

Diaphragm pressure gauge with switch contacts

For the process industry, up to 10-fold overload safety, max. 40 bar

Models PGS43.100, PGS43.160

WIKA data sheet PV 24.03



For further approvals,
see page 13

switchGAUGE

Applications

- Control and regulation of industrial processes at measuring locations with increased overload and scale ranges from 0 ... 25 mbar
- Monitoring of plants and switching of circuits
- For gaseous and liquid, aggressive and highly viscous or contaminated media, also in aggressive environments
- Process industry: Chemical industry, petrochemical industry, power plants, mining, on-/offshore, environmental technology, machine building and general plant construction

Special features

- High reliability and long service life
- Wide choice of special materials
- Can be used with case filling for high dynamic pressure loads and vibrations
- Instruments with inductive contacts for use in hazardous areas
- QR code on dial links to instrument-specific information

Description

Wherever the process pressure has to be indicated locally and, at the same time, circuits need to be switched, the model PGS43 switchGAUGE finds its use.

Switch contacts (electrical alarm contacts) make or break circuits dependent upon the pointer position of the indicating measuring instruments. The switch contacts are adjustable over the full extent of the scale range (see DIN 16085), and are mounted predominantly below the dial, though also partly on top of the dial. Independent of the setting, the instrument pointer (actual value pointer) can move freely across the entire scale range.

The set pointer can be adjusted using a removable adjustment key in the window.



Diaphragm pressure gauge model PGS43.100 with contact model 831.21

Configurator

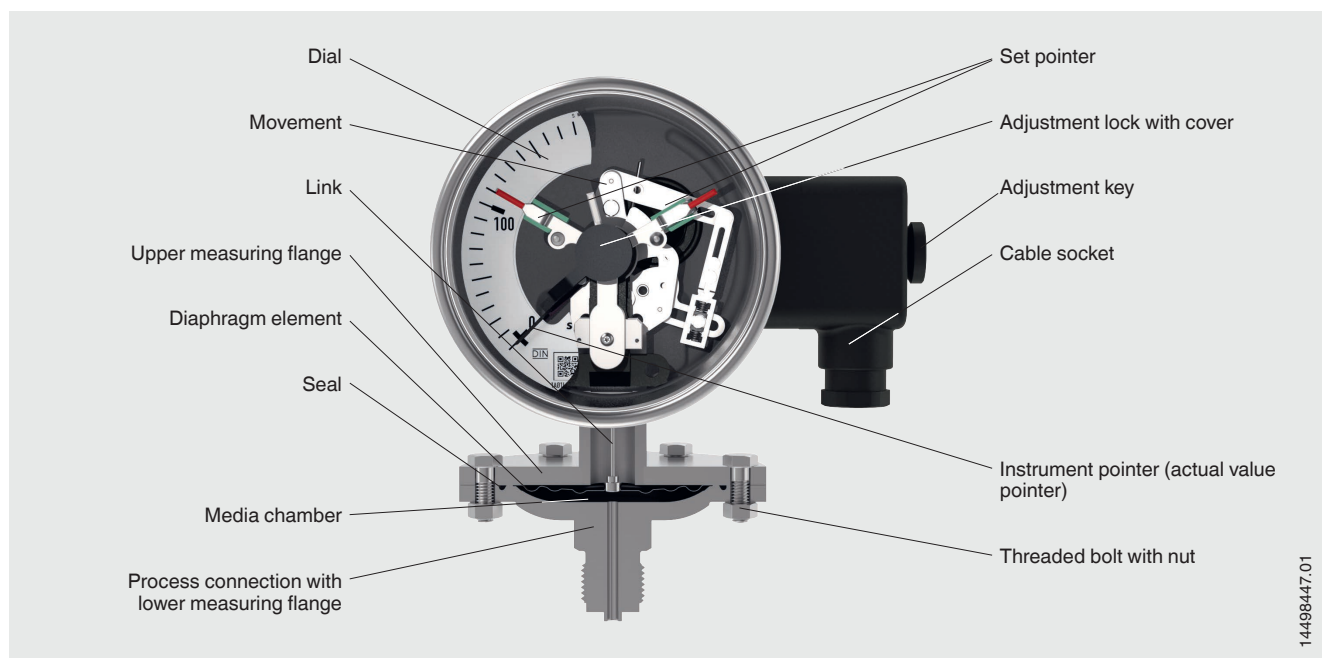


Switch contacts consisting of several contacts can also be set to a single set point.

The pressure gauge is manufactured in accordance with DIN 16085 and fulfils all requirements of the relevant standards (EN 837-3) and regulations for the on-site display of the working pressure of pressure vessels. As switch contacts, magnetic snap-action contacts, reed switches, inductive contacts and electronic contacts are available. Inductive contacts can be used in hazardous areas.

The QR code on the dial allows instrument-specific information such as the serial number, the order number, certificates and other product data to be retrieved from the internet easily and in the long term.

Functionality



Diaphragm elements are circular, corrugated diaphragms. They are clamped or welded together at the edge between two flanges and are subjected to the pressure on one side by the pressure in the media chamber. The resulting deflection is transmitted to the movement via the link and displayed on the dial with the instrument pointer (actual value pointer).

Switch contacts

The switch contacts are designed to allow the instrument pointer (actual value pointer) to move beyond the adjusted set pointer after contact actuation takes place, with the contact remaining actuated. The set pointer can be adjusted using a removable adjustment key (stored in the cable socket) via an adjustment lock in the window.

Overload safety

Diaphragm elements have a relatively large actuating force and, due to the annular clamping of the element, they are less sensitive to vibration in comparison with Bourdon tubes. Diaphragm elements can be subject to higher overload of up to 10 times the full scale value, to a max. of 40 bar, through load take-up points (by bringing the diaphragm element up against the upper measuring flange). With a scale range of 0 ... 4 bar and 10-fold overload safety, a short-term overpressure of up to 40 bar is not problematic, as neither the accuracy nor the switch point setting is affected.

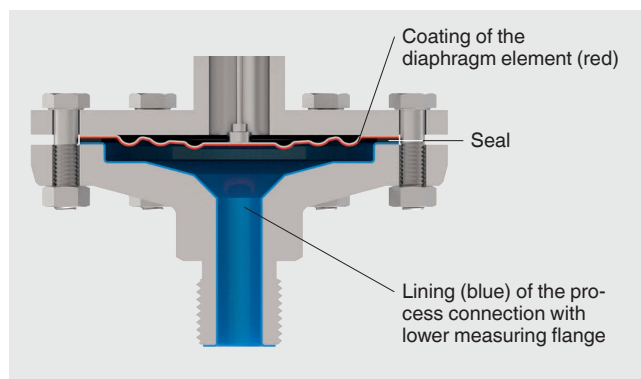
Versions for special media

For measuring highly viscous, contaminated or crystallising media, larger pressure ports and open connecting flanges with an optional flushing connection can be used.

Coating / Lining of wetted parts

By selecting a coating / lining for the wetted parts, the instrument can also be used for extremely corrosive media. Suitable materials can be selected either exclusively for the diaphragm element or in conjunction with the process connection with lower measuring flange – it is possible to use either the same or different materials. The selection of the material combination determines whether it is self-sealing or implemented with a sealing.

