Series 503





AVENTICS[™] Series 503

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Series 503

- System overview



Technical information

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 $^\circ$ C under ambient and medium temperature and may not exceed 3 $^\circ$ C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).



Accessories overview



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2x3/2-directional valve, Series 503

- 2x3/2
- Qn = 950-1000 l/min
- NC/NC NO/NO
- Plate connection
- Can be assembled into blocks
- double solenoid
- With spring/air spring return
- Pilot : External



Туре Activation Pilot Sealing principle Blocking principle Working pressure min./max. Control pressure min./max. Ambient temperature min./max. Medium temperature min./max. Medium Max. particle size Oil content of compressed air Nominal flow Qn Pilot control exhaust Protection class with connection Protective circuit Reverse polarity protection LED status display Duty cycle Typ. switch-on time Typ. switch-off time mounting screws Mounting screw tightening torque Weight

Spool valve, positive overlapping Electrically External Soft sealing Single base plate principle, can be assembled into blocks 2 ... 8 bar 2 ... 8 bar -10 ... 50 °C -10 ... 50 °C Compressed air 50 µm 0 ... 5 mg/m³ See table below with directional pilot air exhaust IP65 Z-diode Protected against polarity reversal Yellow 100 % 15 ms 20 ms with hexagon socket 2.9 Nm 0.236 kg

Technical data

Part No.		МО		Voltage tolerance	Power consumption
				DC	DC
R503A2BD0MA00F1	dellige dellige		NC/NC	-15% / +10%	1.4 W
R503A2BA0MA00F1	éate éate		NO/NO	-15% / +10%	1.4 W
R503A2BD0M11BF1	dellige dellige		NC/NC	-15% / +10%	1.4 W
R503A2BA0M11BF1	ÁSIA ÁSIA		NO/NO	-15% / +10%	1.4 W
	Part No.			Nom	inal flow Qn

Part No.	Nominal flow Qn
R503A2BD0MA00F1	1000 l/min
R503A2BA0MA00F1	950 l/min
R503A2BD0M11BF1	1000 l/min



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Part No.	Nominal flow Qn
R503A2BA0M11BF1	950 l/min

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die cast zinc
Seals	Nitrile butadiene rubber Polyurethane
Front plate	Polyamide
End plate	Polyamide

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Dimensions

Dimensions



2) LED

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5/2-directional valve, Series 503

- 5/2

- Qn = 1200-1400 l/min
- Plate connection
- Can be assembled into blocks
- single solenoid
- Pilot : External





Type Activation Pilot Blocking principle

Working pressure min./max. Control pressure min./max. Ambient temperature min./max. Medium temperature min./max. Medium Max. particle size Oil content of compressed air Nominal flow Qn Pilot control exhaust Protection class with connection Protective circuit Reverse polarity protection LED status display Duty cycle mounting screws Mounting screw tightening torque Weight

Spool valve, positive overlapping Electrically External Single base plate principle, can be assembled into blocks 2 ... 8 bar 2 ... 8 bar -10 ... 50 °C -10 ... 50 °C Compressed air 50 µm 0 ... 5 mg/m³ See table below with directional pilot air exhaust IP65 Z-diode Protected against polarity reversal Yellow 100 % with hexagon socket 2.9 Nm 0.236 kg

Technical data

Part No.	MO	Voltage tolerance	Power consumption	Nominal flow Qn
		DC	DC	
R503A1B10MA00F1		-15% / +10%	1.4 W	1200 l/min
R503A1B10M11BF1		-15% / +10%	1.4 W	1200 l/min
R503A2B10MA00F1		-15% / +10%	1.4 W	1400 l/min
R503A2B10M11BF1		-15% / +10%	1.4 W	1400 l/min
R503A2BN0MA00F1		-15% / +10%	1.4 W	1400 l/min
R503A2BN0M11BF1		-15% / +10%	1.4 W	1400 l/min

Part No.	Typ. switch-on time	Typ. switch-off time
R503A1B10MA00F1	20 ms	60 ms
R503A1B10M11BF1	20 ms	60 ms
R503A2B10MA00F1	20 ms	60 ms
R503A2B10M11BF1	20 ms	60 ms
R503A2BN0MA00F1	28 ms	40 ms
R503A2BN0M11BF1	28 ms	40 ms





Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die cast zinc
Seals	Nitrile butadiene rubber Polyurethane
Front plate	Polyamide
End plate	Polyamide

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Dimensions

Dimensions



2) LED

5/2-directional valve, Series 503

- 5/2

- Qn = 1200-1400 l/min
- Plate connection
- Can be assembled into blocks
- double solenoid
- Pilot : External





Type Activation Pilot Blocking principle

Working pressure min./max. Control pressure min./max. Ambient temperature min./max. Medium temperature min./max. Medium Max. particle size Oil content of compressed air Nominal flow Qn Pilot control exhaust Protection class with connection Protective circuit Reverse polarity protection LED status display Duty cycle mounting screws Mounting screw tightening torque Weight

Spool valve, positive overlapping Electrically External Single base plate principle, can be assembled into blocks 2 ... 8 bar 2 ... 8 bar -10 ... 50 °C -10 ... 50 °C Compressed air 50 µm 0 ... 5 mg/m³ See table below with directional pilot air exhaust IP65 Z-diode Protected against polarity reversal Yellow 100 % with hexagon socket 2.9 Nm 0.236 kg

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Technical data

Part No.	МО	Voltage tolerance	Po	wer consumption	Nominal flow Qn
		DC		DC	
R503A1B40MA00F1		-15% / +10%		1.4 W	1200 l/min
R503A1B40M11BF1		-15% / +10%		1.4 W	1200 l/min
R503A2B40M11BF1		-15% / +10%		1.4 W	1400 l/min
R503A2B40MA00F1		-15% / +10%		1.4 W	1400 l/min
Part No.		Typ. switch-on time		Typ. switch-	off time
R503A1B40MA00F1		15 ms		15 ms	
R503A1B40M11BF1		15 ms		15 ms	
R503A2B40M1	1BF1	20 ms		20 ms	
R503A2B40MA	00F1	20 ms	20 ms		3



Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die cast zinc
Seals	Nitrile butadiene rubber Polyurethane
Front plate	Polyamide
End plate	Polyamide

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Dimensions

Dimensions



2) LED

5/3-directional valve, Series 503

- 5/3

- Qn = 600-1400 l/min
- exhausted center pressurized center closed center
- Plate connection
- Can be assembled into blocks
- double solenoid
- Pilot : External



Type Activation Pilot Blocking principle

Working pressure min./max. Control pressure min./max. Ambient temperature min./max. Medium temperature min./max. Medium Max. particle size Oil content of compressed air Nominal flow Qn Pilot control exhaust Protection class with connection Protective circuit Reverse polarity protection LED status display Duty cycle mounting screws Mounting screw tightening torque Weight

Spool valve, positive overlapping Electrically External Single base plate principle, can be assembled into blocks 2... 8 bar See table below -10 ... 50 °C -10 ... 50 °C Compressed air 50 µm 0 ... 5 mg/m³ See table below with directional pilot air exhaust IP65 Z-diode Protected against polarity reversal Yellow 100 % with hexagon socket 2.9 Nm 0.236 kg

Technical data

Part No.		MO					Voltage tolerance
							DC
R503A1B50MA00F1					exhausted center		-15% / +10%
R503A1B70MA00F1				p	pressurized center		-15% / +10%
R503A1B50M11BF1					exhausted center		-15% / +10%
R503A1B70M11BF1				p	pressurized center		-15% / +10%
R503A2B60MA00F1					closed center		-15% / +10%
R503A2B70MA00F1				p	pressurized center		-15% / +10%
R503A2B50M11BF1					exhausted center		-15% / +10%
R503A2B60M11BF1					closed center		-15% / +10%
R503A2B70M11BF1				p	pressurized center		-15% / +10%
R503A2B50MA00F1					exhausted center		-15% / +10%
Part No.	Power cons	sumption	Nominal	flow Qn	Control pressure min./n	nax.	Typ. switch-on time
	DC						
R503A1B50MA00F1	1.4 \	N	1000	l/min	2 8 bar		20 ms
PDE creation date:	10 0/ 2021						





