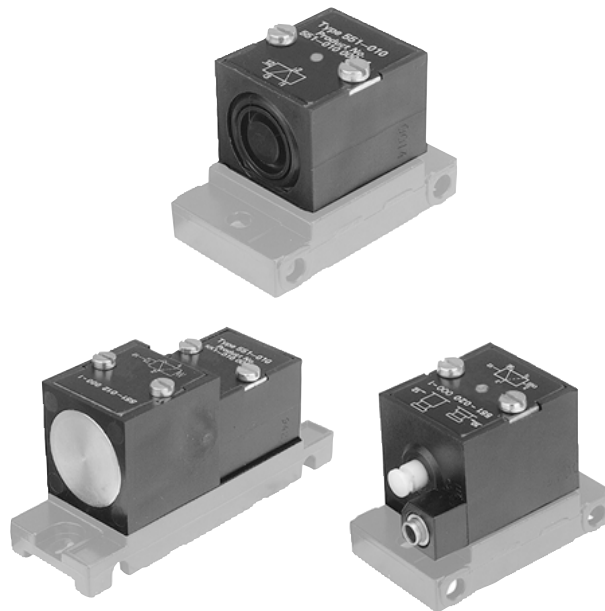



Flow and check valves ▶ Logic valves

## series 551

Brochure



Flow and check valves ▶ Logic valves  
**series 551**

	3/2-directional valve, Series 551 ▶ low pressure operated ▶ Qn = 2 - 120 l/min	3
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## Flow and check valves ▶ Logic valves

### 3/2-directional valve, Series 551 ▶ low pressure operated ▶ Qn = 2 - 120 l/min



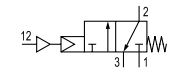
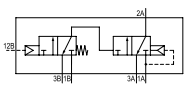
5511-081

Ambient temperature min./max. -20 °C / +70 °C  
 Medium temperature min./max. -20 °C / +70 °C  
 Medium Compressed air  
 Max. particle size 5 μm  
 Oil content of compressed air 0 mg/m³ - 1 mg/m³

Materials:  
 Housing Polyoxymethylene  
 Seals Acrylonitrile Butadiene Rubber

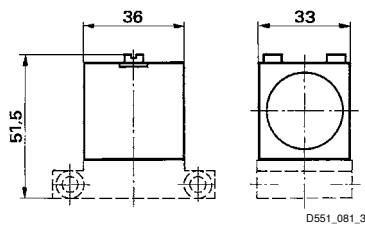
#### Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

		Flow rate value	Working pressure min./max.	Control pressure min./max.	Weight	Fig.	Note	Part No.
		[l/min]	[bar]	[bar]	[kg]			
	-	2	2 / 10	0.01 / 0.5	0.06	Fig. 1	-	5510120000
	NC	120	2 / 10	0.01 / 0.5	0.11	Fig. 2	1)	5510120100
	NO	120	2 / 10	0.01 / 0.5	0.11	Fig. 2	2)	5510121100

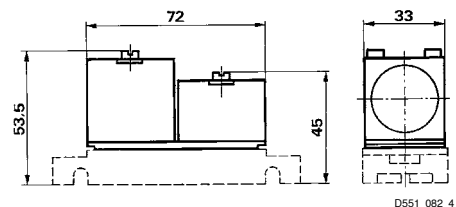
1) Logic function: YES  
 2) Logic function: NOT (NO)  
 Nominal flow Qn at 6 bar and Δp = 1 bar

Fig. 1



D551\_081\_3

Fig. 2



D551\_082\_4

### 3/2-directional valve, Series 551

▶ Qn = 120 l/min



5510-031

Working pressure min./max.	1 bar / 10 bar
Ambient temperature min./max.	-20 °C / +70 °C
Medium temperature min./max.	-20 °C / +70 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 mg/m <sup>3</sup> - 1 mg/m <sup>3</sup>

#### Materials:

Housing	Polyoxymethylene
Seals	Acrylonitrile Butadiene Rubber

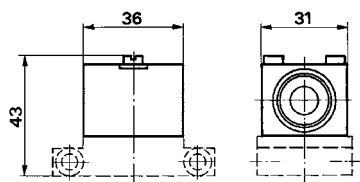
	Logic function	Qn	Control pressure	Weight	Note	Part No.
		[l/min]	min./max. [bar]	[kg]		
	YES	120	3.2 / 10	0.045	1)	<b>5510100000</b>
	NOT (NO)	120	3.2 / 10	0.045	2)	<b>5511100000</b>
	AND	120	-	0.045	-	5510140000
	Shuttle valve (OR)	120	-	0.04	-	<b>5510150000</b>

1) NC

2) NO

Nominal flow Qn at 6 bar and Δp = 1 bar

#### Dimensions



D551\_081\_2

## Flow and check valves ▶ Logic valves

### 3/2-directional valve, Series 551

▶ double air pilot ▶ Qn = 120 l/min



5510-161

Ambient temperature min./max.