→ Available materials (wetted) see page 3



Specifications

Basic information	
Standard	
EN 837-3	Diaphragm and capsule pressure gauges
DIN 16085	Pressure gauges with electrical limit contact devices
→ For information on the “Selection, installation, handling and operation of pressure gauges”, see technical information IN 00.05.	
Other version	■ Oil- and grease-free ■ Oil- and grease-free for oxygen ■ Silicone-free ■ Per NACE ¹⁾ MR0175 / ISO 15156, use in H₂S-containing environments in oil and gas production ■ Per NACE ¹⁾ MR0103 / ISO 17945, metals resistant to hydrogen sulphide stress cracking ■ With pre-volume deflagration flame arrester ²⁾ for mounting to zone 0 (EPL Ga); model 910.21, see data sheet AC 91.02 ■ Diaphragm pressure gauge with output signal, models PGT43.100, PGT43.160; see data sheet PV 14.03 ■ Diaphragm pressure gauge, high overload safety; models 43x.x6, PGx43HP, see data sheets PM 04.07, PV 24.07 and PV 14.07 ■ With flushing bore on the open connecting flange
Nominal size (NS)	■ Ø 100 mm [4"] ■ Ø 160 mm [6"]
Window	■ Laminated safety glass ■ Polycarbonate
Case	
Design	■ Safety level “S1” per EN 837-1: With blow-out device ■ Safety level “S3” per EN 837-1: With solid baffle wall and blow-out back
Material	■ Stainless steel 1.4301 (304) ■ Stainless steel 1.4571 (316Ti)
Case filling ³⁾	■ Without ■ Silicone oil
	Instruments with case filling can be vented and resealed for internal pressure equalisation.
Movement	Stainless steel

1) General information about NACE standards; see data sheet IN 00.21

2) Only for instruments with Ex approval

3) Ingress protection IP65 for instruments with case filling

Measuring element		
Type of measuring element	Diaphragm element	
Materials (wetted)		
Diaphragm element ¹⁾	Span ≤ 0.25 bar	Stainless steel 316L
	Span ≥ 0.4 bar	NiCr alloy (Inconel)
Coating / Lining ^{2) 3)}	Without PTFE Hastelloy Monel Tantalum Gold (only for diaphragm element)	
	Further materials on request	

1) The version for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] is determined after application-specific testing.

2) Diaphragm elements and process connections with lower measuring flanges can be coated / lined with various materials.

→ See page 2

3) Accuracy class 2.5 with selection of a coating / lining.

Accuracy specifications	
Accuracy class	■ 1.6 ¹⁾ ■ 2.5 ^{2) 3)}
Temperature error	On deviation from the reference conditions at the measuring system: $\leq \pm 0.8 \text{ ‰}/10 \text{ K}$ of respective full scale value
Switch hysteresis	Depending on the type of contact used, see from page 7
Reference conditions	
Ambient temperature	+20 °C [+68 °F]

1) After application test, if necessary, accuracy class 1.0 is possible.

2) Accuracy class 2.5 with smallest scale range. Depending on the built-in contact model, 0 ... 25 mbar or 0 ... 40 mbar.

3) Accuracy class 2.5 with selection of a coating / lining.

Scale ranges

Scale range	Overload safety ¹⁾	Vacuum-resist- ant to -1 bar
mbar		
0 ... 25	■ 125 ■ 250	Selectable
0 ... 40	■ 200 ■ 400	Selectable
0 ... 60	■ 300 ■ 600	Selectable
0 ... 100	■ 500 ■ 1,000	Selectable
0 ... 160	■ 800 ■ 1,600	Selectable
0 ... 250	■ 1,250 ■ 2,500	Selectable
0 ... 400	■ 2,000 ■ 4,000	Selectable
0 ... 600	■ 3,000 ■ 6,000	Selectable
0 ... 1,000	■ 5,000 ■ 10,000	Selectable
bar		
0 ... 0.6	■ 3 ■ 6	Selectable
0 ... 1	■ 5 ■ 10	Selectable
0 ... 1.6	■ 8 ■ 16	Selectable
0 ... 2.5	■ 12.5 ■ 25	Selectable
0 ... 4	■ 20 ■ 40	Yes
0 ... 6	■ 30 ■ 40	Yes
0 ... 10	40	Yes
0 ... 16	40	Yes
0 ... 25	40	Yes

Vacuum scale ranges²⁾

Scale range	
mbar	bar
-25 ... 0	-0.6 ... 0
-40 ... 0	-1 ... 0
-60 ... 0	psi
-100 ... 0	-15 inHg ... 0
-160 ... 0	-30 inHg ... 0
-250 ... 0	-
-400 ... 0	-
-600 ... 0	-
-1,000 ... 0	-

1) The specified values for overload safety and vacuum resistance are only valid for versions without coating / lining.

2) Specifications for overload safety and vacuum resistance on request.

→ Other scale ranges on request

Scale range	Overload safety ¹⁾	Vacuum-resist- ant to -1 bar
psi		
0 ... 10	■ 50 ■ 100	Selectable
0 ... 15	■ 75 ■ 150	Selectable
0 ... 30	■ 150 ■ 300	Selectable
0 ... 60	■ 300 ■ 580	Yes
0 ... 100	■ 500 ■ 580	Yes
0 ... 160	580	Yes
0 ... 200	580	Yes
0 ... 300	580	Yes
0 ... 400	580	Yes

+/- scale ranges²⁾

Scale range	
mbar	bar
-5 ... +20	-1 ... +0.6
-10 ... +15	-1 ... +1
-15 ... +25	-1 ... +1.5
-20 ... +40	-1 ... +2
-30 ... +30	-1 ... +3
-40 ... +60	-1 ... +5
-50 ... +200	-1 ... +9
-60 ... +100	-1 ... +10
-100 ... +150	-1 ... +15
-125 ... +125	-1 ... +24
-150 ... +250	psi
-250 ... +750	-30 inHg ... +15
-400 ... +600	-30 inHg ... +60
-500 ... +500	-30 inHg ... +100
-600 ... +400	-30 inHg ... +160
-750 ... +250	-30 inHg ... +200
-800 ... +200	-30 inHg ... +300

Further details on: scale ranges		
Unit	bar psi mbar kg/cm² MPa kPa	
	Other units on request	
Overload safety	5 x full scale value, max. 40 bar 10 x full scale value, max. 40 bar	
Vacuum resistance	Without Vacuum-resistant to -1 bar	
Dial		
Scale layout	Single scale Dual scale	
Scale colour	Single scale	Black
	Dual scale	Black/red
Material	Aluminium	
Customer-specific version	Other scales, e.g. with red mark, circular arcs or circular sectors, on request → Alternatively, adhesive label set for red and green circular arcs; see data sheet AC 08.03	
Instrument pointer	Aluminium, black	
Set pointer	→ See type of contact, from page 7	

Process connection		
Standard	EN 837 ANSI / ASME B1.20.1 ASME B16.5 EN 1092-1, form B	
	Size ¹⁾	
	EN 837	G ½ B M20 x 1.5
	ANSI / ASME B1.20.1	½ NPT
	ASME B16.5	Open connecting flange 1" class 150, RF Open connecting flange 2" class 150, RF Open connecting flange 1" class 300, RF
EN 1092-1, form B	Open connecting flange DN 25 PN 40 Open connecting flange DN 50 PN 40	
Materials (wetted)		
Diaphragm element ²⁾	Span ≤ 0.25 bar	Stainless steel 316L
	Span ≥ 0.4 bar	NiCr alloy (Inconel)
Process connection with lower measuring flange	Stainless steel 316L	
Coating / Lining ^{3) 4)}	Without PTFE Hastelloy Monel Tantalum Gold (only for diaphragm element)	
	Further materials on request	
	Seal ⁵⁾	FPM/FKM PTFE

1) Further threaded connections and open connecting flanges per ASME B16.5 / EN 1092-1 form B from DN 15 to DN 80 (→ See data sheet IN 00.10)

2) The version for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] is determined after application-specific testing.

3) Diaphragm elements and process connections with lower measuring flanges can be coated / lined with various materials.
→ See page 2

4) Accuracy class 2.5 with selection of a coating / lining.

5) The selection of the material combination determines whether it is self-sealing or implemented with a sealing.