Part No.	Power consumption	Nominal flow Qn	Control pressure min./max.	Typ. switch-on time
	DC			
R503A1B70MA00F1	1.4 W	1000 l/min	2 8 bar	20 ms
R503A1B50M11BF1	1.4 W	1000 l/min	2 8 bar	20 ms
R503A1B70M11BF1	1.4 W	1000 l/min	2 8 bar	20 ms
R503A2B60MA00F1	1.4 W	1400 l/min	4 8 bar	15 ms
R503A2B70MA00F1	1.4 W	1300 l/min	3 8 bar	18 ms
R503A2B50M11BF1	1.4 W	600 l/min	3 8 bar	18 ms
R503A2B60M11BF1	1.4 W	1400 l/min	4 8 bar	15 ms
R503A2B70M11BF1	1.4 W	1300 l/min	3 8 bar	18 ms
R503A2B50MA00F1	1.4 W	600 l/min	3 8 bar	18 ms

Part No.	Typ. switch-off time
R503A1B50MA00F1	60 ms
R503A1B70MA00F1	60 ms
R503A1B50M11BF1	60 ms
R503A1B70M11BF1	60 ms
R503A2B60MA00F1	20 ms
R503A2B70MA00F1	45 ms
R503A2B50M11BF1	45 ms
R503A2B60M11BF1	20 ms
R503A2B70M11BF1	45 ms
R503A2B50MA00F1	45 ms

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die cast zinc
Seals	Nitrile butadiene rubber Polyurethane
Front plate	Polyamide
End plate	Polyamide

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Dimensions

Dimensions



2) LED



Bus coupler, Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 4-pin
- Bus coupler
- Fieldbus protocol DeviceNet



Version	Bus coupler
Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.11 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	32
Number of valve positions max.	32
Diagnosis	Undervoltage
I/O module extension max.	16
Weight	0.252 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-180	DeviceNet	Plug (male), 7/8", 4-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 4-pin
- Bus coupler
- Fieldbus protocol MODBUS TCP

	Version	Bus coupler
	Ambient temperature min./max.	-10 50 °C
	Operational voltage electronics	24 V DC
	Electronics voltage tolerance	-10% / +10%
Contraction of the second seco	Power consumption electronics	0.104 A
	Operating voltage, actuators	24 V DC
	Total current for actuators	4 A
and the second se	Protection class	IP65
	Number of solenoid coils max.	128
	Number of valve positions max.	110
	Diagnosis	Undervoltage
	I/O module extension max.	16
	Weight	0.255 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-292	MODBUS TCP	Plug (male), 7/8″, 4-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 5-pin
- Bus coupler
- Fieldbus protocol PROFIBUS DP

	Version	Bus coupler
	Ambient temperature min./max.	-10 50 °C
	Operational voltage electronics	24 V DC
	Electronics voltage tolerance	-10% / +10%
	Power consumption electronics	0.104 A
	Operating voltage, actuators	24 V DC
· · ·	Total current for actuators	4 A
and the second s	Protection class	IP65
	Number of solenoid coils max.	128
	Number of valve positions max.	110
	Diagnosis	Undervoltage
	I/O module extension max.	16
	Weight	0.227 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-239	PROFIBUS DP	Plug (male), 7/8", 5-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 5-pin
- Bus coupler
- Fieldbus protocol Profinet

	Version	Bus coupler
	Ambient temperature min./max.	-10 50 °C
	Operational voltage electronics	24 V DC
	Electronics voltage tolerance	-10% / +10%
	Power consumption electronics	0.104 A
	Operating voltage, actuators	24 V DC
Seat 1	Total current for actuators	4 A
and	Protection class	IP65
	Number of solenoid coils max.	128
	Number of valve positions max.	110
	Diagnosis	Undervoltage
	I/O module extension max.	16
	Weight	0.227 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-240	Profinet	Plug (male), 7/8", 5-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 5-pin
- Bus coupler
- Fieldbus protocol POWERLINK

	Version	Bus coupler
40	Ambient temperature min./max.	-10 50 °C
	Operational voltage electronics	24 V DC
	Electronics voltage tolerance	-10% / +10%
	Power consumption electronics	0.104 A
	Operating voltage, actuators	24 V DC
St. Sala	Total current for actuators	4 A
and a	Protection class	IP65
	Number of solenoid coils max.	128
	Number of valve positions max.	110
	Diagnosis	Undervoltage
	I/O module extension max.	16
	Weight	0.227 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-309	POWERLINK	Plug (male), 7/8″, 5-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 4-pin
- Bus coupler
- Fieldbus protocol CANopen

