Series PR1



AVENTICS™ Series PR1



R412010259

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial Function Precision pressure regulator Parts Precision pressure regulator Port G 1/4 Qn = 480 l/min Mounting orientation Any Regulator type Diaphragm-type pressure regulator Regulation range min. 0.1 bar Regulation range max. 1 bar Working pressure min. 0.5 bar Working pressure max 16 bar Min. ambient temperature -10 °C



Max. ambient temperature 60 °C Activation Mechanical Version Regulator without pressure gauge Regulator function with relieving air exhaust

Pressure supply single Medium Compressed air Neutral gases Recommended pre-filtering 5 µm Weight 1.02 kg

Material

Housing material Die cast zinc Seal material Acrylonitrile butadiene rubber Part No. R412010259

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C. Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow with secondary pressure 0,8 bar at $\Delta p = 0,2$ bar



Dimensions in mm





Pressure characteristics curve



p1 = working pressure p2 = secondary pressure qn = nominal flow

1) Starting point

Flow rate characteristic, p2 = 0,05 - 7 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow



0821302445

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial Function Precision pressure regulator Parts Precision pressure regulator Port G 1/4 Qn = 450 l/min Mounting orientation Any Regulator type Diaphragm-type pressure regulator Regulation range min. 0.05 bar Regulation range max. 2 bar Working pressure min. 0.5 bar Working pressure max 16 bar Min. ambient temperature -10 °C



Max. ambient temperature 60 °C Activation Mechanical ATEX suitable for ATEX Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single Internal air consumption q_v max. 2.2 l/min Medium Compressed air Neutral gases Recommended pre-filtering 5 μ m Weight 0.616 kg

Material

Housing material Brass Seal material Acrylonitrile butadiene rubber Part No. 0821302445

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C . Relieving exhaust (≤ 10 mbar over set pressure) Mounting: mounting bracket 1821332056 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range

Suitable for use in Ex zones 1, 2, 21, 22.

Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions in mm



A1 = input

A2 = output

A4 = output

Pressure characteristics curve



p1 = working pressure p2 = secondary pressure

q = flow rate

Flow rate characteristic, p2 = 0.05 - 2 bar



p1 = working pressure

p2 = secondary pressure qn = nominal flow



0821302446

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial Function Precision pressure regulator Parts Precision pressure regulator Port G 1/4 Qn = 580 l/min Mounting orientation Any Regulator type Diaphragm-type pressure regulator Regulation range min. 0.05 bar Regulation range max. 4 bar Working pressure min. 0.5 bar Working pressure max 16 bar Min. ambient temperature -10 °C



Max. ambient temperature 60 °C Activation Mechanical ATEX suitable for ATEX Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single Internal air consumption q_v max. 3 l/min Medium Compressed air Neutral gases Recommended pre-filtering 5 μ m Weight 0.616 kg

Material

Housing material Brass Seal material Acrylonitrile butadiene rubber Part No. 0821302446

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C . Relieving exhaust (≤ 10 mbar over set pressure) Mounting: mounting bracket 1821332056 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22.

Nominal flow Qn with secondary pressure $p^2 = 6$ bar at $\Delta p = 1$ bar



Dimensions in mm



A1 = input

A2 = output

A4 = output

Flow rate characteristic, p2 = 0,05 - 4 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow

Pressure characteristics curve



p1 = working pressure p2 = secondary pressure

q = flow rate



0821302447

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial Function Precision pressure regulator Parts Precision pressure regulator Port G 1/4 Qn = 1000 l/min Mounting orientation Any Regulator type Diaphragm-type pressure regulator Regulation range min. 0.05 bar Regulation range max. 7 bar Working pressure min. 0.5 bar Working pressure max 16 bar Min. ambient temperature -10 °C



Max. ambient temperature 60 °C Activation Mechanical ATEX suitable for ATEX Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single Internal air consumption q_v max. 4.1 l/min Medium Compressed air Neutral gases Recommended pre-filtering 5 μm Weight 0.616 kg

Material

Housing material Brass Seal material Acrylonitrile butadiene rubber Part No. 0821302447

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C . Relieving exhaust (≤ 10 mbar over set pressure) Mounting: mounting bracket 1821332056 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range

Suitable for use in Ex zones 1, 2, 21, 22.

Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions in mm



A1 = input

A2 = output

A4 = output

Flow rate characteristic, p2 = 0,05 - 7 bar



Pressure characteristics curve



p1 = working pressure

p2 = secondary pressure

qn = nominal flow

p1 = working pressure p2 = secondary pressure q = flow rate



0821302173

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 1/2

Qn = 6500 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 7 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Mechanical

ATEX suitable for ATEX

Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single

Internal air consumption q_v max. 6 l/min

Medium Compressed air Neutral gases

Recommended pre-filtering 5 µm Weight

1.5 kg

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Part No. 0821302173

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar



Dimensions



- A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	В	С	D	E	F
0821302173	G 1/2	G 1/2	G 3/8	G 1/4	82	43.5	159	202.5	10
Part No.	Н	К	М	0	R		T2	U	W
0821302173	M20x1,5	47	3	54	4	17	16	30	51.6



Hysteresis



p1 = working pressure p2 = secondary pressure

q = flow rate

1) * starting point

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure qn = nominal flow

Flow rate characteristic



p1 = working pressure

p2 = secondary pressure qn = nominal flow



0821302554

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 3/8

Qn = 3200 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 3 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Mechanical

ATEX suitable for ATEX

Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single

Internal air consumption q_v max. 6 l/min

Medium Compressed air Neutral gases

Recommended pre-filtering 5 µm Weight

1.5 kg

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Part No. 0821302554

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



- A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	В	С	D	E	F
0821302554	G 3/8	G 3/8	G 3/8	G 1/4	82	43.5	159	202.5	10
Part No.	Н	К	М	0	R		T2	U	W
0821302554	M20x1,5	47	3	54	4	17	16	30	51.6



Hysteresis



p1 = working pressure p2 = secondary pressure

q = flow rate

1) * starting point

Flow rate characteristic



p2 = secondary pressure qn = nominal flow

p1 = working pressure

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure qn = nominal flow



0821302555

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 3/8

Qn = 4000 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 5 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Mechanical

ATEX suitable for ATEX

Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single

Internal air consumption q_v max. 6 l/min

Medium Compressed air Neutral gases

Recommended pre-filtering 5 µm

Weight 1.5 kg

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Part No. 0821302555

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



- A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	В	С	D	E	F
0821302555	G 3/8	G 3/8	G 3/8	G 1/4	82	43.5	159	202.5	10
Part No.	Н	К	М	0	R	Т	T2	U	W
0821302555	M20x1,5	47	3	54	4	17	16	30	51.6



Hysteresis



p1 = working pressure p2 = secondary pressure

q = flow rate

1) * starting point

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure qn = nominal flow

Flow rate characteristic



p1 = working pressure p2 = secondary pressure qn = nominal flow



0821302556

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 3/8

Qn = 5000 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 7 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Mechanical

ATEX suitable for ATEX

Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single

Internal air consumption q_v max. 6 l/min

Medium Compressed air Neutral gases

Recommended pre-filtering 5 µm Weight

1.5 kg

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Part No. 0821302556

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



- A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	В	С	D	E	F
0821302556	G 3/8	G 3/8	G 3/8	G 1/4	82	43.5	159	202.5	10
Part No.	Н	К	М	0	R	Т	T2	U	W
0821302556	M20x1,5	47	3	54	4	17	16	30	51.6



Hysteresis



p1 = working pressure p2 = secondary pressure

q = flow rate

1) * starting point

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure qn = nominal flow

Flow rate characteristic



p1 = working pressure p2 = secondary pressure qn = nominal flow



0821302565

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 1/4

Qn = 2200 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 3 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Mechanical

ATEX suitable for ATEX

Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single

Internal air consumption q_v max. 6 l/min

Medium Compressed air Neutral gases

Recommended pre-filtering 5 µm Weight

1.5 kg

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Part No. 0821302565

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



- A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	В	С	D	E	F
0821302565	G 1/4	G 1/4	G 3/8	G 1/4	82	43.5	159	202.5	10
Part No.	Н	K	М	0	R		T2	U	W
0821302565	M20x1,5	47	3	54	4	17	16	30	51.6



Hysteresis



Flow rate characteristic



p1 = working pressure p2 = secondary pressure

qn = nominal flow

p1 = working pressure p2 = secondary pressure

q = flow rate

1) * starting point

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure qn = nominal flow



0821302566

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 1/4

Qn = 2600 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 5 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Mechanical