→ Other process connections on request

Output signal	
Type of contact	■ Magnetic snap-action contact, model 821 (→ See page 8) ■ Inductive contact, model 831 (→ See page 9) ■ Electronic contact, model 830 E (→ See page 10) ■ Reed switch, model 851 (→ See page 11)
Switch technology	
Magnetic snap-action contact, model 821	■ No control unit and no supply voltage required ■ Direct switching up to 250 V, 1 A
Inductive contact, model 831	■ Suitable for use in hazardous areas with corresponding control unit (model 904.xx) ■ Long service life due to non-contact switching ■ Low influence on the indication accuracy ■ Fail-safe switching at high switching frequency ■ Insensitive to corrosion ■ Also available in safety version
Electronic contact, model 830 E	■ For direct triggering of a programmable logic controller (PLC) ■ Long service life due to non-contact switching ■ Low influence on the indication accuracy ■ Fail-safe switching at high switching frequency ■ Insensitive to corrosion
Reed switch, model 851	■ No control unit and no supply voltage required ■ Direct switching up to 250 V, 1 A ■ For direct triggering of a programmable logic controller (PLC) ■ Wear-free, as non-contact
Contact setting	■ Contact(s) adjustable, adjustment key attached to cable socket ■ Contact(s) fixed, without adjustment lock ¹⁾ ■ Adjustment lock sealable (tamper-proof) ■ Adjustment lock sealed (tamper-proof) ¹⁾ ■ Captive adjustment key with the adjustment lock connected

1) Specify switch point(s) when ordering.

Output signal: magnetic snap-action contact, model 821	
Type of contact	Magnetic snap-action contact
Set pointer	
Single contact, double contact and change-over contact	Plastic, red
Double contact with separate circuits, double change-over contact, triple contact	Metal, red
Switch technology	■ No control unit and no supply voltage required ■ Direct switching up to 250 V, 1 A
Number of switch contacts	
Span ≥ 25 mbar ... < 40 mbar ¹⁾	Max. 2 switch contacts
Span ≥ 40 mbar	Max. 3 switch contacts
Switching function	Separate circuits with ≥ 2 switches The switching function of each switch is indicated by index 1, 2 or 3. The circuits are separated by a "full stop". Example: Model 821.1.1 is a double contact, 2 x normally open with separate circuits.
Model 821.1	Normally open (clockwise pointer motion)
Model 821.2	Normally closed (clockwise pointer motion)
Model 821.3	Change-over; one contact breaks and one contact makes simultaneously when pointer reaches set point
Switch point setting	Set pointers of the contact pressure gauges are freely adjustable over the entire scale range
Setting range (recommended)	25 ... 75 % of span ²⁾
Distance between switch points	Recommended minimum distance between 2 contacts: 20 % of span
Switch hysteresis	2 ... 5 % (typical)
Switching current	0.02 ... 0.3 A (resistive load) Permissible switch-on and switch-off current: ≤ 0.5 A
Switching voltage	AC/DC 24 ... 250 V
Switching power	
Instruments without filling	≤ 30 W, ≤ 50 VA
Instruments with filling	≤ 20 W, ≤ 20 VA
Contact material	Silver-nickel, gold-plated

1) For scale range 0 ... 25 mbar and scale range 0 ... 40 mbar with 3 contacts, accuracy class 2.5 applies

2) Special setting ranges on request

Recommended contact load

Switching voltage	Instruments without filling			Instruments with filling		
	Resistive load		Inductive load	Resistive load		Inductive load
	Direct current	Alternating current	$\cos \varphi > 0.7$	Direct current	Alternating current	$\cos \varphi > 0.7$
DC 220 V / AC 230 V	100 mA	120 mA	65 mA	65 mA	90 mA	40 mA
DC 110 V / AC 110 V	200 mA	240 mA	130 mA	130 mA	180 mA	85 mA
DC 48 V / AC 48 V	300 mA	450 mA	200 mA	190 mA	330 mA	130 mA
DC 24 V / AC 24 V	400 mA	600 mA	250 mA	250 mA	450 mA	150 mA

→ For further information on switch contacts, see technical information IN 00.48

Output signal: Inductive contact, model 831	
Type of contact	Inductive contact
Set pointer	Metal, red
Switch technology	■ Suitable for use in hazardous areas with corresponding control unit (model 904.xx) ■ Long service life due to non-contact switching ■ Low influence on the indication accuracy ■ Fail-safe switching at high switching frequency ■ Insensitive to corrosion ■ Also available in safety version
Number of switch contacts	
Span ≥ 25 mbar ¹⁾	Max. 3 switch contacts
Switching function	Contact versions: ■ 831-N ■ 831-SN, safety version²⁾ ■ 831-S1N, safety version²⁾, inverted signal The switching function of each switch is indicated by index 1 or 2
Model 831.1	Normally open (clockwise pointer motion)
Model 831.2	Normally closed (clockwise pointer motion)
Switch point setting	Set pointers of the contact pressure gauges are freely adjustable over the entire scale range
Setting range (recommended)	10 ... 90 % of span ³⁾
Distance between switch points	Up to 2 contacts can be set to an identical set point. For a version with 3 contacts this is not possible. The left (1st) or right (3rd) contact may not be set to the same set point as the other 2 contacts. The required displacement is approx. 30°, optionally to the right or to the left.
Switching current	Depending on the control unit used, model 904 (→ See data sheet AC 08.04)
Switching voltage	Depending on the control unit used, model 904 (→ See data sheet AC 08.04)
Switching power	Depending on the control unit used, model 904 (→ See data sheet AC 08.04)
Permissible temperature ranges in hazardous areas	
T6	-20 ... +60 °C
T5 ... T1	-20 ... +70 °C
T135°C	-20 ... +70 °C
Safety-related characteristic values (Ex) ⁴⁾	
Max. input voltage U_i	16 V
Max. input current I_i	25 mA
Max. input power P_i	64 mW
Effective internal capacitance C_i	30 nF
Effective internal inductance L_i	100 μ H

1) For scale range 0 ... 25 mbar, accuracy class 2.5 applies

2) Only operate with a corresponding isolating amplifier (model 904.3x)

3) Special setting ranges on request

4) These values refer to the 831-N inductive contact with PT2 power type; for other contact versions and switching amplifiers, see the operating instructions

Associated control units

Model	Version	Ex version
904.28 KFU8-SR-Ex1.W	1 contact	Yes
904.29 KFU8-SR-Ex2.W	2 contacts	Yes
904.33 KFD2-SH-Ex1	1 contact	Yes - Safety version
904.25 MSR 010-I	1 contact	No
904.26 MSR 020-I	2 contacts	No
904.27 MSR 011-I	Two-point control	No

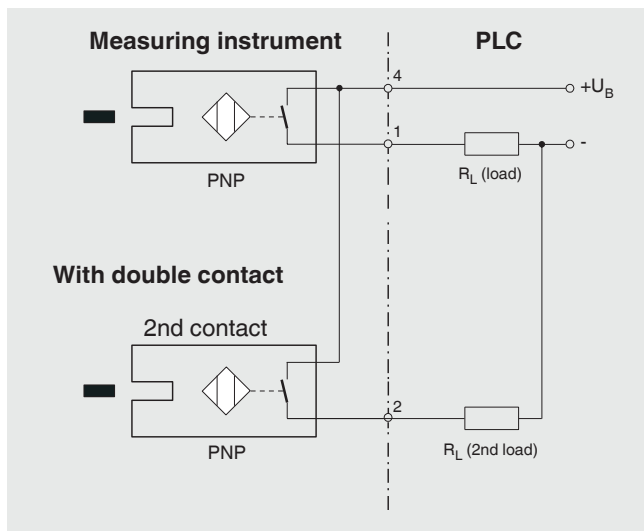
→ For further information on switch contacts, see technical information IN 00.48

