

Peritact 80

Low-pressure measuring device with analog display for tension, compression and differential pressure

- Membrane measuring instrument
- smallest measuring range 0...50 Pa
- Analog output 0...10 V or 0/4...20 mA
- large mechanical display
- Minimum and maximum limits
- Supply voltage 230 Vac, 24 Vac or 24 Vdc
- Wall-mounted enclosure IP65



Description and operation

Safety instructions



Caution! Read these instructions carefully before connecting and operating the device.

Specialist personnel will connect and commission the system.

Application

The Peritact 80 indicators are used to measure and display small differential pressures of non-aggressive gases, especially air.

The application area includes, for example, air conditioning technology for controlling fans, monitoring room pressure or controlling filters.

Description

The Peritact 80 pressure indicator is used for displaying, signaling and transmitting measured values of pressure, vacuum or differential pressure of gaseous, non-aggressive substances.

The pressure, or differential pressure, acts on a guided diaphragm. The resulting force is compensated by a measuring spring, depending on the displacement. The movement of the diaphragm is transmitted via a flexible tube through a feedthrough from the pressure chamber to the actual value indicator. The zero point can be adjusted using a setscrew.

The device can be equipped with two setpoint pointers. The setpoint pointers can be adjusted across the entire scale range without overlap and are equipped with fork-type photoelectric sensors. When the actual value pointer reaches a setpoint pointer, a segment of the actual value pointer enters the corresponding fork-type photoelectric sensor of the setpoint pointer and, via an electronic circuit, activates a relay. The switching state of the relays is indicated by LEDs on the scale.

The movement of the membrane can also be converted into a pressure- or differential-pressure-proportional output signal by a differential transformer with downstream electronics.

The entire measuring system, including the electronic evaluation components, is housed in a wall-mounted enclosure with IP65 protection. The connection ports are located externally on the underside of the device, while the electrical cables are routed into the device via moisture-resistant feedthroughs.

Contact devices, as well as devices with an electrical output signal, require an auxiliary power supply of 230 Vac or 24 Vac.

The two-wire MZP 80 measuring transmitter requires a supply voltage of approximately 13-30 Vdc. The transmitter's current consumption varies depending on the measured pressure, within a range of 4-20 mA.

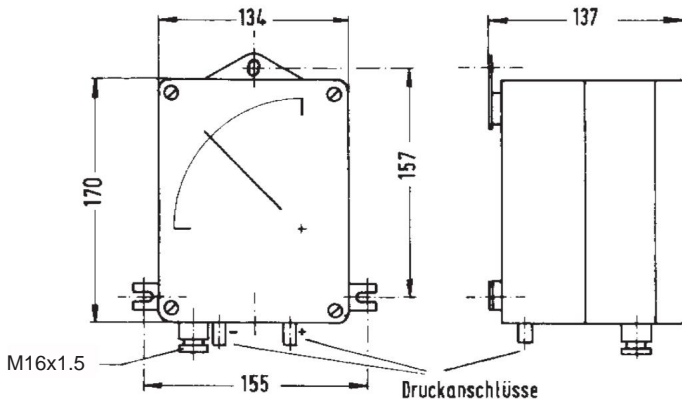
Assembly

All PERITACT 80 devices must be mounted on a wall or in a control panel without vibration.

The devices are mounted to a wall using a three-point mounting system.

The operating position is vertical.

Construction dimensions



Connection of the pressure lines

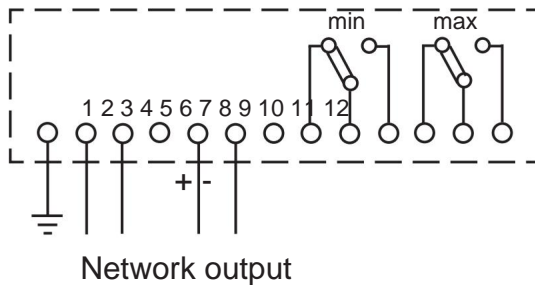
The connection nozzles have a diameter of 8 mm and are designed for hose connection. The connection is on the underside. The positive and negative pressure sides are marked with + and -. The devices are overload-proof up to 0.2 bar; the static pressure must also not exceed 0.2 bar.

