

Bourdon Tube Pressure Gauges

Polyamide Screw Ring Case,
Standard (RK) or Liquid Filled (RKOe)

NCS 100 (4")

Models

RK
RKOe

with Limit-Switch Contact Assemblies

This data sheet contains ordering information, minimum pressure ranges, information about electrical connections and dimensional drawings of Bourdon tube pressure gauges models RK and RKOe with limit-switch contact assemblies.

Standard Configuration

Data sheet 1300 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 (**RKOe**).

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 consider¹⁾:

Limit-Switch Type:	Minimum Pressure Ranges ¹⁾	
	bar	(psi)
1 x Standard	1.0	(15)
2 x Standard	1.6	(30)
3 x Standard	2.5	(60)
1 x Magnetic	1.6	(30)
2 x Magnetic	2.5	(60)
3 x Magnetic	4.0	(60)
1 x Inductive	1.0	(15)
2 x Inductive	1.6	(30)
3 x Inductive	2.5	(60)
1 x Electronic	1.0	(15)
2 x Electronic	1.6	(30)
3 x Electronic	2.5	(60)
1 x Pneumatic ²⁾	1.0	(15)

¹⁾ lower pressure ranges upon request

²⁾ only 1x P possible for nom. case size 100 (4")

4 x limit-switch contact assemblies are not available for nom. case size 100 (4").

Lens

Polycarbonate

Case ventilation

Model RKOe with ventilation device at the top



Electrical Connection

- Mechanical contacts (standard [S] or magnetic [M]):

RK 100

1 m connection cable passing through the back side of the case, respectively for case configurations Rh, rRh passing through the right side of the case

RKOe 100

Universal plug connector mounted on the right side of the case, respectively for case configuration rT on the back side

- Inductive / electronic limit-switch assemblies (I, E):
Terminal box mounted on the right side of the case, respectively for case configuration rT on the back side

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

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

- Pneumatic limit-switch assemblies (P)
PPE- or PP converter on the backside of the case; 1 limit max. for standard versions, with bottom connection only, dimensional drawings upon request

Special Versions

- Case ventilation for outdoor use, no. 22: with pressure equalizing membrane, IP 65
- Other electrical connections, e.g. plug connector DIN EN 175-301-803

Ordering Information

The ordering code of the individual gauge model RK 100 resp. RKOe 100 (compare data sheet 1300) is extended by the

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

Examples:

RK 100-1, 0-600 bar, G ½ B, **M 12**
RKOe 100-3, 0-10 bar, ½"NPT, **I 1**



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Case Configurations, Electrical Connections, Dimensional Data and Weights

The dimensions are the same as from the basic model, except the front-to-back sizes, **dimensions B and B1**, see table below. For the other dimensions, please see data sheet 1300.

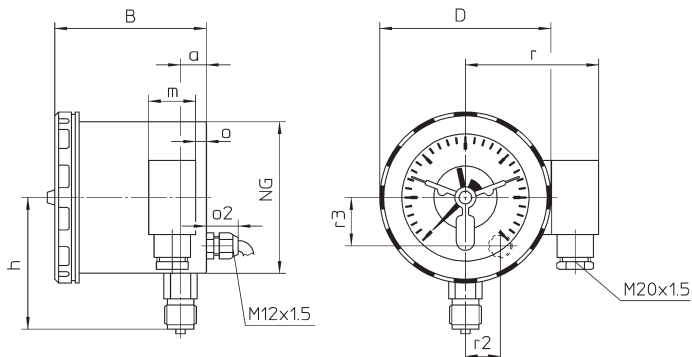
Others than standard locations are available only upon request at extra charges.

The locations of the electrical connections are shown in the dimensional drawings below.

The front-to-back sizes of versions with pneumatic limit-switch assembly are the same as below. Technical drawings for the PP/PE converter upon request.