Output signal: electronic contact, model 830 E

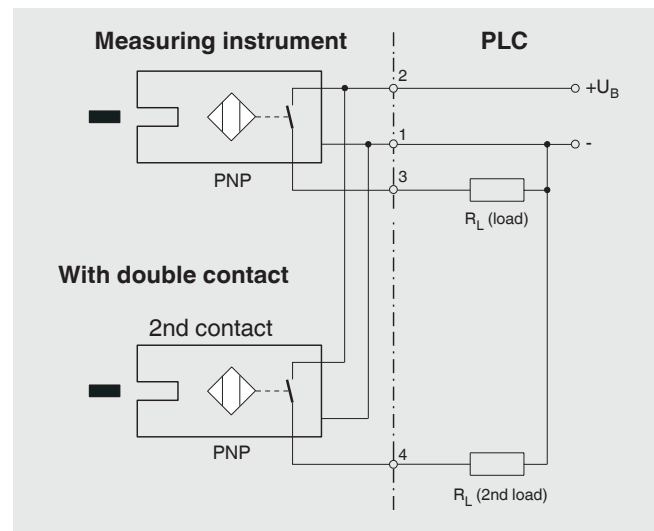
Type of contact	Electronic contact (PNP transistor)
Set pointer	Metal, red
Switch technology	■ For direct triggering of a programmable logic controller (PLC) ■ Long service life due to non-contact switching ■ Low influence on the indication accuracy ■ Fail-safe switching at high switching frequency ■ Insensitive to corrosion
Number of switch contacts	Max. 3 switch contacts
Switching function	Contact versions: ■ 2-wire system ■ 3-wire system The switching function of each switch is indicated by index 1 or 2
Model 830 E.1	Normally open (clockwise pointer motion)
Model 830 E.2	Normally closed (clockwise pointer motion)
Setting range (recommended)	10 ... 90 % of span ¹⁾
Distance between switch points	Up to 2 contacts can be set to an identical set point. For a version with 3 contacts this is not possible. The left (1st) or right (3rd) contact may not be set to the same set point as the other 2 contacts. The required displacement is approx. 30°, optionally to the right or to the left.
Switching current	≤ 100 mA
Switching voltage	DC 10 ... 30 V

1) Special setting ranges on request

2-wire system



3-wire system



→ For further information on switch contacts, see technical information IN 00.48

Output signal: Reed switch, model 851	
Type of contact ^{1) 2)}	Bistable reed switch
Set pointer	Plastic, red
Switch technology	■ No control unit and no supply voltage required ■ Direct switching up to 250 V, 1 A ■ For direct triggering of a programmable logic controller (PLC) ■ Wear-free, as non-contact
Number of switch contacts	Max. 2 switch contacts
Switching function	Separate circuits with 2 switches
	The switching function is indicated by index 3
Model 851.3	Change-over; one contact breaks and one contact makes simultaneously when pointer reaches set point
Switch point setting	Set pointers of the contact pressure gauges are freely adjustable over the entire scale range
Setting range (recommended)	10 ... 90 % of span
Distance between switch points	When using two contacts, these cannot be set to the same point. Depending on the switching function, a minimum clearance of 15 ... 30° is required.
Switch hysteresis	3 ... 5 %
Switching current	≤ AC/DC 1 A
Switching voltage	≤ AC/DC 250 V
Switching power	≤ 60 W, 60 VA
Contact material	Rhodium
Transport current	AC/DC 2 A
Inductive load cos φ	1
Contact resistance (static)	100 mΩ
Insulation resistance	109 Ω
Breakdown voltage	DC 1,000 V
Switching time incl. contact bounce	4.5 ms

1) For scale range 0 ... 25 mbar, accuracy class 2.5 applies

2) For NS 160 [6"], the case conforms to the safety level „S1“ in accordance with EN 837

3) For switching voltages AC < 50 V and DC < 75 V, switch contact not adjustable from outside

→ For further information on switch contacts, see technical information IN 00.48

Electrical connection	
Connection type	■ Cable socket, black Per VDE 0110 insulation group C/250 V PG gland ■ Connector (instead of cable socket)
Wire cross-section	6 screw terminals + PE for 2.5 mm ²
Cable diameter	6 ... 13 mm
Pin assignment	The pin assignment is given on the product label of the instrument. Connection terminals and grounding terminal are appropriately marked.
Material	PA 6 (polyamide)

Operating conditions	
Medium temperature range	
Instruments without filling	-20 ... +200 °C [-4 ... +392 °F]
Instruments with silicone oil filling	-20 ... +100 °C [-4 ... +212 °F]
Ambient temperature range	-20 ... +60 °C [-4 ... 140 °F]
Storage temperature range	-20 ... +60 °C [-4 ... 140 °F]
Pressure limitation	
Steady	Full scale value
Fluctuating	0.9 x full scale value
Ingress protection per IEC/EN 60529	■ IP54 ■ IP65 ¹⁾ ■ IP66 ²⁾ (ingress protection of the case)

1) Ingress protection IP65 for instruments with case filling

2) Hermetically sealed case; see data sheet IN 00.18

For hazardous areas, the permissible temperature of the contact model 831 will exclusively apply (see page 8). These must not be exceeded at the instrument either (for details, see operating instructions). If necessary, measures for cooling (e.g. syphon, instrumentation valve, etc.) have to be taken.

Approvals

Logo	Description	Region
	EU declaration of conformity	European Union
	EMC Directive	
	Low Voltage Directive	
	RoHS directive	

Optional approvals

Logo	Description	Region
 	EU declaration of conformity	European Union
	ATEX directive ¹⁾ Hazardous areas	
	Without coating / lining from PTFE Gas II 2G Ex ia IIC T6/T5/T4 Gb Dust II 2D Ex ia IIIB T135°C Db	
	With coating / lining from PTFE Gas II 2G Ex ia IIC T6/T5/T4 Gb ²⁾	
 	IECEX ¹⁾ Hazardous areas	International
	Without coating / lining from PTFE Gas Ex ia IIC T6/T5/T4 Gb Dust Ex ia IIIB T135°C Db	
	With coating / lining from PTFE Gas Ex ia IIC T6/T5/T4 Gb ²⁾	
 	EAC	Eurasian Economic Community
	EMC Directive	
	Low Voltage Directive	
	Hazardous areas ¹⁾	
	Ex Ukraine Hazardous areas ¹⁾	Ukraine
	NEPSI Hazardous areas ¹⁾	China
	PAC Kazakhstan Metrology, measurement technology	Kazakhstan
-	PAC Ukraine Metrology, measurement technology	Ukraine
	PAC Uzbekistan Metrology, measurement technology	Uzbekistan
-	CRN Safety (e.g. electr. safety, overpressure, ...)	Canada

¹⁾ Only for instruments with inductive contact model 831

²⁾ In the area of the coating / lining from PTFE, measures must be taken, if necessary, in order to exclude electrostatic charging.

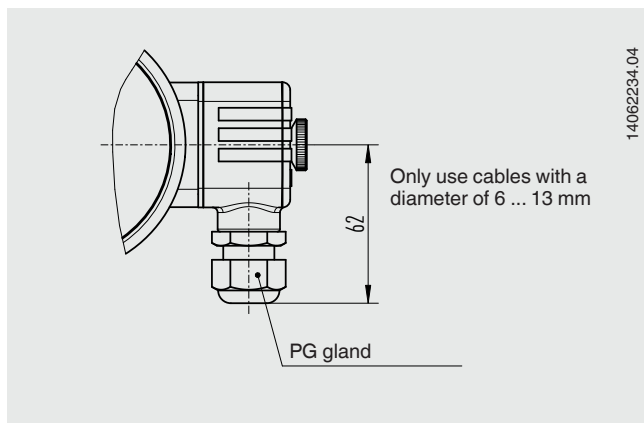
Certificates (option)

Certificates	
Certificates	■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy) ■ 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)
Recommended calibration interval	1 year (dependent on conditions of use)

