

Bourdon Tube Pressure Gauge

With limit switch contact assembly
Square case

RQS

General Information

This data sheet contains details on the ordering information and minimum pressure ranges of the Bourdon tube pressure gauge model RQS with limit switch contact assembly as well as dimensional drawings with the position of the electrical connections.

Data sheet 1500 contains important details and ordering information for this basic model without limit switch contact assembly. These details also apply to the version with limit switch contact assembly, unless otherwise stated below.

Detailed explanations on the operating principle and the application of our limit switch contact assemblies can be found in model overview 9.1000.



Standard Version

Information on general and metrological features (e.g. load limits/temperature resistance) and standard pressure ranges/scale divisions can be found in model overview 1000.

Minimum Pressure Ranges

Each pressure gauge needs certain directive forces of the measuring element for operating a limit switch contact assembly. Therefore, the installation is possible from the minimum pressure ranges indicated in the following table:

Limit switch contact assembly	Minimum pressure ranges (pressure unit in bar/psi)	
	NCS 96 (3.78")	NCS 144 (5.67")
1 x low-action	1.0 (15)	1.0 (15)
2 x low-action	1.6 (30)	1.6 (30)
1 x magnetic	1.6 (30)	1.6 (30)
2 x magnetic	2.5 (60)	2.5 (60)
1 x inductive	1.0 (15)	1.0 (15)
2 x inductive	1.6 (30)	1.6 (30) ¹⁾
1 x electronic	1.0 (15)	1.0 (15)
2 x electronic	1.6 (30)	1.6 (30) ¹⁾
1 x pneumatic	1.0 (15)	1.0 (15)
2 x pneumatic	–	1.6 (30)

Pressure gauges with 3 or 4 limit switches upon request.

Window

Acrylic glass

Electrical Connection

For electromechanical limit switches (M, S):

(magnetic and low-action contact)

cable entry in the back of the case, 1 m connection cable

option:

- NCS 144: universal plug connector on the back of the case (not available for NCS 96)
- angular plug connector according to DIN EN 175301-803 (former DIN 43 650) upon request

For inductive / electronic limit switches (I, E):

NCS 96: cable entry in the back of the case,
1 m connection cable

NCS 144: terminal box on the back of the case

option:

angular plug connector according to DIN EN 175301-803 (former DIN 43 650) upon request

The universal plug connector is equipped with 6 connections and a ground terminal.

The terminal box is equipped with 6 connections.

The exact position of the electrical connection is depicted in the dimensional drawings on page 2.

Other than standard mounting is only available upon request at extra charges.

For pneumatic limit switches

one PE or PP converter for each limit switch on the back of the case (NCS 96: max. 1 limit switch);
dimensional drawings available upon request

Ordering Information, Standard Pressure Ranges

See page 3

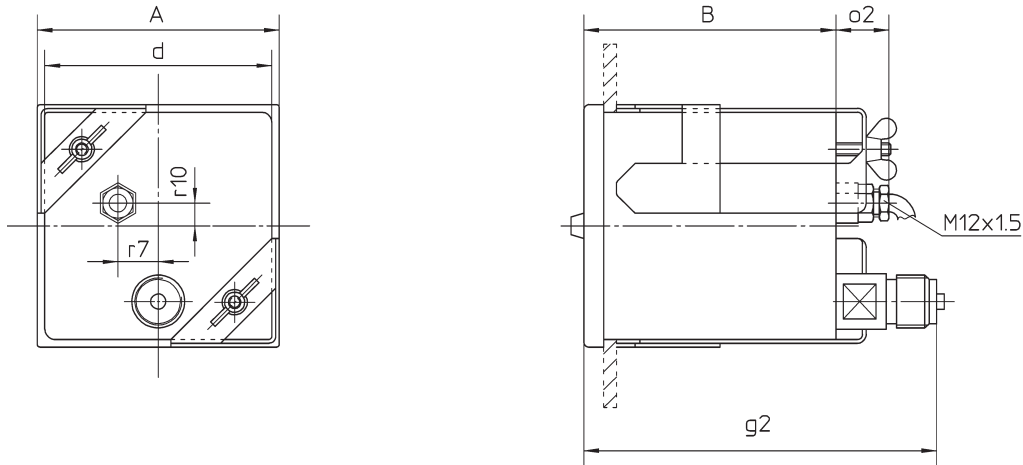
¹⁾ with switching function 11 or 22 upon request