-20 °C / +70 °C

Medium temperature min./max.

-20 °C / +70 °C

Medium

Compressed air

Max. particle size

5 μm

Oil content of compressed air

0 mg/m<sup>3</sup> - 1 mg/m<sup>3</sup>

Materials:

Housing

Polyoxymethylene

Seals

Acrylonitrile Butadiene Rubber

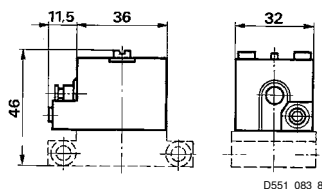
#### Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

	Flow rate value	Working pressure min./max.	Control pressure min./max.	Weight	Part No.
	[l/min]	[bar]	[bar]	[kg]	
	120	0 / 10	2 / 10	0.06	<b>551020000</b>

Nominal flow Qn at 6 bar and Δp = 1 bar

#### Dimensions



D551\_083\_8

### Series 551 Accessories

#### Air reservoir

▶ with indicating pin ▶ for series 551 ▶ Material: Polyoxymethylene



5510-021

#### Version

Ambient temperature min./max.

Medium temperature min./max.

Working pressure min./max.

Medium

Max. particle size

Oil content of compressed air

Filter reservoir volume

#### Reservoir

-20 °C / +70 °C

-20 °C / +70 °C

0 bar - 10 bar

Compressed air

5 μm

0 mg/m<sup>3</sup> - 1 mg/m<sup>3</sup>

18 cm<sup>3</sup>


#### Materials:

Reservoir

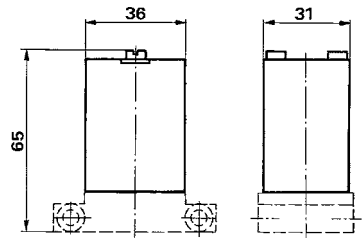
Polyoxymethylene

Seal

Acrylonitrile Butadiene Rubber

	Weight [kg]	Part No.
	0.06	<b>5510030000</b>

#### Dimensions



D551\_081\_1

#### Pressure Switches

▶ adjustable ▶ Qn = 30 - 120 l/min ▶ for series 551



5510-121

Ambient temperature min./max.

-20 °C / +70 °C

Medium temperature min./max.

-20 °C / +70 °C

Medium

Compressed air

Max. particle size

5 μm

Oil content of compressed air

0 mg/m<sup>3</sup> - 1 mg/m<sup>3</sup>

#### Materials:

Housing

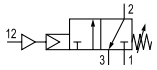
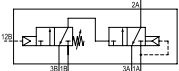
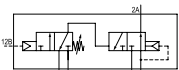
Polyoxymethylene

Seals

Acrylonitrile Butadiene Rubber

## Flow and check valves ▶ Logic valves

### Series 551 Accessories

	Logic function	Qn	Working pressure min./max.	Control pressure min./max.	Weight	Fig.	Note	Part No.
		[l/min]	[bar]	[bar]	[kg]			
	-	30	1 / 10	0.6 / 10	0.115	Fig. 1	-	<b>5510160000</b>
	YES	120	1 / 10	0.6 / 10	0.165	Fig. 2	1)	<b>5510160100</b>
	NOT (NO)	120	1 / 10	0.6 / 10	0.165	Fig. 2	2)	5510161100

1) NC  
2) NO  
Nominal flow Qn at 6 bar and Δp = 1 bar

Fig. 1

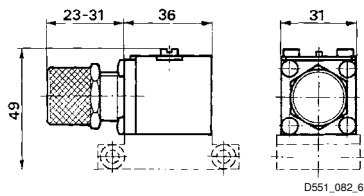
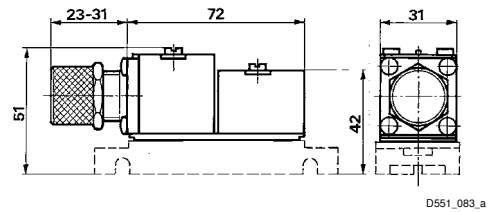