	Version
	Ambient temper
- Charles	Operational volta
S - 18	Electronics volta
	Power consump
10/2/20	Operating voltage
	Total current for
	Protection class
	Number of soler
	Number of valve
	Diagnosis
	I/O module exte

Version	Bus coupler
Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.11 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	32
Number of valve positions max.	32
Diagnosis	Undervoltage
I/O module extension max.	16
Weight	0.252 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-291	CANopen	Plug (male), 7/8″, 4-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 4-pin
- Bus coupler
- Fieldbus protocol EtherNET/IP

	Version	Bus coupler
	Ambient temperature min./max.	-10 50 °C
	Operational voltage electronics	24 V DC
	Electronics voltage tolerance	-10% / +10%
	Power consumption electronics	0.104 A
	Operating voltage, actuators	24 V DC
Contraction of the second seco	Total current for actuators	4 A
and the second se	Protection class	IP65
	Number of solenoid coils max.	128
	Number of valve positions max.	110
	Diagnosis	Undervoltage
	I/O module extension max.	16
	Weight	0.227 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-325	EtherNET/IP	Plug (male), 7/8″, 4-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 4-pin
- Bus coupler
- Fieldbus protocol EtherCAT

Version	Bus coupler
Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.104 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	128
Number of valve positions max.	110
Diagnosis	Undervoltage
I/O module extension max.	16
Weight	0.227 kg
	Version Ambient temperature min./max. Operational voltage electronics Electronics voltage tolerance Power consumption electronics Operating voltage, actuators Total current for actuators Protection class Number of solenoid coils max. Number of valve positions max. Diagnosis I/O module extension max. Weight

Technical data

Part No.	Fieldbus protocol	power supply
240-310	EtherCAT	Plug (male), 7/8", 4-pin

Material	
Housing	Polybutyleneterephthalate







Series G3

- Fieldbus connection with I/O functionality, power supply 7/8", 4-pin
- Bus coupler
- Fieldbus protocol EtherCAT



/ersion	Bus coupler
mbient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.11 A
Operating voltage, actuators	24 V DC
otal current for actuators	4 A
Protection class	IP65
Diagnosis	Undervoltage
O module extension max.	16
Veight	0.269 kg

Technical data

Part No.	Fieldbus protocol	power supply
240-362	EtherCAT	Plug, 7/8", 4-pin

Material	
Housing	Polybutyleneterephthalate







End plate left

- Left end plate G3



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Total current for actuators	4 A
Protection class	IP65
Weight	0.091 kg

Technical data

Part No.	power supply
240-184	4

Material	
Housing	polyethyleneterephthalate

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Left end plate for Subbus G3



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Total current for actuators	4 A
Protection class	IP65
I/O connection	M12x1, 4-pin
Weight	0.13 kg

Technical data

Part No.	power supply	I/O connection
240-183	4	M12x1, 4-pin

Material	
Housing	polyethyleneterephthalate
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Right end plate for Subbus G3

General series information Series G3

 In today's highly automated machines, the **AVENTICS Series G3 electronic fieldbus** valve system is replacing conventional hardwired solutions. It integrates communication interfaces to pneumatic valve valve system with input/output (I/ O) capabilities. This next-generation electronic platform permits easy access to connections; it's simple to assemble, install, commission, and maintain. The G3's functionality allows programmable logic controllers to more efficiently turn valves on and off, and to channel I/O data from sensors, lights, relays, individual valves, or other I/O devices via various industrial networks. The G3 is the only pneumatic valve manifold that contains a graphical display used for configuration, commissioning, and diagnostics. It offers improvements in application, performance, and maintenance for original equipment manufacturers (OEMs) and end users alike.



Technical data

Industry	Industrial
Signal connection E/A thread size	M12x1
Signal connection E/A number of poles	4-pin
Min. ambient temperature	-10 °C
Max. ambient temperature	50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Total output for valves	4 A
Protection class	IP65
Electrical connection	4
Weight	0.13 kg

Material

Housing material

polyethyleneterephthalate



Part No.

