

Differential Pressure Gauges With Limit Switch Contact Assembly

Measuring system 2 Bourdon tubes/1 pointer,
stainless steel case with bayonet ring

DiRZCh 160
DiRZChOe 160

This data sheet contains information concerning order text and minimum pressure ranges of the differential pressure gauge models DiRZCh/DiRZChOe with limit switch contact assembly as well as dimensional drawings with the position of the electrical connections.

Data sheet 5111 contains important details and ordering information for those basic models without limit switch contact assembly. These specifications also apply to the versions with limit switch contact assembly, unless otherwise stated below.

The model code for liquid-filled pressure gauges with limit switch contact assembly is DiRZChOe. A special oil is used as case filling.

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



Standard Versions

Available Limit Switch Contact Assemblies

1. **Direct** (electromechanical)
 - 1.1 Low-action contact **S**
 - 1.2 Magnetic contact **M**
2. **Indirect** (contact-free)
 - 2.1 Electronic contact **E**
 - 2.2 Inductive contact **I**

Minimum Pressure Ranges

Each pressure gauge requires certain directive forces of the measuring element for the operation of a limit switch contact assembly. Therefore, the installation is only possible from the minimum pressure ranges indicated in the following table¹⁾:

Limit switch contact assembly type	Minimum pressure ranges ¹⁾	
		bar
S	1 x low-action	1.0
	2 x low-action	1.6
	3 x low-action	upon request
M	1 x magnetic	1.6
	2 x magnetic	4.0
	3 x magnetic	upon request
I	1 x inductive	1.0
	2 x inductive	1.6
	3 x inductive	upon request
E	1 x electronic	1.0
	2 x electronic	1.6
	3 x electronic	upon request

For pressure gauges with 3 limit switch contacts, the limit setting pointers cannot necessarily all be set one above the other. Therefore, please always specify which of the pointers have to be adjustable one above the other or where your switch points are.

For the filled versions, electronic limit switches are to be preferred due to increased contact resistances at the mechanical switching contacts.

Window

Laminated safety glass

Electrical Connection

- For electromechanical limit switches (**M**, **S**) universal plug connector on the right side of the case
- For inductive or electronic limit switches (**I**, **E**) terminal box on the right side of the case

The plug connector has 6 connections and a ground terminal. The terminal box has 6 connections.

Please refer to the dimensional drawings on page 2 for the precise position of the electrical connection.

Special Versions Upon Request

- Other position of connection
- Other electrical connection

Ordering Information

In addition to the order text of the particular instrument models (cf. data sheet 5111), please add

- the code letter for the type of limit switch contact assembly: **S**, **M**, **I**, or **E** and
- the code number for the switch function, e.g.: 1, 11, 12, 2, 22, 21

Please compare the particular types of limit switch contact assembly in model overview 9.1000!

Example: DiRZCh 160 – 3, 0 – 10 bar, G $\frac{1}{2}$ B, M12
DiRZChOe 160 – 3, 0 – 6 bar, $\frac{1}{2}$ " NPT, I1

¹⁾ lower pressure ranges upon request

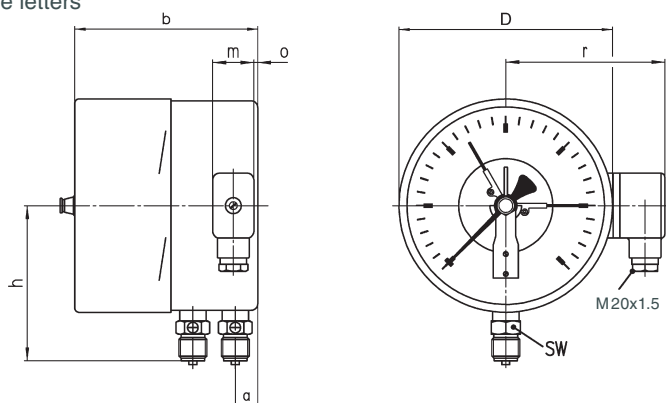
Case Configuration, Code Letters, Dimensional Data and Weight

Compared to the basic models, there are deviations in the front-to-back sizes, see table.
Please refer to data sheet 5111 for the other dimensional data.

Bottom Connection, Parallel One Behind the Other

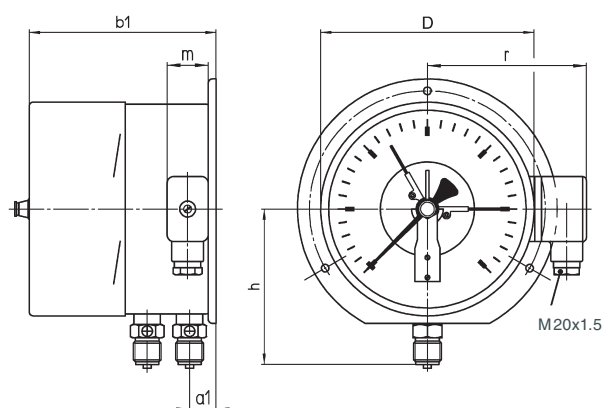
without mounting device

without code letters



with back flange for surface mounting

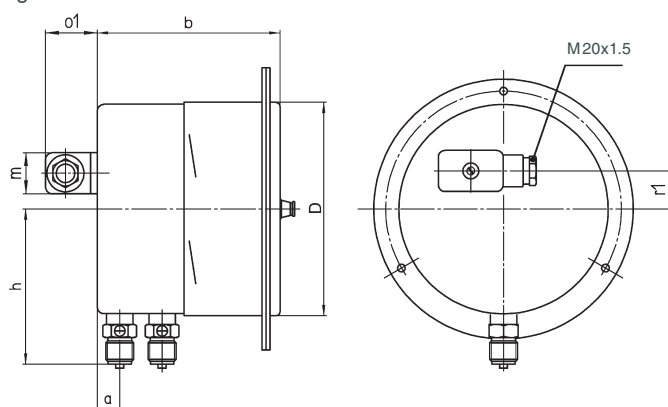
code letters: **Rh**



with front flange for panel mounting

code letters: **Fr**

without case filling



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

NCS	a	a1	b	b1	D	h ^{±1}	m	r	r1	o	o1	SW	approx. weight ¹⁾	
													DiRZCh	DiRZChOe
160	17	20.5	138	141.5	161	117	31	117	27	3	37	22	1.8	3.8
6"	0.67	0.81	5.43	5.57	6.34	4.61	1.22	4.61	1.06	0.12	1.46	0.87	3.97	8.38

¹⁾ For inductive and electronic limit switches with 2 similar switching functions (i.e. I11, I22 or E11, E22, also as part of 3x limit switch contact assemblies), please add 12 mm (0.47") to the lengths B and B1.