Electrical connection

Connection is made according to the corresponding connection diagram. The transparent cover must be removed for connection. The 2415 model does not require auxiliary power. With the MZP 80 two-wire transmitter, power is supplied to the device and data is transmitted over the same two wires. A DC voltage of approximately 24 Vdc (13–30 Vdc) is required as the voltage source.

The contact rating of the relays in the contact devices is max. 250 Vac, 6 A non-inductive load.

Connection diagram



Zero point setting

To set the zero point, disconnect the pressure hoses. Then, adjust the zero point using the zero adjuster on the front of the device. Finally, reconnect the hoses for pressure measurement.

Setting the setpoint pointers on the contact devices

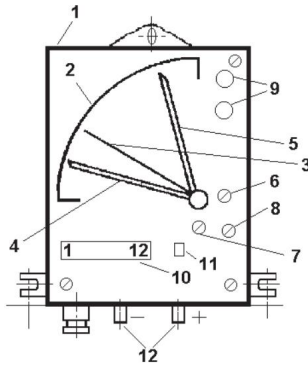
The setpoint indicators for minimum and maximum monitoring are operated on the front of the devices. Adjustment is possible without overlap across the entire scale range. The switching state of the relays is indicated by LEDs on the scale.

Adjusting the electrical output signal

If a difference is detected between the pointer reading and the electrical output signal, the output can be readjusted using the potentiometers P1 and P2.

P1 shifts the zero point, while P2 changes the measuring range. On the MZP 80 two-wire transmitter, the corresponding potentiometers are marked "4 mA" and "20 mA" on the scale.

Operating elements wall-mounted unit



- | | |
|--------------------------------------|------------------------------------|
| 1 plastic housing 155x170x137 mm | 7 setting of setpoint pointer max. |
| 2 scale | 8 zeroers |
| 3 Actual value pointers | 9 LEDs for the switching state |
| 4 setpoint pointers min | 10 Connection terminal |
| 5 setpoint pointers max | 11 Protective conductor terminal |
| 6 Setting the setpoint pointer (min) | 12 pressure ports 8 mm |

Technical data

Measuring materials:	non-aggressive gases	
Sensor:	guided rubber diaphragm with measuring spring	
smallest measuring range:	50 Pa	
largest measuring range:	10,000 Pa	
Overload protection:	max. 0.2 bar	
static pressure:	max. 0.2 bar	
Pressure connections:	Hose nozzles 8 mm ø	
Electrical connections:	Screw terminals 2 x 2.5 mm ² Wall-mounted unit with cable entry M16x1.5	
Exit:	Peritact 80:	0...20 mA, 4...20 mA, 0...10 V
	MZP 80:	4...20 mA, two-wire technology
Maximum burden:	with a current output of 500 ohms	
Maximum load:	at a voltage output of 20 mA	
Contact device:	2 limit values (min and max), each with 1 relay and 1 changeover contact, max. load 250 Vac non-inductive , 6 A, load	
Supply voltage:	Peritact 80:	230Vac or 24Vac
	MZP80:	24 Vdc (13...30 Vdc)
EMC:	Tested according to EN 50081-2, 50082-2, CE marking	
Housing:	Plastic (ABS) Wall-mounted, 134 x 170 x 137 mm (W x H x D), clear lid	
Protection class:	IP65 according to EN 60529	
Operating position:	perpendicular	
Ambient temperature:	Wall-mounted unit -10...+60 °C	
Weight:	approx. 1.5 kg	

Influencing factors and error limits

Supply voltage change:	ÿ 0.1% -15...+10%
Ambient temperature influence:	ÿ 0.3% /10K
Change in burden or load:	ÿ 0.1%