Fig. 2



## Signal interrupter

▶ Qn = 120 l/min ▶ for series 551



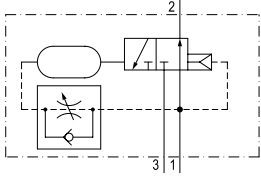
5510-091

Ambient temperature min./max. -20°C / +70°C  
 Medium temperature min./max. -20°C / +70°C  
 Medium  
 Max. particle size 5 μm  
 Oil content of compressed air 0 mg/m<sup>3</sup> - 1 mg/m<sup>3</sup>

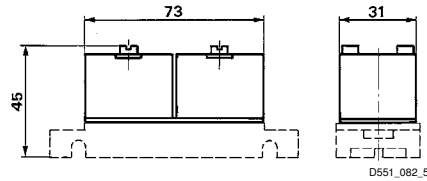
Materials:  
 Housing  
 Seals

Polyoxymethylene  
 Acrylonitrile Butadiene Rubber

## Series 551 Accessories

	Qn	Working pressure min./max.	Weight	Part No.
	[l/min]	[bar]	[kg]	
	120	1 / 10	0.11	<b>5510130000</b>
Nominal flow Qn at 6 bar and $\Delta p = 1$ bar				

### Dimensions



### Counter

► Qn = 120 l/min ► for series 551



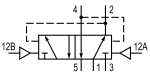
5510-171

Ambient temperature min./max.  
Medium temperature min./max.  
Medium  
Max. particle size  
Oil content of compressed air

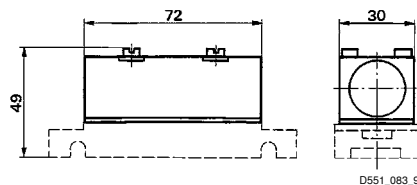
-20°C / +70°C  
-20°C / +70°C  
Compressed air  
5  $\mu\text{m}$   
0 mg/m<sup>3</sup> - 1 mg/m<sup>3</sup>

Materials:  
Housing  
Seals

Aluminum  
Acrylonitrile Butadiene Rubber

	Qn	Control pressure min./max.	Weight	Part No.
	[l/min]	[bar]	[kg]	
	120	2 / 10	0.13	<b>5510240000</b>
Nominal flow Qn at 6 bar and $\Delta p = 1$ bar				

### Dimensions





## Flow and check valves ▶ Logic valves

### Series 551 Accessories

#### Pneumatic timer

▶ for opening or closing delay ▶ Qn = 120 l/min ▶ for series 551



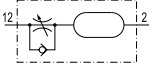
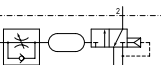
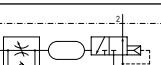
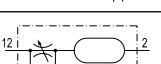

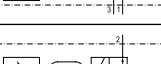
5510-221

Working pressure min./max.  
Ambient temperature min./max.  
Medium temperature min./max.  
Medium  
Max. particle size  
Oil content of compressed air  
Time delay Max.

See table below  
-20°C / +70°C  
-20°C / +70°C  
Compressed air  
5 µm  
0 mg/m³ - 1 mg/m³  
10 s

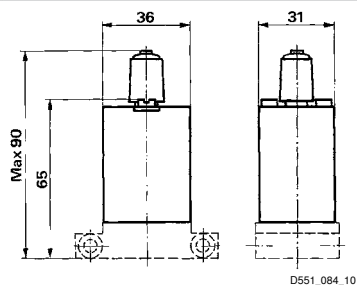
Materials:  
Housing  
Seals

Polyoxymethylene  
Acrylonitrile Butadiene Rubber

	Logic function	Qn	Working pressure min./max.	Control pressure min./max.	Weight	Fig.	Note	Part No.
		[l/min]	[bar]	[bar]	[kg]			
	-	-	1 / 10	-	0.08	Fig. 1	-	<b>5510250000</b>
	YES	120	1.5 / 10	1.05 / 7	0.125	Fig. 2	1)	<b>5510250100</b>
	NOT (NO)	120	1.5 / 10	1.05 / 7	0.125	Fig. 2	2)	<b>5510251100</b>
	closing delay	-	1 / 10	-	0.08	Fig. 1	-	<b>5510260000</b>
	YES	120	1.5 / 10	1.05 / 7	0.125	Fig. 2	1)	<b>5510260100</b>
	NOT (NO)	120	1.5 / 10	1.05 / 7	0.125	Fig. 2	2)	<b>5510261100</b>