→ For approvals and certificates, see website

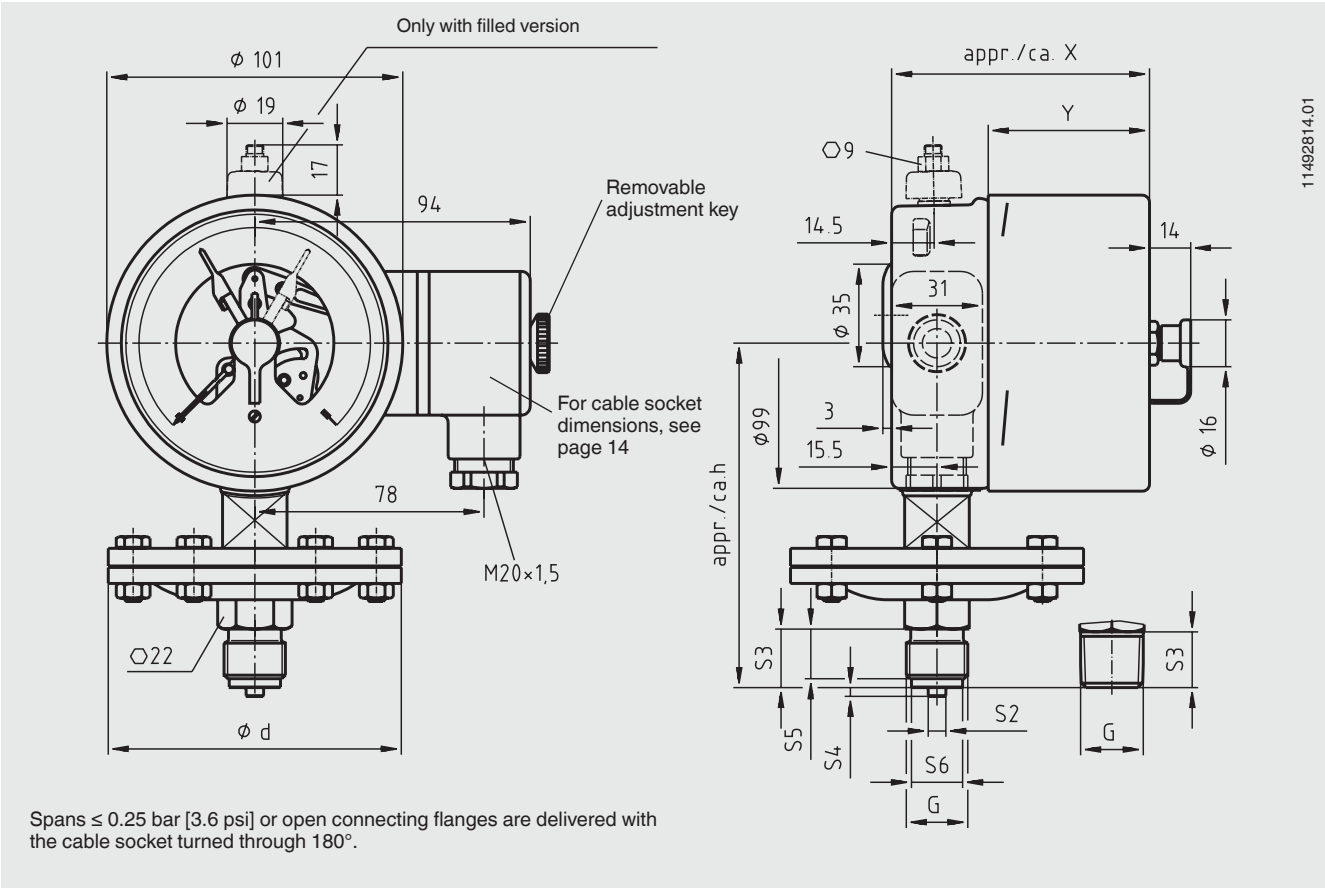
Dimensions in mm

Cable socket



NS 100 [4"] instruments are delivered with the cable socket turned through 180° for spans ≤ 0.25 bar [3.6 psi] or for process connections with open connecting flanges.

switchGAUGE model PGS43.100, safety level “S1”, with switch contact model 821, 831 or 830 E

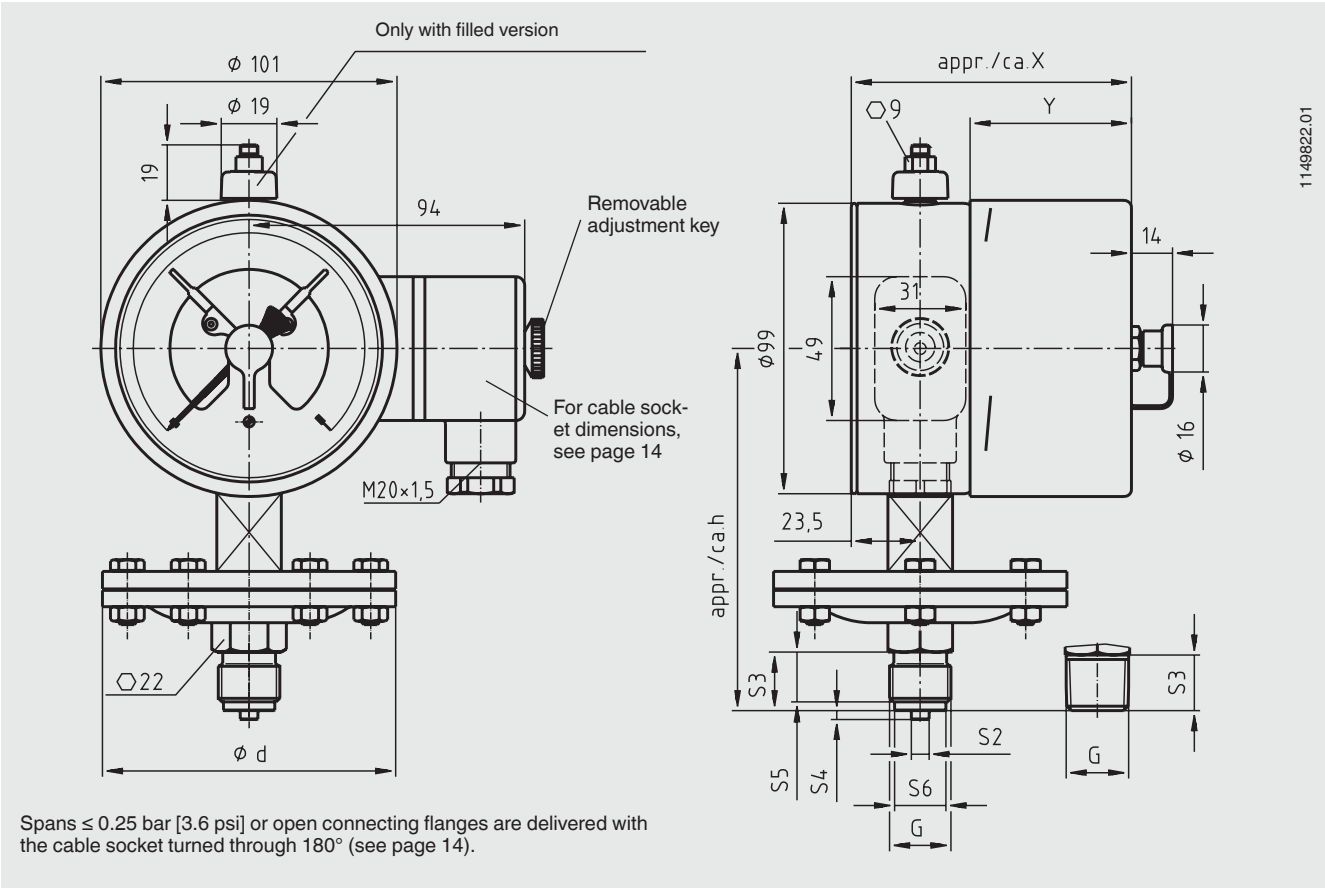


Process connection G	Span ¹⁾	Dimensions in mm						
		ϕd	h	S2	S3	S4	S5	S6
G ½ B	≤ 0.25 bar [3.6 psi]	160	119	$\phi 6$	20	3	17	$\phi 17.5$
	≥ 0.4 bar [5.8 psi]	100	117	$\phi 6$	20	3	17	$\phi 17.5$
½ NPT	≤ 0.25 bar [3.6 psi]	160	118	-	19	-	-	-
	≥ 0.4 bar [5.8 psi]	100	116	-	19	-	-	-

1) The dimensions for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] are determined after application-specific testing.