240-185









Right end plate for G3 Standalone 240-255

General series information Series G3

 In today's highly automated machines, the **AVENTICS Series G3 electronic fieldbus** valve system is replacing conventional hardwired solutions. It integrates communication interfaces to pneumatic valve valve system with input/output (I/ O) capabilities. This next-generation electronic platform permits easy access to connections; it's simple to assemble, install, commission, and maintain. The G3's functionality allows programmable logic controllers to more efficiently turn valves on and off, and to channel I/O data from sensors, lights, relays, individual valves, or other I/O devices via various industrial networks. The G3 is the only pneumatic valve manifold that contains a graphical display used for configuration, commissioning, and diagnostics. It offers improvements in application, performance, and maintenance for original equipment manufacturers (OEMs) and end users alike.



Technical data

Industry	Industrial
Min. ambient temperature	-10 °C
Max. ambient temperature	50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Total output for valves	4 A
Protection class	IP65
Electrical connection	4
Weight	0.071 kg

Material

Housing material Part No. polyethyleneterephthalate 240-255











Wireless auto-recovery module, series G3 240-382

Series G3



Technical data

Industry Min. ambient temperature Max. ambient temperature Part No. Industrial -10 °C 50 °C 240-382





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Distributor

- Valve driver, Series 500



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Total current for actuators	4 A
Protection class	IP65

Technical data

Part No.	power supply
P599AE508827001	4

Material	
Housing	polyethyleneterephthalate

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Distributor

- Power supply plug 7/8", 4-pin



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.03 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of valve positions max.	32
Diagnosis	Undervoltage
I/O module extension max.	15
Weight	0.235 kg

Technical data

Part No.	power supply
240-241	Plug, 7/8", 4-pin

Material	
Housing	polyethyleneterephthalate







I/O modules, Series G3

- Screw terminal block

- I/O module version



Version I/O module version Ambient temperature min./max. -10 ... 50 °C Operational voltage electronics 24 V DC Electronics voltage tolerance -10% / +10% Power consumption electronics 0.05 A Power supply for actuators 24 V DC 4 A Total current for actuators Protection class IP65 Total current of sensors max. 1,2 A Diagnosis Short circuit Weight 0.274 kg

Technical data

Part No.	Number of inputs	Number of outputs	I/O module version
240-203	16	-	digital inputs PNP
240-204	16	-	digital inputs NPN
240-316	8	-	digital inputs PNP
240-330	-	16	digital inputs NPN

Material	
Housing	polyethyleneterephthalate







I/O module version

I/O modules, Series G3

- digital inputs PNP, Socket (female), M8x1
- I/O module version



Version

Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	55 A
Max. current per channel	0.15 A
Power supply for actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Total current of sensors max.	1,2 A
Diagnosis	Short circuit
Weight	0.274 kg

Technical data

Part No.	Number of inputs	I/O module version
240-379	8	digital inputs PNP

Material	
Housing	polyethyleneterephthalate







I/O modules, Series G3

- Plug, M23x1, 19-pin, Screw terminal block
- A-design
- I/O module version



Version	I/O module version
Ambient temperature min./max.	-10 50 °C
Power consumption electronics	0.05 A
Max. current per channel	0.3 A
Power supply for actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Total current of sensors max.	1,2 A
Diagnosis	Short circuit
Weight	0.274 kg

Technical data

Part No.	Number of inputs	I/O module version
240-323	16	digital inputs PNP

Material	
Housing	polyethyleneterephthalate



I/O modules, Series G3

- Socket, M12x1

- A-design
- I/O module version



Version	I/O module version
Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Max. current per channel	0.15 A
Power supply for actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Total current of sensors max.	1,2 A
Diagnosis	Short circuit
I/O connection	M12x1, 4-pin
Weight	See table below

Technical data

Part No.	Туре	Number of inputs	Number of outputs
240-205	16DI8M12 digital inputs PNP	16	-
240-206	8DI8M8 digital inputs PNP	8	-
240-207	16DO8M12 digital outputs PNP	-	16
240-208	8DO8M12 digital outputs PNP	-	8
240-209	16DI8M12 digital inputs NPN	16	-
240-210	8DI8M12 digital inputs NPN	8	-
240-211	8DO8M12 digital inputs/outputs PNP	8	8
240-300	8D08M12	-	8

