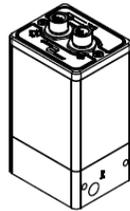


Manual RPD200

English



Conditions to run the proportional pressure regulator:

We assume that the operating staff is introduced in the safe handling of the proportional pressure regulator and has read and understood this assembly instruction completely.

Application

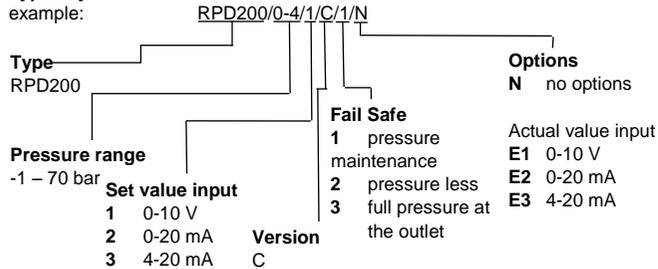
The RPD200 is used for the regulation of compressed air. The proportional pressure regulator regulates the outgoing pressure proportionally to an analog set value signal. An internal or external pressure sensor measures the pressure. Discrepancies between set value and actual value will be compensated by the regulator.

Technical Data

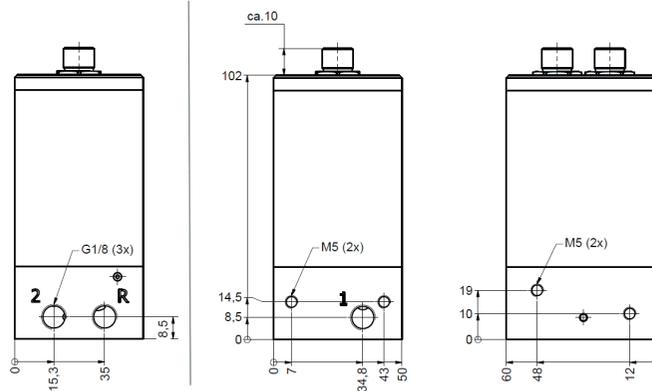
Supply voltage	24 VDC ±10 %
Power consumption	max. 12,5 W at Fail Safe Option 1, max. 24,5 W at Fail Safe Option 2 + 3
connection, electrical	8-pole M12x1 connector
set value input	0-10 V, 0-20 mA or 4-20 mA
actual value output	conforms to set value
connection, pneumatically	G1/8"
pressure range	-1 – 70 bar relative
inlet pressure required	max. 80 bar, depends on pressure range
quality of compressed air medium	filtered with 40 µm filter, no condensate compressed air, neutral gasses
flow	300 l/min at 6 bar outgoing pressure*
temperature range	-5°C – 60 °C
weight	0,850 kg
protection class	IP65 only with screwed plug coupling and locked USB port

*inlet pressure 10 bar

Type key



Dimensions



Installation

The installation and startup is only allowed by qualified staff. The user has to make sure that all the laws and rules for running and installing the regulator will be kept.

! During the installation the supply lines have to be without compressed air and voltage. When all the lines are connected correctly to the regulator the compressed air supply and the voltage supply can be switched on. Build up the pressure slowly to avoid fast and uncontrolled moving. Consider the limits in which the regulator can be used and which are defined in the technical data.

Mechanical connection

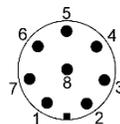
The pressure supply will be connected to the 1/8" thread 1. At connection 2 there is the regulated pressure. R is the ventilation of the regulator.

! At connection R use a muffler to avoid damage of hearing through loud noises of the ventilation. When using pressure control ranges with vacuum the vacuum has to be connected to R.

No material of sealing is allowed to find its way into the regulator.

Electrical connection

The used power sources have to ensure a safe electrical separation of the operating voltage according to IEC/DIN EN 60204-1. Install plug 8-pole plug



PIN	Cable color*	Function
1	White	24 VDC supply
2	Brown	0 VDC supply
3	Green	Set value input
4	Yellow	GND
5	Grey	Actual value output
6	Pink	Comparator output
7	Blue	Failure output
8	Red	Digital input

chart 1 * no warranty of color indication

The used cable has to be protected. The cable shield has to be grounded at the other end of the 8-pole female connector.

Comparator exit

If the outgoing pressure reaches the set value ±3% FS the output switches on high. I = max. 700mA

Set value input

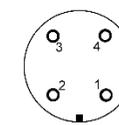
The set value input is defined by the product type key. Set values smaller than 0,5% (Full scale) will be oppressed. The regulator exhausts the connector 2 immediately then.

Actual value output

The actual value output has the same range as the set value input. Example: set value input Option 3= 4-20 mA ⇒ actual value output 4-20 mA The actual value output shows the actual measured outgoing pressure.

External Sensor

When an external sensor is used the regulator has an additional 4-pole M12x1 connector.



The indication of the pressure control area in the type drawing is then only used as an aid to select the other components of the controller for the specified pressure control area.

PIN	Cable color*	Function
1	Brown	24 VDC supply
2	White	Actual value input
3	Blue	GND
4	Black	Do not connect

chart 2
* no warranty of color indication

Status LEDs

Green LED
Voltage supply 24 VDC connected

Red LED
faults

The red LED is a signal for following incidents:

cause	LED	performance regulator	measure
Voltage supply 24 VDC too low or too high	continuously	no regulation	Check voltage supply
Set value too high	continuously	no regulation	Check set value
Set value < 3,7 mA at SW 4-20 mA	continuously	no regulation	Check set value

chart 3

Failures are also shown at the failure output (Pin 7). The output will switch on high, I = max. 700 mA. If the failure is persistent, the regulator has to be sent back to the manufacturer for an inspection.

Running**Cleaning**

The regulator can be cleaned with a soft soap solution if needed.

Repair

The regulator does not have any wearing parts that have to be replaced locally periodically. If a malfunction arises the regulator has to be sent back to the manufacturer.

Disassembly

Before removing the regulator the supply lines have to be without compressed air and voltage.

USB-port

The USB-connection is for the configuration of the regulator. If necessary the regulator can be adjusted with the adapter cable 077760000 and the program „Ribacon“.