appropriate letter

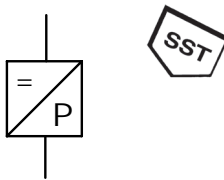
deviant pressure range	measurement range to be indicated in clear text	D...-XX
absolute pressure range	lowest measurement range: 0...1 bar _{abs}	D...-...A
G ¹ / ₄ m	connection thread	D...-...02
G ³ / ₈ m	connection thread	D...-...03
for oxygen	specialy cleaned, max. 40 bar	D8...-...15 for D8

Accessories, enclosed

coupling socket, 4-pin	M12x1, straight	KM12-A4-0	angular	KM12-C4-0
socket with cable	2 m, straight	KM12-A4-2	angular	KM12-C4-2
	5 m, straight	KM12-A4-5	angular	KM12-C4-5



Description	The operating pressure is converted into a proportional, electrical signal by a silicon pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.
Media	all media compatible with stainless steel 316L or 1.4404 D6...W: liquids compatible with stainless steel 316L, polyethylene and NBR/Buna-N D6...H: light and heavy heating oil
Supply voltage	13...30 V DC at voltage signal, 12...36 V DC at current signal, residual ripple 5%, reverse voltage protection plug according to DIN 43650A, contact gap 18 mm, 3-pin, with coupling socket
Electrical connector	
Output signal	4...20 mA: max. power consumption 260 mW 0...10 V: max. power consumption 100 mW
Linearity/Hysteresis	< 0.1 % FS typ. < 0.5 % FS
Repeatability	< 0.1 % FS typ. < 0.2 % FS
Long-term stability	< 0.2 % FS typ. < 0.4 % FS
Temperature sensitivity	< 0.03% FS typ. per °C at 0 to 70 °C / 32 to 158 °F, < 0.06% FS per °C at 0 to 70 °C / 32 to 158 °F
Response time	1 ms for 10...90% of pressure range
Vibration resistance	10 g at 5...500 Hz
Mounting position	any
Material	Body/Diaphragm: stainless steel 316L/1.4404, Shock resistance 50 g D6...W: additionally polyethylene and NBR/Buna-N Protection class IP 65 according to DIN 40050 Temperature range -40 to 100°C / -40 to 212°F



-1 ... 350 bar, accurate to 0.5% compressed air or liquids

Dimensions			Operating pressure	Measurement range	Order number for output signal	
B	Ø	A/F	max. bar	bar	4...20 mA	0...10 V

Pressure transducer G½m			SST, gauge pressure, with angular coupling socket		D6A	D6V
142	27	27	2	0... -1	D6A-V0	D6V-V0
			2	-1... 1	D6A-V1	D6V-V1
			2	0... 1	D6A-01	D6V-01
			4	0... 2	D6A-02	D6V-02
			10	0... 5	D6A-05	D6V-05
			20	0... 10	D6A-10	D6V-10
			32	0... 16	D6A-16	D6V-16
165	27	27	40	0... 20	D6A-20	D6V-20
			70	0... 35	D6A-35	D6V-35
			140	0... 70	D6A-70	D6V-70
			200	0... 100	D6A-D1	D6V-D1
			400	0... 200	D6A-D2	D6V-D2
			700	0... 350	D6A-D3	D6V-D3



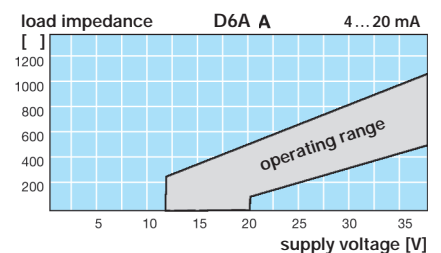
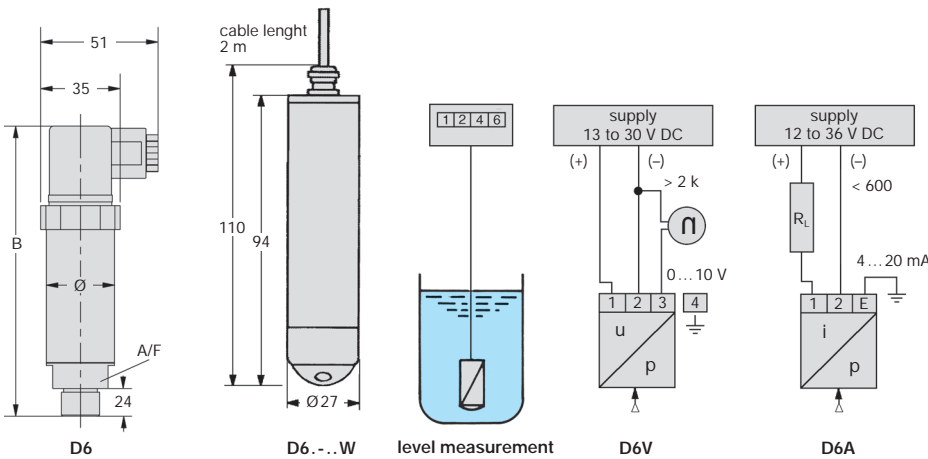
D6A-01 with male thread **D6A-01F** with flush-mounted SST diaphragm

Special options, add the appropriate letter

deviant pressure range	measurement range to be indicated in clear text	D6 . -XX
absolute pressure range	lowest measurement range: 0...1 bar _{abs}	D6 . . . A
G½m	connection thread	D6 . . . 02
for oxygen	specially cleaned, max. 20 bar	D6 . . . 15
flush-mounted diaphragm	up to 16 bar, G¾, height 132 mm, A/F 32 mm	D6 . . . F
submersible sensor	for water up to 10 bar, IP 68, with 2 m capillary cable	D6 . . . W
submersible sensor	for heating oil up to 10 bar, IP 68, with 2 m capillary cable	D6 . . . H




D6A-01W with cable



Test chart: see chapter "Technical Information"

PDF CAD
www.aircom.net

 Order example:
D6A-V0