Part No.	I/O module version	I/O connection	Power consumption electronics	Weight
240-205	digital inputs PNP	M12x1, 4-pin	0.05 A	0.274 kg
240-206	digital inputs PNP	M12x1, 4-pin	0.05 A	0.274 kg
240-207	Digital outputs	M12x1, 4-pin	0.11 A	0.274 kg
240-208	digital outputs PNP	M12x1, 4-pin	0.09 A	0.274 kg
240-209	digital inputs NPN	M12x1, 4-pin	0.05 A	0.274 kg
240-210	digital inputs NPN	M12x1, 4-pin	0.05 A	0.274 kg
240-211	digital inputs/outputs PNP	M12x1, 4-pin	0.1 A	0.274 kg
240-300	Digital outputs	M12x1, 4-pin	0.09 A	0.264 kg

Material	
Housing	polyethyleneterephthalate







I/O modules, Series G3

- Socket, M12x1

- A-design



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power supply for actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Diagnosis	Short circuit
I/O connection	M12x1, 4-pin
Weight	See table below

Technical data

Part No.	Туре	Number of inputs	Number of outputs	Analog inputs	Analog outputs	I/O module version
240-212	4AI4M12-E	4	-	0 10 V	-	Analog inputs
240-213	2AIAO8M12	2	2	0 10 V	0 10 V	analog inputs/outputs
240-214	4AI4M12-E	4	-	4 20 mA	-	Analog inputs
240-215	2AIAO4M12	2	2	4 20 mA	4 20 mA	analog inputs/outputs
240-307	2AIAO8M12	2	2	0 10 V	0 10 V	analog inputs/outputs
240-363	-	4	4	-	-	analog inputs/outputs

Part No.	I/O connection	Power consumption electronics	Total current of the power supply for the external sensors	Weight
240-212	M12x1, 4-pin	0.08 A	1,2 A	0.244 kg
240-213	M12x1, 4-pin	0.09 A	1,2 A	0.244 kg
240-214	M12x1, 4-pin	0.08 A	1,2 A	0.244 kg
240-215	M12x1, 4-pin	0.09 A	1,2 A	0.244 kg
240-307	M12x1, 4-pin	0.08 A	4 A	0.264 kg
240-363	M12x1, 4-pin	0.08 A	8 A	0.247 kg

Technical information

Material

Housing

polyethyleneterephthalate





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Series G3

A-design I/O module version



Version

Ambient temperature min./max. Operational voltage electronics Electronics voltage tolerance Power consumption electronics Power supply for actuators Total current for actuators Protection class Total current of sensors max. Diagnosis I/O module version -10 ... 50 °C 24 V DC -10% / +10% 0.07 A 24 V DC 4 A IP65 1,2 A Overvoltage Undervoltage

Technical data

Part No.	Туре	I/O module version
240-311	Socket, M12x1	Analog inputs

Material	
Housing	polyethyleneterephthalate







I/O modules, Series G3

- digital inputs PNP, Socket (female), M8x1
- I/O module version



Version	I/O module version
Ambient temperature min./max.	-10 50 °C
Power consumption electronics	55 A
Max. current per channel	0.15 A
Power supply for actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Total current of sensors max.	1,2 A
Diagnosis	Short circuit
Weight	0.274 kg

Technical data

Part No.	Number of inputs
240-326	8

Material	
Housing	Polybutyleneterephthalate







Bus coupler, Series 580

- CANopen, Central fieldbus connection without I/O function, Power supply plug M12x1, 4-pin

- Bus coupler
- Fieldbus protocol CANopen



Version	Bus coupler
Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.1 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	32
Number of valve positions max.	32
Diagnosis	Short circuit Overvoltage
Weight	0.32 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AECO1010A00	CANopen	Plug (male), M12, 4-pin, A-coded

Material	
Housing	Die-cast aluminum







Series 580

- Central fieldbus connection without I/O function
- Fieldbus protocol DeviceNet



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.1 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	32
Number of valve positions max.	32
Diagnosis	Short circuit Overvoltage
Weight	0.32 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AEDN1010A00	DeviceNet	Plug (male), M12, 4-pin, A-coded