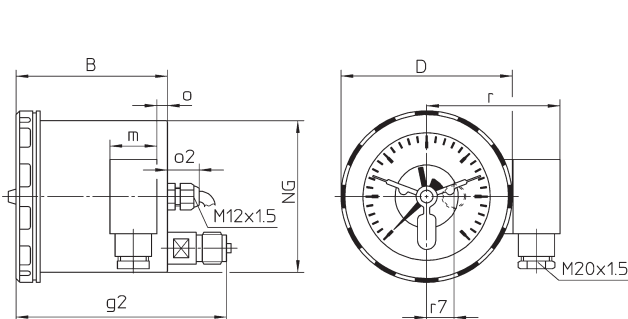
Bottom connection

Connection cable or Universal plug connector / terminal box



Back connection (r)

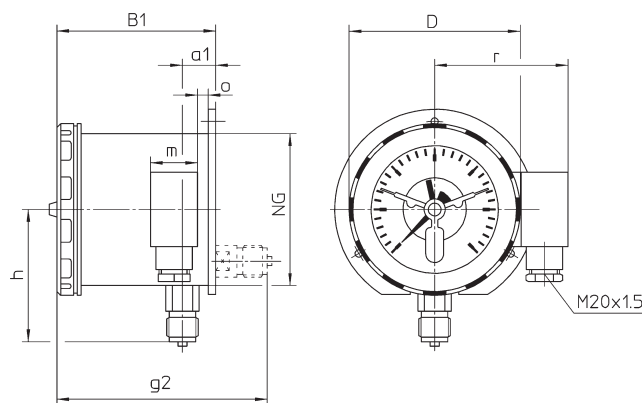
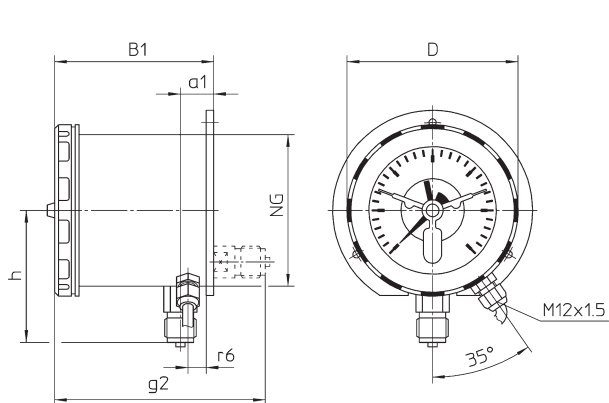
Connection cable or Universal plug connector / terminal box



Bottom or lower back connection, rear mounting flange (Rh, rRh)

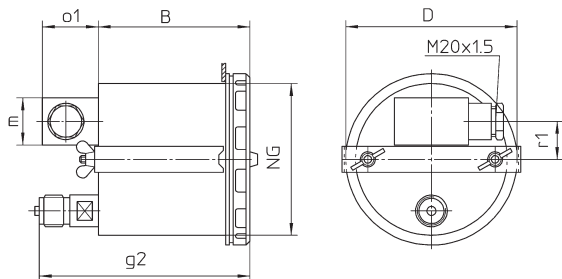
Connection cable

Universal plug connector/terminal box



Lower back connection, U-clamp for panel mounting (rT)

Connection cable or Universal plug connector / terminal box



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

NCS	a	a1	B	B1	D	g2	h±1	m	o	o1	o2	r	r1	r2	r3	r6	r7	Weight (approx.) ¹⁾	
																		RK	RKOe
100	17	22	100	105	113	139	87	31	7	42	21	94	25	23	32	12	18	0.62	1.20
4"	.67	.87	3.94	4.13	4.45	5.47	3.42	1.22	.27	1.65	.83	3.7	.98	.90	1.26	.47	.71	1.37	2.64

¹⁾ approx. weights for case with bottom connection and with 2 contacts

The information in this leaflet is given in good faith, but we reserve the right to make changes without notice.