Type of contact	Dimensions in mm	
	X	Y
Single or double contact	88	55
Double (change-over) contact	113	80
Triple contact	96	63

switchGAUGE model PGS43.100, safety level “S3”, with switch contact model 821, 831 or 830 E

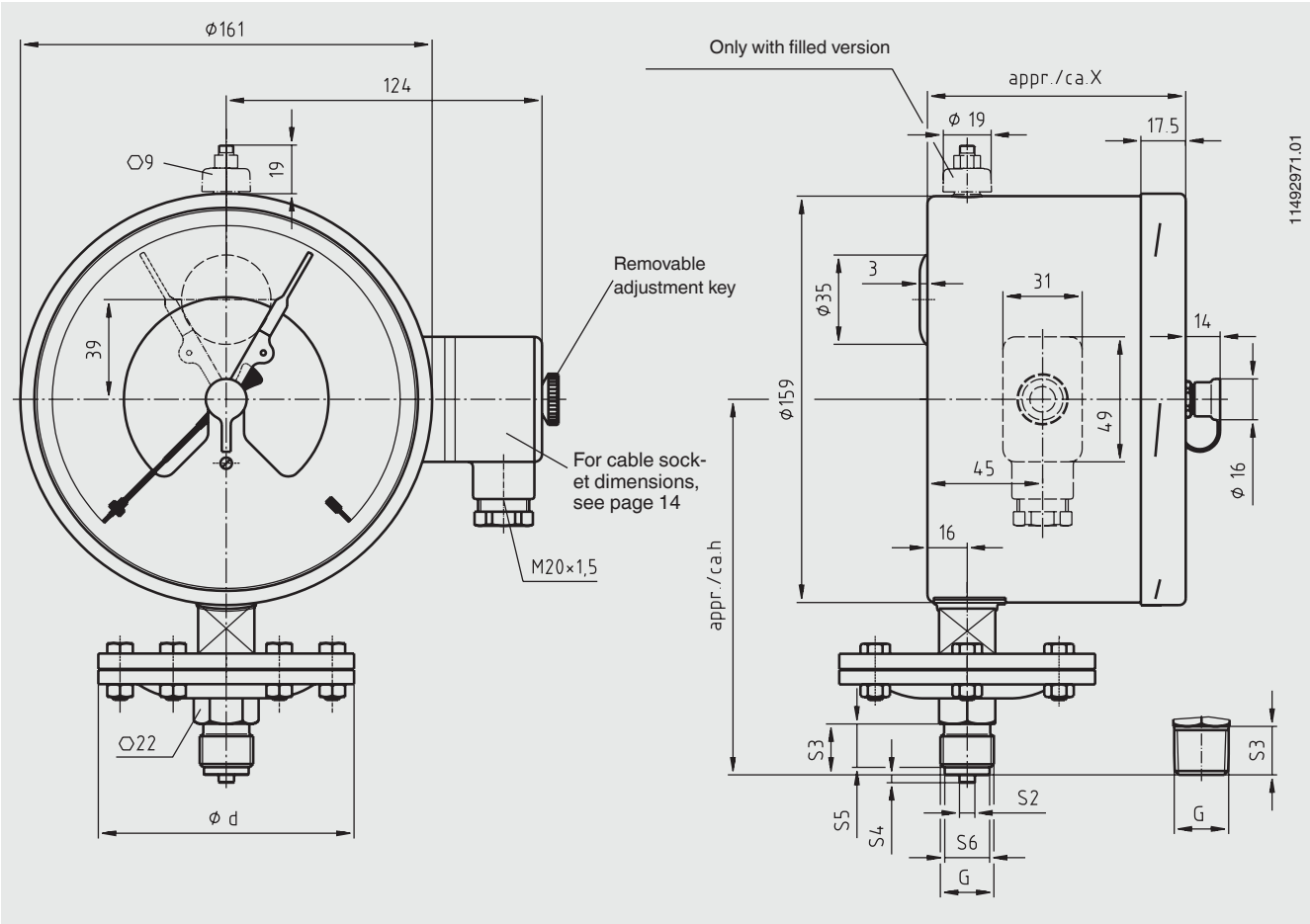


Process connection G	Span ¹⁾	Dimensions in mm						
		Ø d	h	S2	S3	S4	S5	S6
G ½ B	≤ 0.25 bar [3.6 psi]	160	119	Ø 6	20	3	17	Ø 17.5
	≥ 0.4 bar [5.8 psi]	100	117	Ø 6	20	3	17	Ø 17.5
½ NPT	≤ 0.25 bar [3.6 psi]	160	118	-	19	-	-	-
	≥ 0.4 bar [5.8 psi]	100	116	-	19	-	-	-

1) The dimensions for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] are determined after application-specific testing.

Type of contact	Dimensions in mm	
	X	Y
Single or double contact	88	55
Double (change-over) contact	113	80
Triple contact	96	63

switchGAUGE model PGS43.160, safety level “S1”, with switch contact model 821, 831 or 830 E

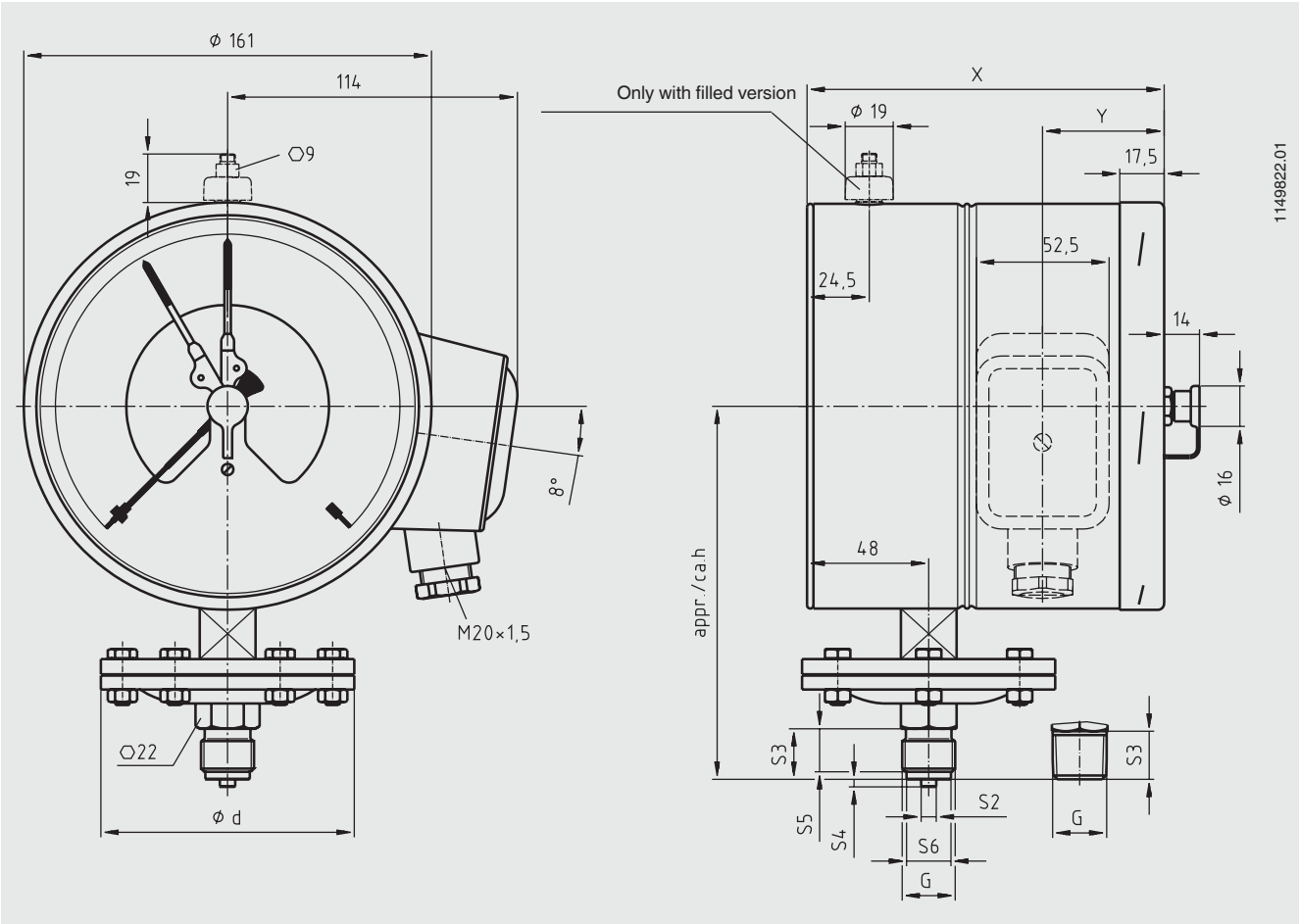


Process connection G	Span ¹⁾	Dimensions in mm						
		$\varnothing d$	h	S2	S3	S4	S5	S6
G ½ B	≤ 0.25 bar [3.6 psi]	160	149	Ø 6	20	3	17	Ø 17.5
	≥ 0.4 bar [5.8 psi]	100	147	Ø 6	20	3	17	Ø 17.5
½ NPT	≤ 0.25 bar [3.6 psi]	160	148	-	19	-	-	-
	≥ 0.4 bar [5.8 psi]	100	146	-	19	-	-	-

1) The dimensions for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] are determined after application-specific testing.