ATEX suitable for ATEX

Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single

Internal air consumption q_v max. 6 l/min

Medium Compressed air Neutral gases

Recommended pre-filtering 5 µm

Weight 1.5 kg

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Part No. 0821302566

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



- A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	В	С	D	E	F
0821302566	G 1/4	G 1/4	G 3/8	G 1/4	82	43.5	159	202.5	10
Part No.	Н	К	М	0	R		T2	U	W
0821302566	M20x1,5	47	3	54	4	17	16	30	51.6



Hysteresis



Flow rate characteristic

p1 = working pressure p2 = secondary pressure qn = nominal flow



p1 = working pressure p2 = secondary pressure

q = flow rate

1) * starting point

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure qn = nominal flow



0821302567

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 1/4

Qn = 3000 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 7 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Mechanical

ATEX suitable for ATEX

Certificates suitable for ATEX Regulator function with relieving air exhaust

Pressure supply single

Internal air consumption q_v max. 6 l/min

Medium Compressed air Neutral gases

Recommended pre-filtering 5 µm

Weight 1.5 kg

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Part No. 0821302567

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



- A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	В	С	D	E	F
0821302567	G 1/4	G 1/4	G 3/8	G 1/4	82	43.5	159	202.5	10
Part No.	Н	К	М	0	R	Т	T2	U	W
0821302567	M20x1,5	47	3	54	4	17	16	30	51.6



Hysteresis



p1 = working pressure p2 = secondary pressure

q = flow rate

1) * starting point

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure qn = nominal flow

Flow rate characteristic



p1 = working pressure p2 = secondary pressure qn = nominal flow



0821302165

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.





Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 1/2

Qn = 5600 l/min Mounting orientation

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 10 bar

Working pressure min. 0.5 bar



Working pressure max 16 bar

Min. ambient temperature -35 °C

Max. ambient temperature 60 °C

Activation Pneumatically

ATEX suitable for ATEX

Certificates suitable for ATEX

Regulator function with relieving air exhaust

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Pressure supply single Internal air consumption q_v max. 6 l/min Medium Compressed air Neutral gases Recommended pre-filtering

5 μm Control pressure max.

Weight 1.25 kg

10 bar

Part No. 0821302165

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (\leq 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22. Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar



Dimensions



A1 = input A2 = output A3 = output A6 = output

Dimensions in mm

Part No.	A1	A2	A3	A6	A8	В	С	D	E
0821302165	G 1/2	G 1/2	G 3/8	G 1/4	G 1/8	82	43.5	100.5	144
Part No.		К	М	0	R	Т	T2	U	W
0821302165	16	47	3	54	4	17	16	30	51



Pressure characteristics curve



p1 = working pressure

p2 = secondary pressure

q = flow rate

Flow rate characteristic, p2 = 0,05 - 7 bar



p1 = working pressure p2 = secondary pressure

qn = nominal flow

exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure

p2 = secondary pressure

qn = nominal flow

Flow rate characteristic, p2 = 0,05 - 5 bar



p1 = working pressure p2 = secondary pressure

qn = nominal flow



Flow rate characteristic, p2 = 0.05 - 3bar



p1 = working pressure

p2 = secondary pressure qn = nominal flow

control pressure characteristic



px = control pressure p2 = secondary pressure 1) Pneumatically operated 2) Man. adjustment up to 1 bar



0821302052

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.



Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 3/8

Qn = 5600 l/min

Mounting orientation Any

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 10 bar

Working pressure min. 0.5 bar

Working pressure max 16 bar

Min. ambient temperature -35 °C



Max. ambient temperature 60 °C

Activation Pneumatically

ATEX suitable for ATEX

Certificates suitable for ATEX

Regulator function with relieving air exhaust

Pressure supply single

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Internal air consumption q_v max. 6 l/min Medium Compressed air Neutral gases Recommended pre-filtering 5 µm Control pressure max. 10 bar

Weight 1.26 kg

Part No. 0821302052

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (≤ 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range

Suitable for use in Ex zones 1, 2, 21, 22.

Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



A1 = input A2 = output

A3 = relieving exhaust

A6 = pressure gauge connection A8 = Pilot connection

Dimensions in mm

Part No.	A1	A2	A3	A6	A8	В	С	D	E
0821302052	G 3/8	G 3/8	G 3/8	G 1/4	G 1/8	82	43.5	65.5	108
Part No.	К	М	0	R		T2	U	W	
0821302052	47	3	54	4	17	16	30	51	



Flow rate characteristic, p2 = 0.05 - 5 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow

Pressure characteristics curve



p1 = working pressure

p2 = secondary pressure

q = flow rate

Flow rate characteristic, p2 = 0,05 - 7 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow

Flow rate characteristic, p2 = 0,05 - 3 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow



exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure p2 = secondary pressure

qn = nominal flow

control pressure characteristic



px = control pressure p2 = secondary pressure 1) Pneumatically operated



0821302055

General series information PR1

The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.



Technical data

Industry Industrial

Function Precision pressure regulator

Parts Precision pressure regulator

Port G 1/2

Qn = 5600 l/min

Mounting orientation Any

Regulator type Diaphragm-type pressure regulator

Regulation range min. 0.05 bar

Regulation range max. 10 bar

Working pressure min. 0.5 bar

Working pressure max 16 bar

Min. ambient temperature -35 °C



Max. ambient temperature 60 °C

Activation Pneumatically

ATEX suitable for ATEX

Certificates suitable for ATEX

Regulator function with relieving air exhaust

Pressure supply single

Material

Housing material Die cast zinc

Seal material Chloroprene rubber Internal air consumption q_v max. 6 l/min Medium Compressed air Neutral gases Recommended pre-filtering 5 µm Control pressure max. 10 bar

Weight 1.26 kg

Part No. 0821302055

Technical information

The pressure dew point must be at least 15 $^\circ\text{C}$ under ambient and medium temperature and may not exceed 3 $^\circ\text{C}$.

Relieving exhaust (≤ 10 mbar over set pressure) Mounting: mounting bracket R412004872 or installation in piping Notice: This product may only be operated with oil-free, dry compressed air. Internal air consumption depending on adjustment range Suitable for use in Ex zones 1, 2, 21, 22.

Nominal flow Qn with secondary pressure p2 = 6 bar at $\Delta p = 1$ bar



Dimensions



A1 = input A2 = output

A3 = relieving exhaust

A6 = pressure gauge connection A8 = Pilot connection

Dimensions in mm

Part No.	A1	A2	A3	A6	A8	В	С	D	E
0821302055	G 1/2	G 1/2	G 3/8	G 1/4	G 1/8	82	43.5	65.5	108
									_
Part No.	К	М	0	R		T2	U	W	
0821302055	47	3	54	4	17	16	30	51	



Flow rate characteristic, p2 = 0.05 - 5 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow

Pressure characteristics curve



p1 = working pressure

p2 = secondary pressure

q = flow rate

Flow rate characteristic, p2 = 0,05 - 7 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow

Flow rate characteristic, p2 = 0,05 - 3 bar



p1 = working pressure

p2 = secondary pressure

qn = nominal flow



exhaust characteristics (contact limit < 10 mbar)



p1 = working pressure p2 = secondary pressure

qn = nominal flow

control pressure characteristic



px = control pressure p2 = secondary pressure 1) Pneumatically operated



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Precision filter pressure regulator, Series PR1-FRE

- G 1/4

- filter porosity 10 µm



Technical data

sion	1-part
ts	Precision filter pressure regulator
unting orientation	vertical
rking pressure min./max.	0.2 16 bar
bient temperature min./max.	-10 60 °C
dium temperature min./max.	-10 60 °C
dium	Compressed air Neutral gases
k. particle size	5 µm
ninal flow Qn	750 l/min
gulator type	Diaphragm-type pressure regulator
gulator function	with relieving air exhaust
ustment range min./max.	See table below
ssure supply	single
er reservoir volume	11.5 cm ³
er element	exchangeable
ndensate drain	Manual
 Internal air consumption 	0.01 l/min
ight	0.975 kg

Part No.	Port	filter porosity	Flow	Adjustment range min./max.	Condensate drain
			Qn		
0821300410	G 1/4	10 µm	750 l/min	0.1 2 bar	Manual
0821300411	G 1/4	10 µm	750 l/min	0.2 5 bar	Manual

Nominal flow with secondary pressure 6.3 bar at $\Delta p = 1$ bar

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Technical information

Material	
Housing	Die cast zinc
Seals	Acrylonitrile butadiene rubber
Reservoir	Die cast zinc
Filter insert	Polyethylene