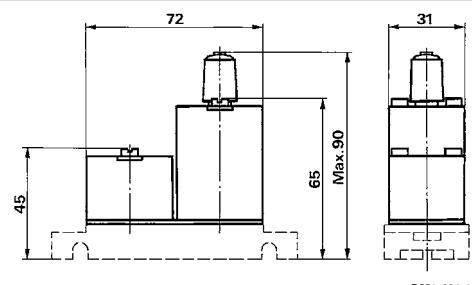
1) NC  
2) NO  
with throttle  
Nominal flow Qn at 6 bar and Δp = 1 bar

Fig. 1



D551\_084\_10

Fig. 2



D551\_084\_11

**Series 551**  
Accessories

**Single subbase**

► compressed air connection output: G 1/8 - Ø 4 ► for series 551



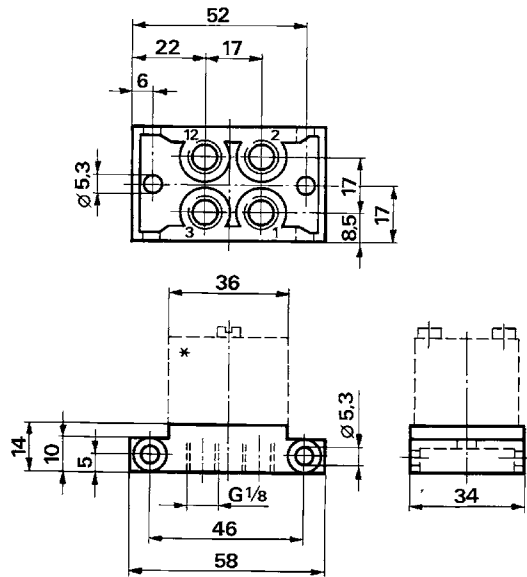
5510-391

Ambient temperature min./max.	-20°C / +70°C
Medium temperature min./max.	-20°C / +70°C
Medium	Compressed air
Working pressure min./max.	0 bar / 10 bar
Number of valve positions	1
Direction of pneumatic port (1)	Down
Direction of pneumatic port (3,5)	Down
Direction of pneumatic port (2,4)	Down

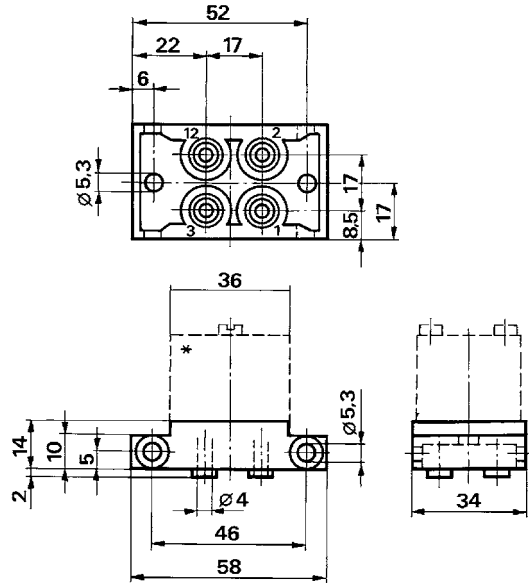
Materials:  
Base plate Die-cast aluminum, black painted

Compressed air connection			Weight	Fig.	Part No.
Input	Output	Exhaust			
[1]	[2 / 4]	[3 / 5]	[kg]		
G 1/8	G 1/8	G 1/8	0.037	Fig. 1	<b>5515410000</b>
Ø 4	Ø 4	Ø 4	0.048	Fig. 2	<b>5515610000</b>

Fig. 1 Fig. 2



D551\_085\_a



D551\_085\_b

\* alternative valve

## Flow and check valves ▶ Logic valves

### Series 551 Accessories

#### Subbase for two valves

▶ compressed air connection output: G 1/8 - Ø 4 ▶ for series 551



5510-411

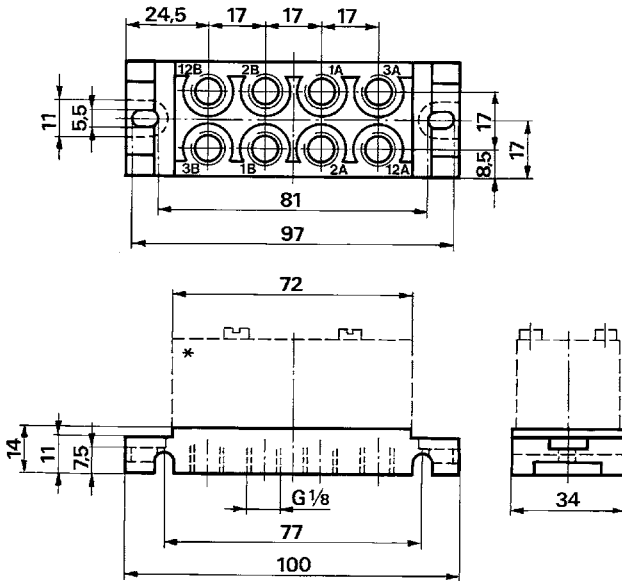
Ambient temperature min./max.	-20°C / +70°C
Medium temperature min./max.	-20°C / +70°C
Medium	Compressed air
Working pressure min./max.	0 bar / 10 bar
Number of valve positions	2
Direction of pneumatic port (1)	Down
Direction of pneumatic port (3,5)	Down
Direction of pneumatic port (2,4)	Down