Type of contact	Dimensions in mm
	X
Single or double contact	102
Double (change-over) contact	116
Triple contact	102

switchGAUGE model PGS43.160, safety level “S3”, with switch contact model 821, 831 or 830 E

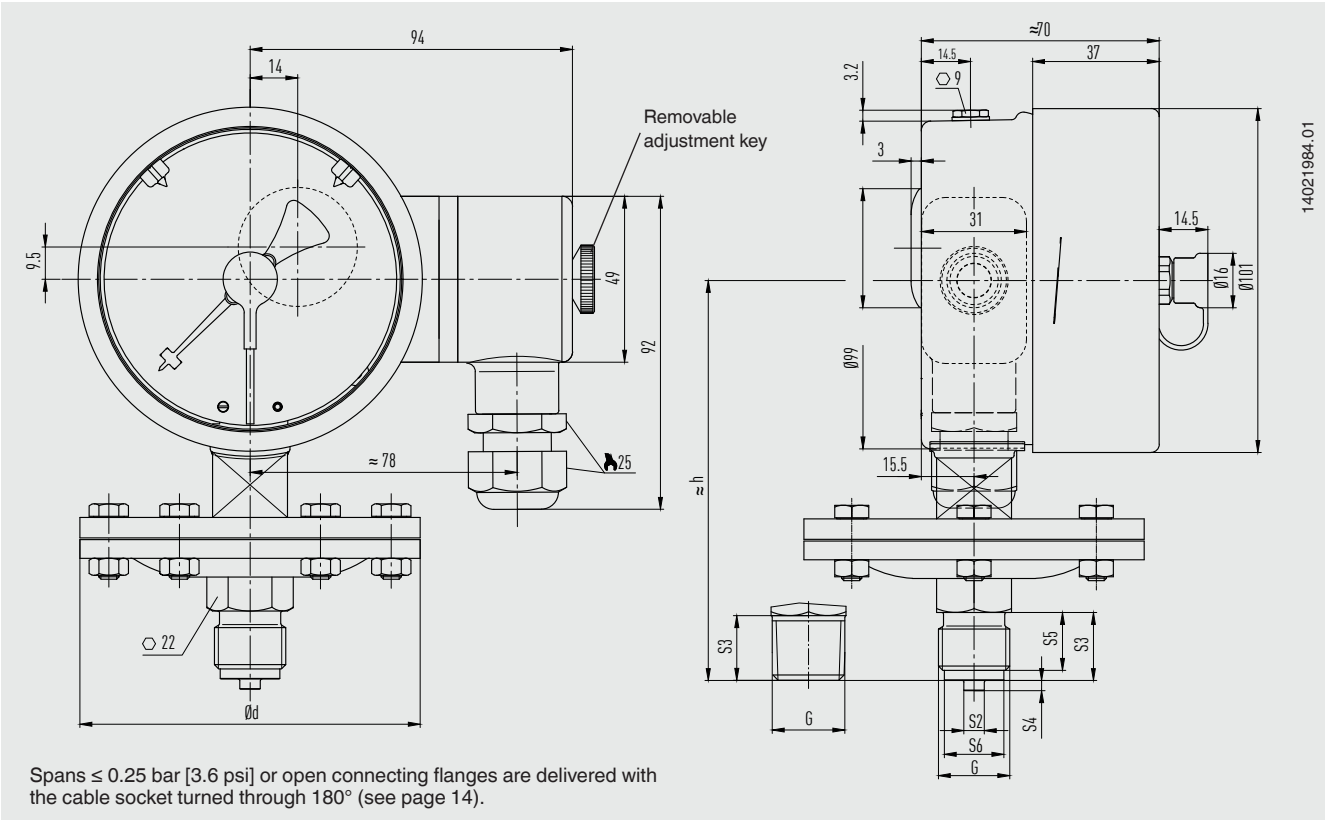


Process connection G	Span ¹⁾	Dimensions in mm						
		Ø d	h	S2	S3	S4	S5	S6
G ½ B	≤ 0.25 bar [3.6 psi]	160	149	Ø 6	20	3	17	Ø 17.5
	≥ 0.4 bar [5.8 psi]	100	147	Ø 6	20	3	17	Ø 17.5
½ NPT	≤ 0.25 bar [3.6 psi]	160	148	-	19	-	-	-
	≥ 0.4 bar [5.8 psi]	100	146	-	19	-	-	-

1) The dimensions for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] are determined after application-specific testing.

Type of contact	Dimensions in mm	
	X	Y
Single or double contact	141	48
Triple contact	153.5	60.5

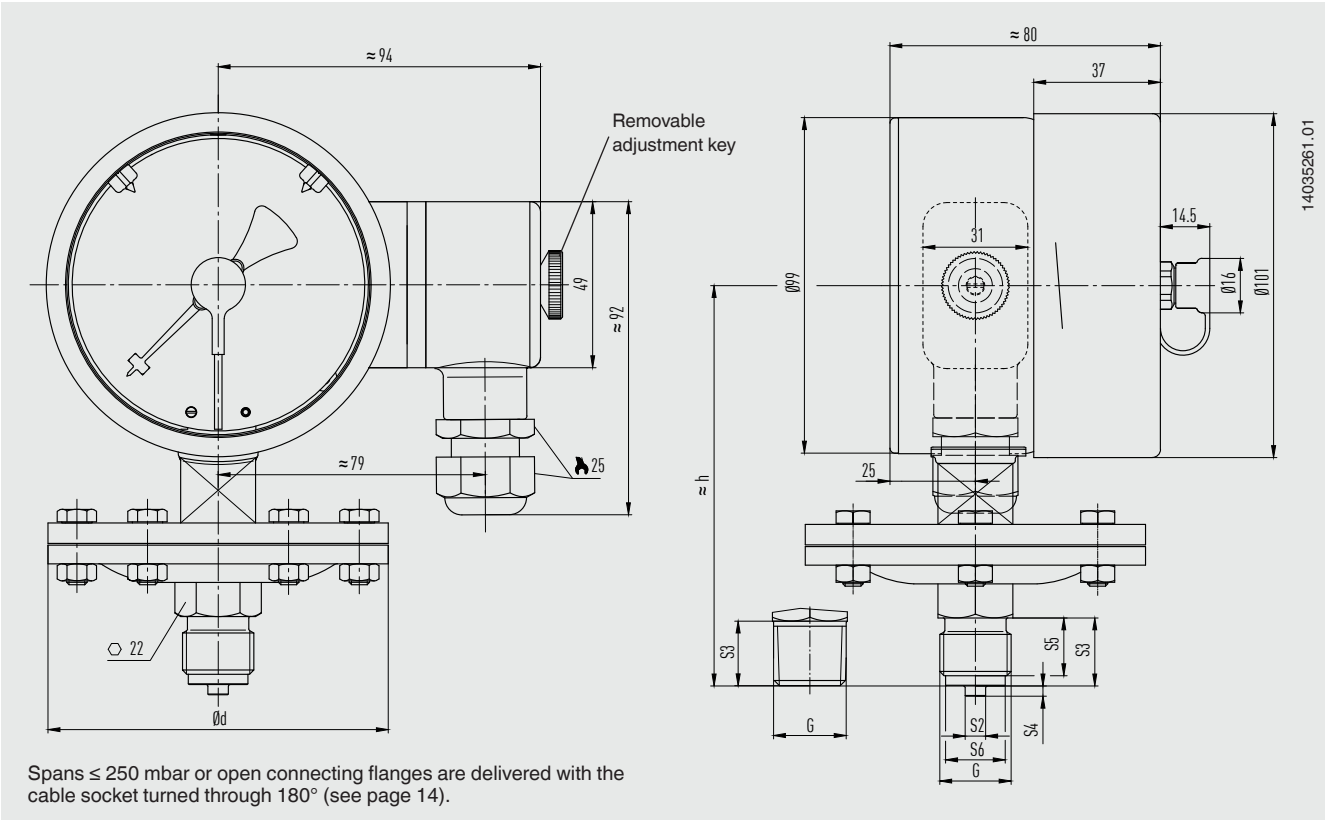
switchGAUGE model PGS43.100, safety level “S1”, with switch contact model 851.3 or 851.33



