

# OPERATION MANUAL



## Industrial pressure transmitter DRTR-AL for measurement of absolute pressure

### Description



### Characteristic features

- Variants from vacuum to 100 bar FS possible
- Measuring absolute pressure
- Output standard signal 0...10 V or 4...20 mA
- High-quality industrial design in blue anodized aluminum
- Rugged, media-resistant design
- Temperature compensated
- Easy to install
- Water and oil resistant
- IP65 Protection

### Typical areas of application

- Food technology
- Pneumatics
- High pressure
- Fuel pumps
- Gases
- Fuel cells

### Technical Data

Industrial pressure transmitter	
Measuring range	1...+50 bar, 6 types
Bursting pressure	See table on page 2
Residual error linearity / hysteresis	< ±0,4 % FS
Temperature coefficient	TCO < ±0,015 % FS / K TCG < ±0,010 % FS / K
Operating temperature range	-20...+80 °C
Sensor material	Ceramics, Al <sub>2</sub> O <sub>3</sub>
Housing material	Aluminium AlMgSi0,5 anodized in blue
Seal	Viton
Pressure connection	G1/4"
Dimensions	(LxWxH) 115x50x30 mm
Connection	4-pole industrial connection, DIN 43650
Protection	IP65
CE-Conformance	2014/30/EU
EMV-noise emission	EN 61000-6-3:2011
EMV-noise withstanding	EN 61000-6-1:2007
Model 4...20 mA	
Output signal	4...20 mA, Two-wire
Permissible load	$R_a[\Omega] = (U_v[V] - 10V) / 0,02 A$
Model 0...10 V	
Output signal	0...10 V, Three-wire
Auxiliary power	12...30 V DC / 5 mA

### Features

The pressure sensor of the series DRTR-AL transmits the measured value in the form of a calibrated and temperature compensated standard signal of 0...10 V or 4...20 mA. The product range covers 6 different measuring variants of the pressure range from vacuum to 50 bar Full Scale (FS)(See table).

With the precise calibration of 7 measurement points at 3 different temperatures, excellent precision and a very low temperature residual error is achieved.

The sensors are ideal for measuring the static and dynamic absolute pressure in liquids or gases.

Typical applications are in the field of pneumatics, hydraulics and industrial applications. The robust sensor housing with IP65 is made of anodized aluminum and has a G1/4" media port.

The electrical connection is an industrial plug according to DIN 43650. The electrical power signal is supplied via the current loop, and the version with voltage output requires a separate unit for power supply.

In addition to the versions with 4...20 mA and 0...10 V variants with digital output signal, stainless steel case, and relative pressure versions are also available.

In general the B+B pressure sensors are medium resistant. However we recommend to prove the media compatibility with critical mediums such as electroplating applications (iron trichloride) or oils with undefined additives .



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### Available Models

Measuring range	Burst pressure	Order no. current output	Order no. voltage output
1 bar abs	4 bar	DRTR-AL-20MA-A1B	DRTR-AL-10V-A1B
2 bar abs	5 bar	DRTR-AL-20MA-A2B	DRTR-AL-10V-A2B
5 bar abs	12 bar	DRTR-AL-20MA-A5B	DRTR-AL-10V-A5B
10 bar abs	25 bar	DRTR-AL-20MA-A10B	DRTR-AL-10V-A10B
20 bar abs	50 bar	DRTR-AL-20MA-A20B	DRTR-AL-10V-A20B
50 bar abs	120 bar	DRTR-AL-20MA-A50B	DRTR-AL-10V-A50B

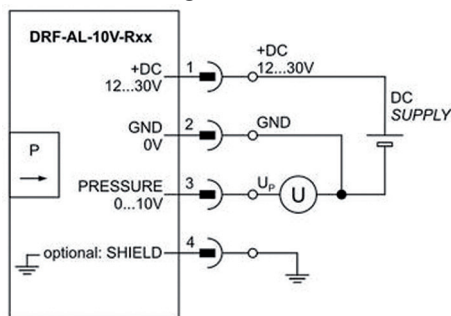
With absolute pressure measurement, 0 bar corresponds to vacuum.

### Assignment of connection

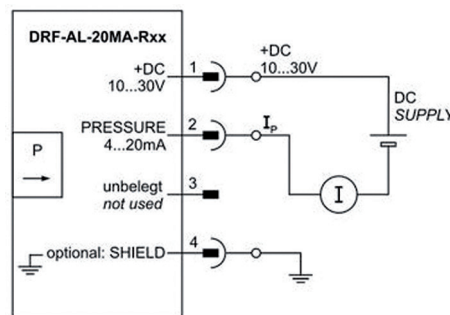
Pin	Voltage output	Current output
1	+DC 12...30 V	+DC 10...30 V
2	GND 0 V	PRESSURE 4...20 mA
3	U PRESSURE 0...10 V	...
4	SHIELD	SHIELD



### Connection diagram

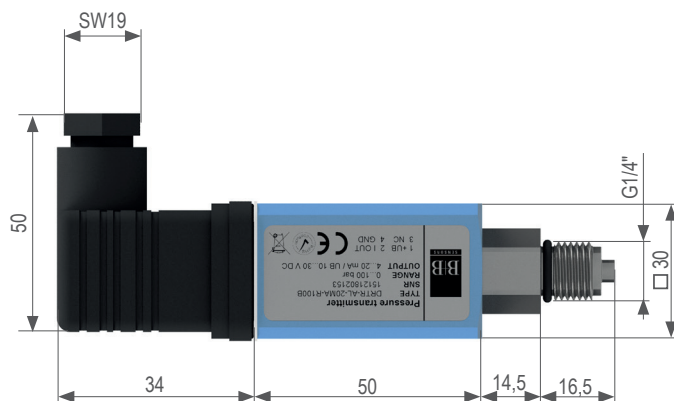


Voltage output 0...10 V



Current output 4...20 mA

### Dimensions



With G1/4" Pressure gauge

### Attention

Please avoid extreme mechanical and inappropriate exposure.

The device/product is not suitable for potential explosive areas and medical-technical applications.

