

Diaphragm Pressure Gauges

Bayonet Ring Case Stainless Steel, Solid Front, Blow-out Back
Standard (PSCh) or Liquid Filled (PSChOe)

with Limit-Switch Contact Assemblies

NCS 100
160 Models

PSCh
PSChOe

This data sheet contains ordering information, minimum pressure ranges, information about electrical connections and dimensional drawings of diaphragm pressure gauges model PSCh / PSChOe with limit-switch contact assembly.

Standard Configuration

Data sheet **3600** contains all important features of these models without electrical accessories. These technical details are valid also for gauges assembled with limit-switches, as far as you do not find a deviating description below.

The ordering code for the liquid-filled version with limit-switch contact assembly is different (PSChOe).

The **filling liquid** is a special oil.

For detailed information about use and operation of our limit-switch contact assemblies please note our **general information leaflet 9000**, and for further information, especially about the available make/break operations, see the data sheets for the individual limit-switch models:

Mechanical (Standard- and magnetic contacts)	Data sheet 9100
Inductive	Data sheet 9200
Electronic	Data sheet 9201
Pneumatic	Data sheet 9300

Minimum Pressure Ranges

Every pressure gauge needs a sufficient amount of torque to operate a limit-switch contact assembly with minimized error.

The following minimum pressure ranges are to consider ¹⁾.

For liquid-filled versions further restrictions as explained in data sheet 3600 are to notice.

Limit-Switch Type:	Minimum Pressure Range ¹⁾			
	Measuring Flange-Ø 100 mm (3.94")		Measuring Flange-Ø 160 mm (6.3")	
	bar	psi	mbar	"WC
1 x Standard	0.6	10	60	25
2 x Standard			100	40
3 x Standard			160	60
4 x Standard ²⁾			160	60
1 x Magnetic	0.6	10	100	40
2 x Magnetic			160	60
3 x Magnetic			250	100
4 x Magnetic ²⁾			250	100
1 x Inductive	0.6	10	60	25
2 x Inductive				
3 x Inductive ³⁾				
1 x Electronic	0.6	10	60	25
2 x Electronic				
3 x Electronic ³⁾				

¹⁾ lower pressure ranges upon request

²⁾ for NCS 160 only

³⁾ 4x limit-switch contact assemblies upon request

For pressure gauges with 3 or 4 contacts it is not always possible to set all set pointers one above the other. Therefore you should state for which contacts resp. set pointers the opportunity to set one above the other is required. Or simply point out when ordering, where your set points are.

Pneumatic limit-switch for this model upon request.

Lens

Laminated safety glass



Case Ventilation

Model PSChOe with ventilation device at the top

Safety Features:

- Solid front stainless steel between measuring system and dial
- Full blow-out safety back

When pressure is built up inside of the case, the entire case back separates, allowing full relief.

Electrical Connection

- Mechanical contacts (standard [S] or magnetic [M]):
Universal plug connector mounted on the right side of the case
- Inductive / electronic limit-switch assemblies (I, E):
Terminal box mounted on the right side of the case

The universal plug connector has 6 terminals and a ground terminal. The terminal box has 6 terminals only.

The precise locations of the electrical connection is shown in the dimensional drawing on the reverse side of this data sheet. Others than standard locations are available upon request at extra charges only.

How to Order:

The ordering code of the pressure gauge model (compare data sheet 3600) is extended by the

- Code letter for the limit-switch contact assembly:
S, M, I or **E** and the
- Code number for the make/break operation, e.g.
1, 2, 11, 12, 21, 22

(Please compare the data sheets for the limit-switch contact!)

Examples for Ordering Information:

- PSCh 100-3, 0-25 bar, ½" BSP, **M 12**
- PSChOe 160-3, 0-400 mbar, ½"NPT, **I 1**



ARMATURENBAU GmbH

Manometerstraße 5 • D-46487 Wesel - Ginderich
Phone: (0 28 03) 9130-0 • Fax: (0 28 03) 10 35
armaturenbau.com • mail@armaturenbau.com



Subsidiary Company and Sales East Germany and Eastern Europe

MANOTHERM Beierfeld GmbH 3690

Am Gewerbepark 9 • D-08344 Grünhain-Beierfeld
Phone: (0 37 74) 58-0 • Fax: (0 37 74) 58-545
manotherm.com • mail@manotherm.com

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Case Configuration, Electrical Connection, Dimensions and Weight

The dimensions are the same as from the basic model, except the front-to-back size, **dimension B**, see table below.

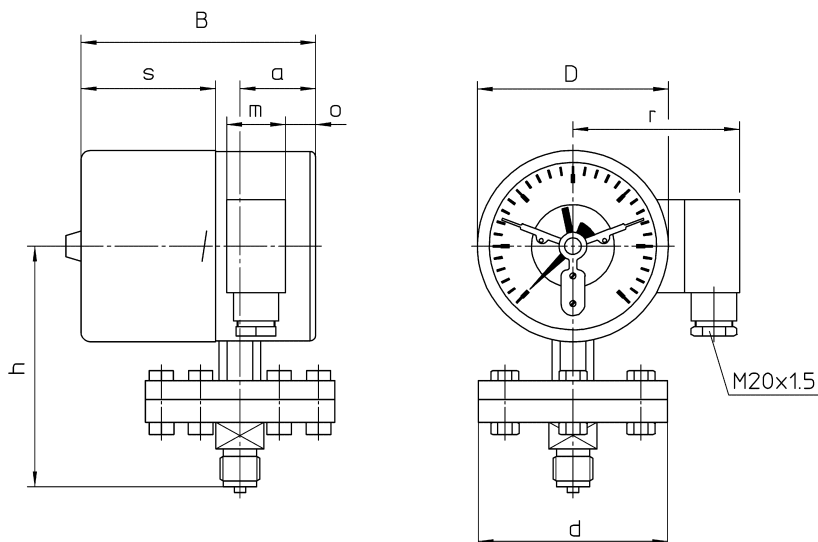
For the other dimensions, please see data sheet 3600.

The locations of the electrical connection is shown in the dimensional drawing below.

Others than standard locations are available only upon request at extra charges.

Case configuration: bottom connection

Terminal box or universal plug connector



Dimensions (mm / inches) and Weight (kg / lb)

Nominal Case Size	Measuring Flange Ø d ¹⁾	a	B	D	h ^{±2}	m	o	r	s	Weight approx. ³⁾	
										PSCh	PSChOe
100 (4")	100 (3.93)	40 1.57	124 4.88	101 3.98	127 5	31 1.22	16 .63	88 3.46	71 2.80	2.70 6.0	3.40 7.50
	160 (6.3)		130 ²⁾ 5.12 ²⁾	161 6.34	157 6.18		14 .55	117 4.61	95 3.74	4.05 8.9	4.85 10.7
160 (6")	100 (3.93)	40 1.57	130 ²⁾ 5.12 ²⁾	161 6.34	157 6.18	31 1.22	14 .55	117 4.61	95 3.74	4.25 9.4	6.05 13.3
	160 (6.3)		130 ²⁾ 5.12 ²⁾	161 6.34	157 6.18		14 .55	117 4.61	95 3.74	5.60 12.4	7.50 16.5

¹⁾ nominal flange size

²⁾ For 4x standard or magnetic contacts and for inductive and electronic limit switches with 2 equal make/break operations (i.e. I 11 or E 22, also as part of 3x limit-switch contact assemblies) please add 12 mm (0.47") to length B.

³⁾ approx. weight for version with 2x limit-switch and ½" BSP connection