Process connection G	Span ¹⁾	Dimensions in mm						
		Ø d	h	S2	S3	S4	S5	S6
G ½ B	≤ 0.25 bar [3.6 psi]	160	119	Ø 6	20	3	17	Ø 17.5
	≥ 0.4 bar [5.8 psi]	100	117	Ø 6	20	3	17	Ø 17.5
½ NPT	≤ 0.25 bar [3.6 psi]	160	118	-	19	-	-	-
	≥ 0.4 bar [5.8 psi]	100	116	-	19	-	-	-

1) The dimensions for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] are determined after application-specific testing.

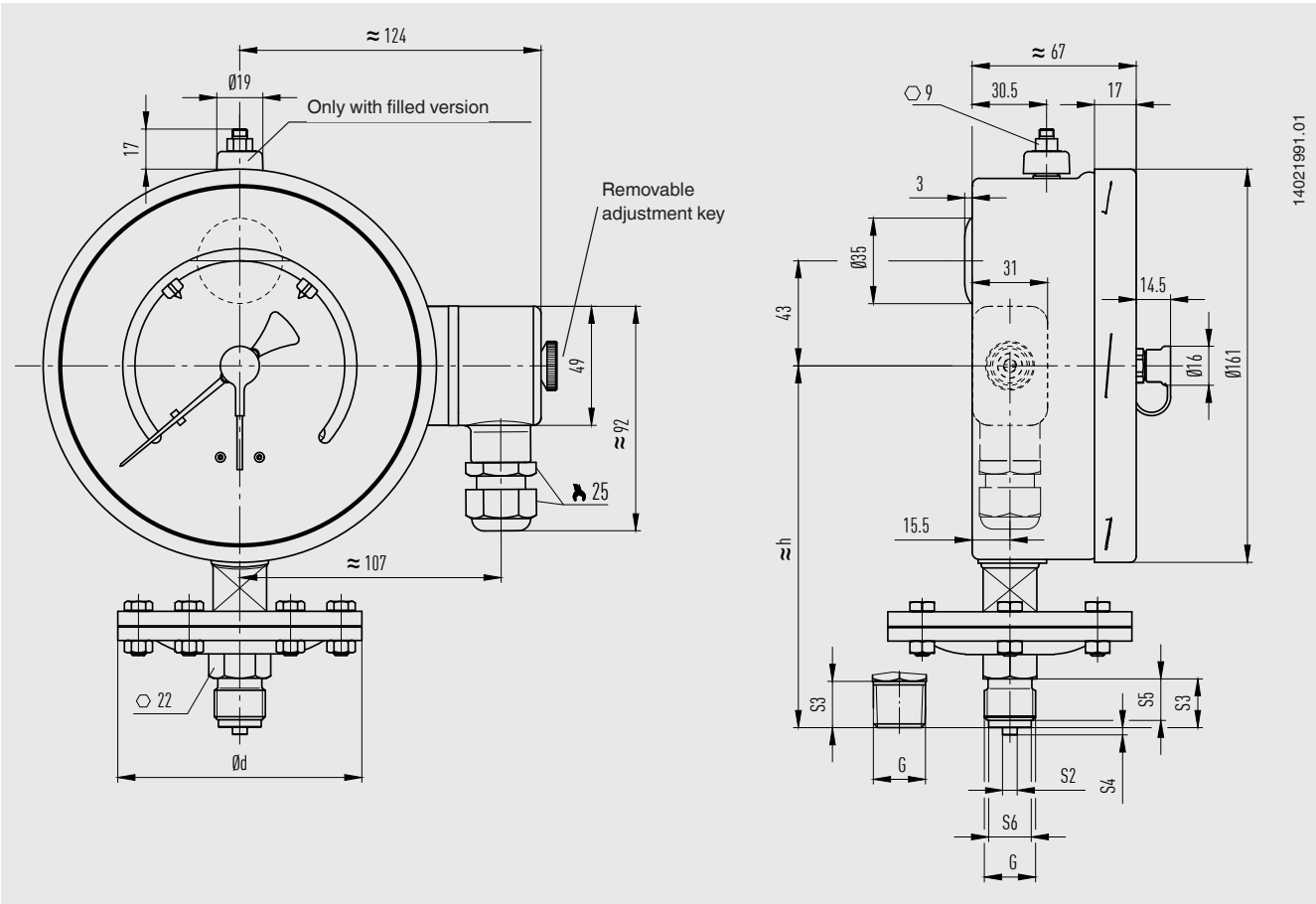
switchGAUGE model PGS43.100, safety level “S3”, with switch contact model 851.3 or 851.33



Process connection G	Span ¹⁾	Dimensions in mm						
		$\varnothing d$	h	S2	S3	S4	S5	S6
G ½ B	≤ 0.25 bar [3.6 psi]	160	119	$\varnothing 6$	20	3	17	$\varnothing 17.5$
	≥ 0.4 bar [5.8 psi]	100	117	$\varnothing 6$	20	3	17	$\varnothing 17.5$
½ NPT	≤ 0.25 bar [3.6 psi]	160	118	-	19	-	-	-
	≥ 0.4 bar [5.8 psi]	100	116	-	19	-	-	-

1) The dimensions for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] are determined after application-specific testing.

switchGAUGE model PGS43.160, safety level “S1”, with switch contact model 851.3 or 851.33



Process connection G	Span ¹⁾	Dimensions in mm						
		Ø d	h	S2	S3	S4	S5	S6
G ½ B	≤ 0.25 bar [3.6 psi]	160	149	Ø 6	20	3	17	Ø 17.5
	≥ 0.4 bar [5.8 psi]	100	147	Ø 6	20	3	17	Ø 17.5
½ NPT	≤ 0.25 bar [3.6 psi]	160	148	-	19	-	-	-
	≥ 0.4 bar [5.8 psi]	100	146	-	19	-	-	-

1) The dimensions for customised spans between 0.25 bar [3.6 psi] and 0.4 bar [5.8 psi] are determined after application-specific testing.

Accessories and spare parts

Model		Description
	910.33	Adhesive label set for red and green circular arcs → See data sheet AC 08.03
	910.17	Seals → See data sheet AC 09.08
	910.15	Syphons → See data sheet AC 09.06
	910.13	Overpressure protector → See data sheet AC 09.04
	IV1	Needle valve and multiport → See data sheet AC 09.22
	IV2	Block-and-bleed valve → See data sheet AC 09.19
	IVM	Monoflange, process and instrument version → See data sheet AC 09.17
	BV	Ball valve, process and instrument version → See data sheet AC 09.28

Ordering information

Model / Nominal size / Contact model / Contact version / Scale range / Connection location /
Process connection / Options

Configurator



© 08/2009 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
The specifications given in this document represent the state of the art at the time of publishing.
We reserve the right to make modifications to the specifications and materials.
In case of a different interpretation of the translated and the English data sheet, the English wording shall prevail.