Case Configuration, Electrical Connection, Dimensional Data and Weights

Lower Back Connection

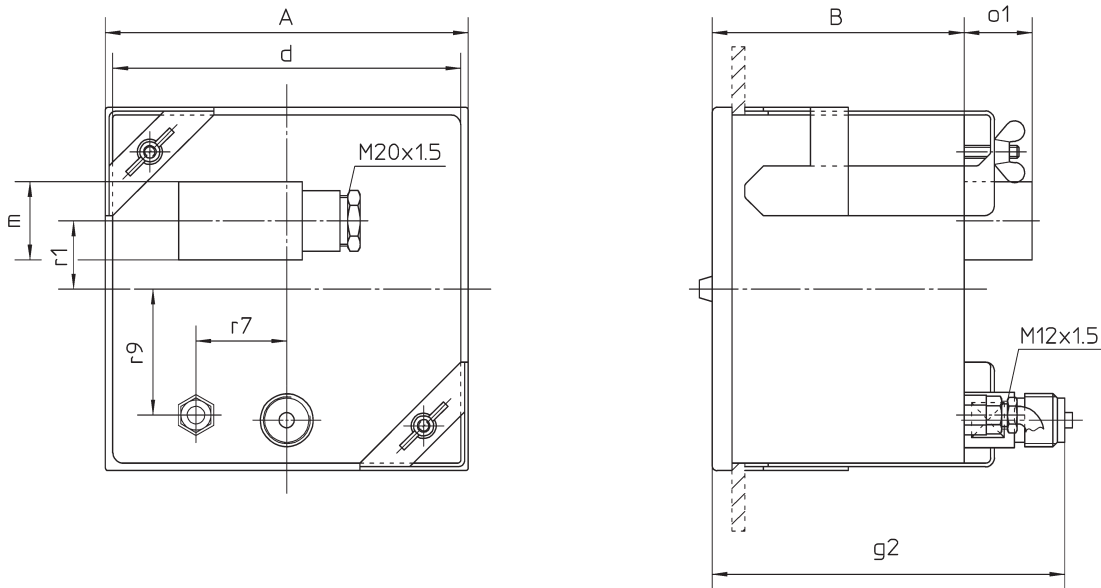
NCS 96, u-clamp for switch panel mounting

cable entry



NCS 144, u-clamp for switch panel mounting

cable entry or universal plug connector/terminal box



Dimensional Data (mm/inch) and Weights (kg/lb)

case	A (NCS)	B	d	g2	m	o1	o2	r1	r7	r9	r10	approx. weight
96 x 96 3.78 x 3.78	96	100	90 3.54	140 5.51	-	-	21 0.83	-	16 0.63	-	9 0.35	1.10 2.43
144 x 144 5.67 x 5.67	144	144	136 5.35	144	31 1.22	27 1.06	-	27 1.06	36 1.42	50 1.97	-	1.70 3.75

Dimensional deviations compared to basic models from data sheet 1500: dimensions B, g2 (height), see table

For the other dimensions, please refer to data sheet 1500.

The exact position of the electrical connection is depicted in the dimensional drawings above.

Other than standard mounting is only available upon request at extra charges.

Dimensional drawings for pressure gauges with pneumatic limit switch contact assembly are available upon request.

Ordering Information

Basic Model:		Bourdon Tube Pressure Gauge with Limit Switch Contact Assembly, Square Case		RQS
Case filling:	without			without code letters
Nominal case size:	96x96, 144x144 mm (3.78x3.78, 5.67x5.67")			96, 144
Wetted material:	copper alloy			- 1
	stainless steel			- 3
Pressure ranges:	-0.6 / 0 bar			
	-1 / 0 bar			
	-1 / +0.6 bar	30" hg vac.	-	15 psi
	-1 / +1.5 bar	30" hg vac.	-	30 psi
	-1 / +3 bar	30" hg vac.	-	60 psi
	-1 / +5 bar	30" hg vac.	-	100 psi
	-1 / +9 bar	30" hg vac.	-	160 psi
	-1 / +15 bar	30" hg vac.	-	200 psi
		30" hg vac.	-	300 psi
	0 - 0.6 bar	0 -		10 psi
	0 - 1 bar	0 -		15 psi
	0 - 1.6 bar			
	0 - 2.5 bar	0 -		30 psi
	0 - 4 bar	0 -		60 psi
	0 - 6 bar	0 -		100 psi
	0 - 10 bar	0 -		160 psi
	0 - 16 bar	0 -		200 psi
		0 -		300 psi
	0 - 25 bar	0 -		400 psi
	0 - 40 bar	0 -		600 psi
	0 - 60 bar	0 -		800 psi
		0 -		1,000 psi
	0 - 100 bar	0 -		1,500 psi
	0 - 160 bar	0 -		2,000 psi
		0 -		3,000 psi
	0 - 250 bar	0 -		4,000 psi
		0 -		5,000 psi
	0 - 400 bar	0 -		6,000 psi
0 - 600 bar	0 -		10,000 psi	
0 - 1000 bar	0 -		15,000 psi	
Process connection:	standard thread	G ½ B	G ½ B	
	options	½" NPT	½" NPT	
		M20x1.5	M20x1.5	
Limit switch contact assembly:	low-action contact			S
	magnetic contact			M
	inductive contact			I
	electronic contact			E
	pneumatic contact			P
Switching function:				1
				2
				11
				12
				21
				22
Example:				RQS 144 - 3, 0 - 6 bar, G ½ B, M1