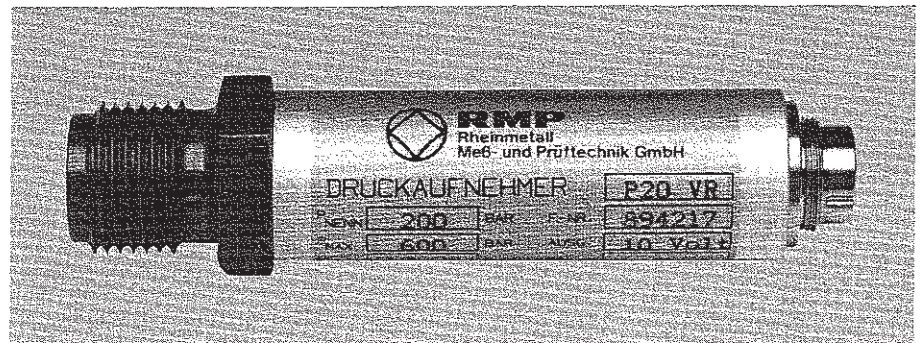


Pressure transducer p 20 V with integrated amplifier



- For static and dynamic measurement of fluid and gas pressures
- Frictionless, high resolution
- Incorporated DC measuring amplifier
- Available with voltage or current output
- Measuring ranges 10...1000 bar
- Connection port in accordance with DIN 16288
- Space-saving, value-for-money design
- DAZ1 indicator can be directly connected

The p 20 V pressure transducer was designed for static and dynamic measurement of overpressures with respect to the atmospheric pressure in fluids and gases. It is used in pneumatics, hydraulics, process control engineering, pump construction etc.

The lack of any mechanical transmission elements susceptible to friction guarantees high resolution and reproducibility of the measured values as well as a long service life.

Design and function

In the case of the p 20 V pressure transducer, the measuring element consists of a rigid diaphragm, which has been machined from the solid transducer body and which has strain gauges connected in a full bridge circuit bonded to it.

The pressure transducer p 20 V is fitted with a measuring amplifier.

The imbalance of the bridge circuit when the pressure transducer is loaded produces an output voltage or

an output current proportional to the applied pressure to be measured.

Notes on application

The pressure is routed via a port in the socket in accordance with DIN 16288 with a G 1/2 A connecting thread. When determining the measuring range, it is necessary to take into account the maximum pressure, in other words any brief pressure peaks which may occur.

The signal voltage is amplified with the built-in DC measuring amplifier. At the nominal pressure, a voltage of + 10 V is applied to the amplifier output or a current of 20 mA flows. A filtered direct voltage of between 19 V and 26.5 V is sufficient for the energy supply.

Indicating and recording units can be directly connected to the output. These can be adjusted for a stipulated measuring range.

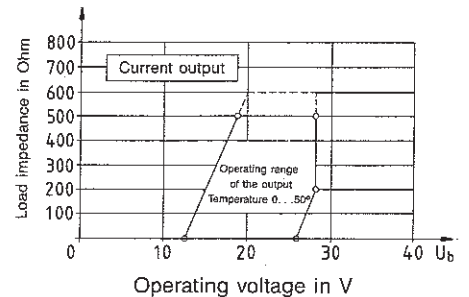
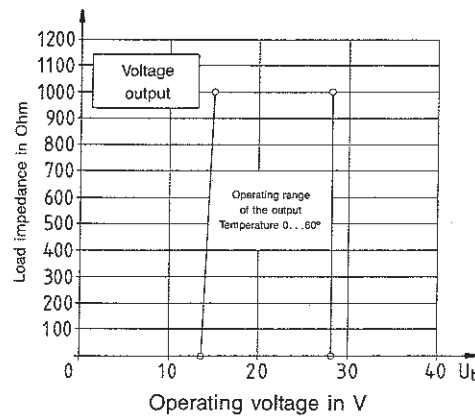
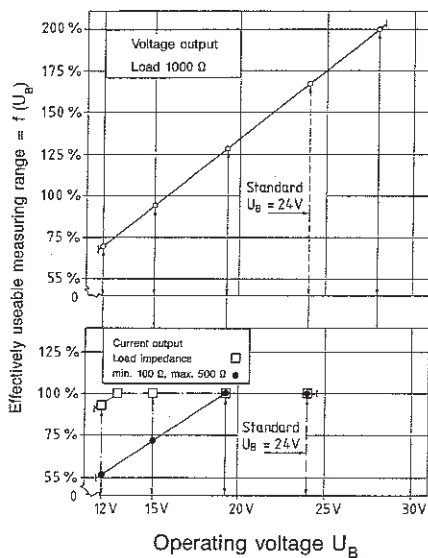
An external potentiometer, connected via a screened cable (6-pole) should be used for precise setting of the electrical zero point (when depressurized).

The zero point balancing potentiometer is installed in the indicator instrument DAZ1 available from RMP.

If these instructions are followed, the distance between the pressure transducer p 20 V and the indicating instrument may exceed 100 m.

The pressure transducer has bypass calibration. The calibration signal is approximately 80 % of the measured range. If required, the precise value is given on the rating plate.