Dimensions

Dimensions



A1 = input A2 = output

Dimensions in mm																
A1	A2	В	С	D	E	Н	H1	I	11	J	K	L	М	T2	V	W1
G 1/4	G 1/4	60	120	96	216	48	40	M5	M6	60	37	8	2	6	7	42.5



Diagrams





p1 = working pressure

p2 = secondary pressure

q = flow rate

Flow rate characteristic, p2 = 0,2 - 5 bar



p1 = Working pressure

p2 = Secondary pressure

qn = Nominal flow



Mounting bracket, Series PR1-MBR-...-W02

Weight



0.104 kg

Technical data

Part No.	
1821332055	
1821332056	

Technical information

Material	
Housing	Steel, galvanized



Dimensions

Dimensions



Dimensions

Part No.	А	В	С	Μ	0	R	Т	U	Material	Surface	Weight
1821332055	76	35	35	3	54	4	17	30	Steel	galvanized	0.104 kg
1821332056	62	30	30	3	49.4	5.5	13.5	24.5	Steel	galvanized	0.104 kg



Mounting bracket, Series MU1/PR1-MBR-...-W02

- for MU1, PR1



Ambient temperature min./max.

-40 ... 60 °C

Technical data

Part No.	for
R412004872	MU1, PR1

Technical information

Material	
Housing	Steel, galvanized



Dimensions

Dimensions



Dimensions

Part No.		А	В	С	D	E	F	G	Н	J	K	L
R412004872	G1	76	35	35	3	5.5	53.6	30.1	17	63.2	28.8	10.5



Pressure gauge, Series PG1-SAS

- Back port
- Background color Black
- Scale color White, Grey
- Viewing window Polystyrene
- Units bar
- Units psi



Version
Standardization
Class
Ambient temperature min./max.
Medium
Main scale unit (outside)
Main scale color (outside)
Secondary scale unit (inside)
Secondary scale color (inside)
Background color
Pointer color
Weight

Bourdon tube pressure gauge EN 837-1 2,5 -40 ... 60 °C Compressed air bar White psi Grey Black White See table below



Technical data

Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
R412003853	G 1/8	40 mm	0 bar 1.2	0 bar 1.6	0 1.6 bar	0.05
R412003854	G 1/8	40 mm	0 bar 2	0 bar 2.5	0 2.5 bar	0.1
R412003855	G 1/8	40 mm	0 bar 3.2	0 bar 4	0 4 bar	0.1
R412003856	G 1/8	40 mm	0 bar 4	0 bar 6	0 6 bar	0.2
R412003857	G 1/8	40 mm	0 bar 8	0 bar 10	0 10 bar	0.2
R412003858	G 1/8	40 mm	0 bar 12	0 bar 16	0 16 bar	0.5
R412004407	G 1/4	40 mm	0 bar 1.2	0 bar 1.6	0 1.6 bar	0.05
R412004408	G 1/4	40 mm	0 bar 2	0 bar 2.5	0 2.5 bar	0.1
R412004409	G 1/4	40 mm	0 bar 3.2	0 bar 4	0 4 bar	0.1
R412004410	G 1/4	40 mm	0 bar 4	0 bar 6	0 6 bar	0.2
R412004411	G 1/4	40 mm	0 bar 8	0 bar 10	0 10 bar	0.2
R412004412	G 1/4	40 mm	0 bar 12	0 bar 16	0 16 bar	0.5
R412004413	G 1/4	50 mm	0 bar 1.2	0 bar 1.6	0 1.6 bar	0.05
R412004414	G 1/4	50 mm	0 bar 2	0 bar 2.5	0 2.5 bar	0.1
R412004415	G 1/4	50 mm	0 bar 3.2	0 bar 4	0 4 bar	0.1
R412004416	G 1/4	50 mm	0 bar 4	0 bar 6	0 6 bar	0.2
R412004417	G 1/4	50 mm	0 bar 8 bar	0 bar 10 bar	0 10 bar	0.2
R412004418	G 1/4	50 mm	0 bar 12	0 bar 16	0 16 bar	0.5
R412007898	G 1/4	50 mm	0 bar 20	0 bar 25	0 25 bar	1