Materials:  
Base plate

Die-cast aluminum, black painted

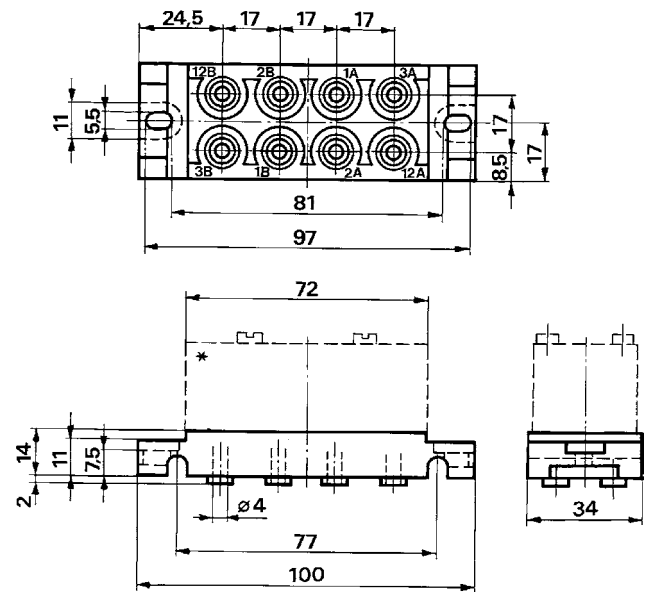
Compressed air connection			Weight	Fig.	Part No.
Input	Output	Exhaust	[kg]		
[1]	[2 / 4]	[3 / 5]			
G 1/8	G 1/8	G 1/8	0.072	Fig. 1	<b>5514410000</b>
Ø 4	Ø 4	Ø 4	0.09	Fig. 2	<b>5514610000</b>

Fig. 1



D551\_086\_a

Fig. 2



D551\_086\_b

\* alternative valve

**Series 551**  
 Accessories

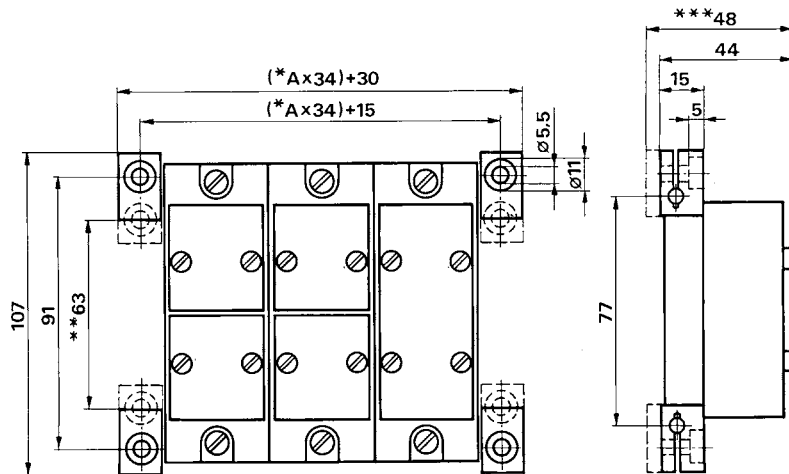
**Mounting kit**  
 ► for series 551

Ambient temperature min./max. -20°C / +70°C  
 Medium temperature min./max. -20°C / +70°C

## Materials:

Screws Steel  
 Tie-rods Steel  
 Mounting bracket Aluminum

Number of valve positions	Weight	Part No.
	[kg]	
2	0.09	5514400020
3	0.11	5514400030
4	0.13	5514400040
5	0.15	5514400050
6	0.17	5514400060
7	0.19	5514400070
8	0.21	5514400080
9	0.23	5514400090
10	0.25	5514400100



D551\_048

\* A = No. of subbases.

\*\* With the mounting holes turned inwards.

\*\*\* With the mountings turned 180°.