Characteristics fields



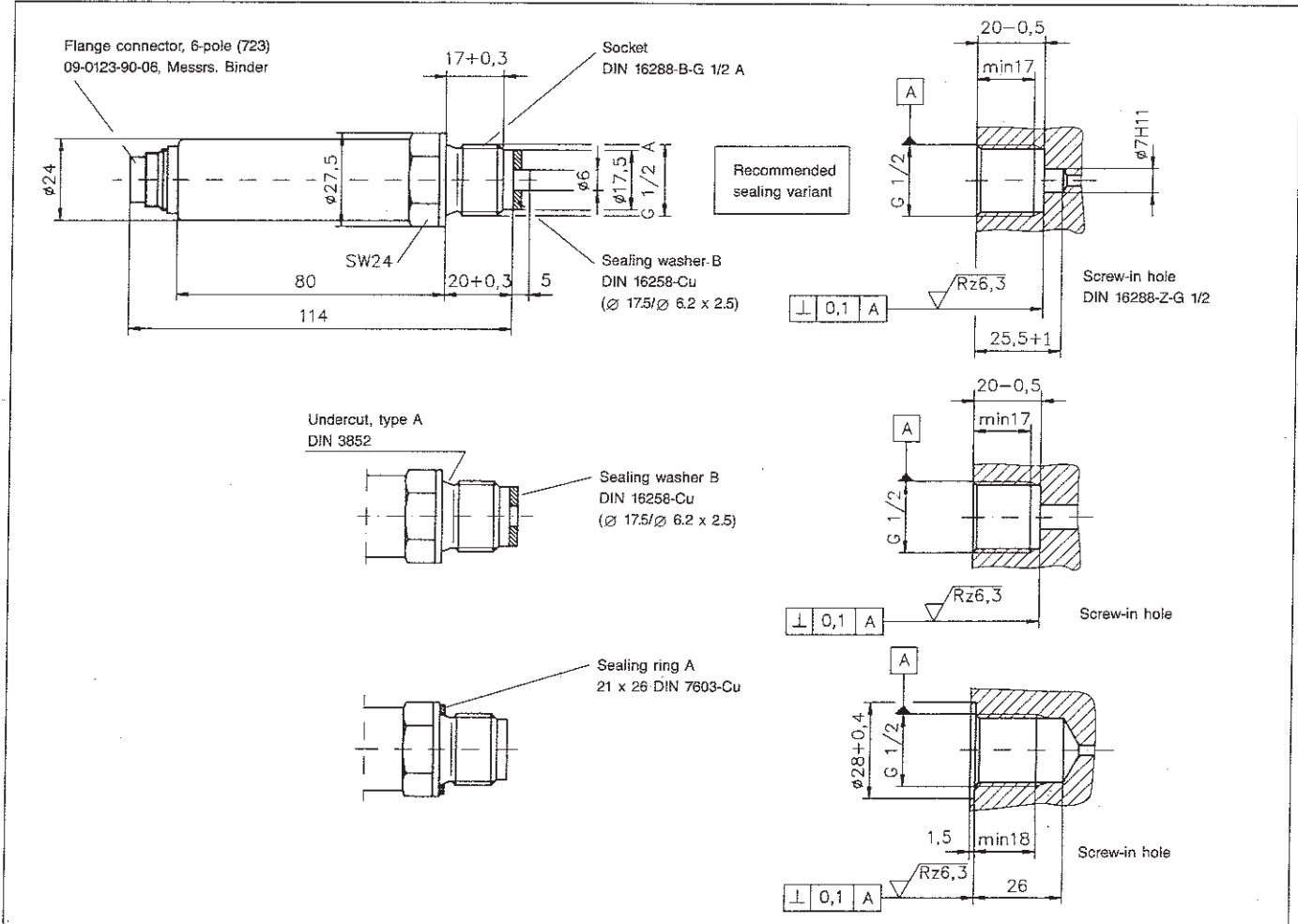
TECHNICAL DATA

Accuracy class:	0.5 % typical
Measuring ranges:	10, 20, 50, 100, 200, 300, 500, 1000 bar, special measuring ranges from 100 ea.
Energy supply:	24 V, (19.2...26.5 V)/45 mA max. Lower operating voltages possible as from 9 V (see characteristics family)
Overload capability:	3-fold
Voltage output:	10 V/10 mA
or	
Current output:	20 mA, min./max. load impedance 100/500 Ω*)
or	
Current output:	4...20 mA, min./max. load impedance 100/500 Ω, > 50 °C: min. load impedance 200 Ω
Output voltage range:	-3...+12 V
Calibration signal	> 15 V to 28 V, approx. 1 mA 80 % of the measuring range limit value
Limit frequency:	1200 Hz (3 dB)

Zero point error:	< ± 1 %
Sensitivity error:	< ± 0.5 %
Linearity and hysteresis error:	< 0.5 %
Temperature range:	0...60 °C, wider temperature range on request
Zero point drift:	< 0.5 %/10 K
Sensitivity drift:	< 0.5 %/10 K
Electrical connection:	6-pole, DIN 45322
Protection class:	IP 65
Hydraulic/pneumatic connection:	G 1/2 A
Material for thread connection and diaphragm	1.4057
Weight:	120 g
Available accessories:	Coupling socket, 6-pole, see back page 09/0122-10-0609-0322-00-06 (IP 40)
Subject to technical modifications	

*) Note: In the case of the current output, the supply voltage should not exceed 26 V continuously, otherwise the thermal current limiting will respond.

Dimensions



Connection circuit