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Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
R412004419	G 1/4	63 mm	0 bar 1.2	0 bar 1.6	0 1.6 bar	0.05
R412004420	G 1/4	63 mm	0 bar 2	0 bar 2.5	0 2.5 bar	0.1
R412004421	G 1/4	63 mm	0 bar 3.2	0 bar 4	0 4 bar	0.1
R412004422	G 1/4	63 mm	0 bar 4	0 bar 6	0 6 bar	0.2
R412004423	G 1/4	63 mm	0 bar 8	0 bar 10	0 10 bar	0.2
R412004424	G 1/4	63 mm	0 bar 12	0 bar 16	0 16 bar	0.5

Part No.	Weight	Fig.	
R412003853	0.08 kg	Fig. 4	-
R412003854	0.08 kg	Fig. 4	-
R412003855	0.08 kg	Fig. 4	-
R412003856	0.08 kg	Fig. 4	-
R412003857	0.08 kg	Fig. 4	-
R412003858	0.08 kg	Fig. 4	-
R412004407	0.08 kg	Fig. 1	-
R412004408	0.08 kg	Fig. 1	-
R412004409	0.08 kg	Fig. 1	-
R412004410	0.08 kg	Fig. 1	-
R412004411	0.08 kg	Fig. 1	-
R412004412	0.08 kg	Fig. 1	-
R412004413	0.09 kg	Fig. 2	-
R412004414	0.09 kg	Fig. 2	-
R412004415	0.09 kg	Fig. 2	-
R412004416	0.09 kg	Fig. 2	-
R412004417	0.09 kg	Fig. 2	1)
R412004418	0.09 kg	Fig. 2	1)
R412007898	0.09 kg	Fig. 2	-
R412004419	0.1 kg	Fig. 3	-
R412004420	0.1 kg	Fig. 3	-
R412004421	0.1 kg	Fig. 3	-
R412004422	0.1 kg	Fig. 3	-
R412004423	0.1 kg	Fig. 3	-
R412004424	0.1 kg	Fig. 3	-

1) Suitable for use in Ex zones 1, 2, 21, 22.

Technical information

Material	
Housing	Acrylonitrile butadiene styrene
Thread	Brass
Viewing window	Polystyrene
Seal	Polytetrafluorethylene



Dimensions

Dimensions in mm, Fig. 1



1) Gasket thread



Dimensions in mm, Fig. 2



1) Gasket thread

Dimensions in mm, Fig. 3



1) Gasket thread

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Pressure gauge, Series PG1-SAS-ADJ

- Back port

- with adjustable work area display
- Background color Black
- Scale color White, Grey
- Viewing window Polystyrene
- Units bar
- Units psi





Version	Bourdon tube pressure gauge		
Version	with adjustable work area display		
Standardization	EN 837-1		
Class	2,5		
Ambient temperature min./max.	-40 60 °C		
Medium	Compressed air		
Work area	adjustable work area display		
Work Area Display, Color	Red Green		
Main scale unit (outside)	bar		
Main scale color (outside)	White		
Secondary scale unit (inside)	psi		
Secondary scale color (inside)	Grey		
Background color	Black		
Pointer color	White		
Weight	0.1 kg		

Technical data

Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
R412007867	G 1/4	50 mm	0 bar 1.2	0 bar 1.6	0 1.6 bar	0.05
R412007868	G 1/4	50 mm	0 bar 2	0 bar 2.5	0 2.5 bar	0.1
R412007869	G 1/4	50 mm	0 bar 3.2	0 bar 4	0 4 bar	0.1
R412007870	G 1/4	50 mm	0 bar 4	0 bar 6	0 6 bar	0.2
R412007871	G 1/4	50 mm	0 bar 8	0 bar 10	0 10 bar	0.2
R412007872	G 1/4	50 mm	0 bar 12	0 bar 16	0 16 bar	0.5

Technical information

To set the operating range, the cover (inspection glass) must be removed. To do this, carefully lift the inspection glass by inserting a pointed or flat object in the slot provided for this purpose on the housing circumference.

Technical information

Material		
Housing		Acrylonitrile butadiene styrene
Thread		Brass
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Material	
Viewing window	Polystyrene
Seal	Polytetrafluorethylene

Dimensions

Dimensions in mm, Fig. 1



1) Gasket thread

Dimensions in mm

Compressed air connection	Nominal diameter	ØA	В	С	D	E	F	SW
G 1/4	50 mm	49	47.5	26.5	13	7.2	3.7	14

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