Material	
Housing	Die-cast aluminum







Series 580

- Central fieldbus connection without I/O function
- Fieldbus protocol EtherCAT



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.11 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	128
Number of valve positions max.	110
Diagnosis	Short circuit Overvoltage
Weight	0.32 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AEEC1010A00	EtherCAT	Plug (male), M12, 5-pin, A-coded

Material	
Housing	Die-cast aluminum







Series 580

- Central fieldbus connection without I/O function
- Fieldbus protocol Ethernet



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.9 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	128
Number of valve positions max.	110
Diagnosis	Short circuit Overvoltage
Weight	0.337 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AEED1010A00	Ethernet	Plug (male), M12, 4-pin, A-coded

Material	
Housing	Die-cast aluminum







Series 580

- Central fieldbus connection without I/O function
- Fieldbus protocol POWERLINK



-10 50 °C
24 V DC
-10% / +10%
0.11 A
24 V DC
4 A
IP65
128
110
Short circuit Overvoltage
0.328 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AEPL1010A00	POWERLINK	Plug (male), M12, 4-pin, A-coded

Material	
Housing	Die-cast aluminum







Series 580

- Central fieldbus connection without I/O function, Power supply plug M12x1, 5-pin, class B
- Fieldbus protocol PROFIBUS DP



-10 50 °C
24 V DC
-10% / +10%
0.08 A
24 V DC
4 A
IP65
128
110
Short circuit Overvoltage
0.326 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AEPT1010A00	PROFIBUS DP	Plug (male), M12, 5-pin, A-coded

Material	
Housing	Die-cast aluminum






Series 580

- Central fieldbus connection without I/O function
- Fieldbus protocol Profinet



Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.11 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	128
Number of valve positions max.	110
Diagnosis	Short circuit Overvoltage
Weight	0.335 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AEPN1010A00	Profinet	Plug (male), M12, 5-pin, A-coded

Material	
Housing	Die-cast aluminum







Bus coupler, Series 580

- Central fieldbus connection without I/O function, Power supply plug M12x1, 5-pin
- Bus coupler
- Fieldbus protocol Profinet



Version	Bus coupler
Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.3 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of valve positions max.	43
Diagnosis	Short circuit Overvoltage
Weight	0.32 kg

Technical data

Part No.	Fieldbus protocol	power supply
P580AECH2010A00	Profinet	Plug, M12x1, 5-pin, A-coded

Material	
Housing	Die-cast aluminum







Series 580

- Central fieldbus connection without I/O function, Power supply plug M12x1, 4-pin
- Bus coupler
- Fieldbus protocol IO-Link



Version	Bus coupler
Ambient temperature min./max.	-10 50 °C
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power consumption electronics	0.04 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Protection class	IP65
Number of solenoid coils max.	32
Number of valve positions max.	32
Diagnosis	Short circuit Overvoltage
I/O connection	M12x1, 5-pin, A-coded
Weight	See table below

Technical data

Part No.	Fieldbus protocol	I/O connection	Weight
P580AELM1010A00	IO-Link	M12x1, 5-pin, A-coded	0.298 kg
P580AELM2010A00	IO-Link	M12x1, 5-pin, A-coded	0.303 kg

Material	
Housing	Die-cast aluminum







Stop plate according to ISO 15407-2 to exchange valve, series 503



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Weight	See table below

Technical data

Part No.	Туре	Scope of delivery	Weight
R503AY426707001	-	Sandwich plate, sealing kit, mounting screws	0.237 kg
R503AY426707003	lockable	Sandwich plate, sealing kit, mounting screws	0.352 kg

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







Stop plate to exchange valve, series



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Protection class	IP65
Weight	0.237 kg

Technical data

Part No.	Scope of delivery
R503AY426707002	Sandwich plate, sealing kit, mounting screws

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







Blanking plate, series 503



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Protection class	IP65
Weight	0.084 kg

Technical data

Part No.	Scope of delivery
P503AB428359001	Stop plate, sealing kit, mounting screws

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	galvanized steel







Blanking plate



Working pressure min./max.	
Ambient temperature min./max.	
Medium temperature min./max.	
Medium	
Number of valve positions max.	
Protection class	
Weight	

-0.95 10 bar
-10 50 °C
-10 50 °C
Compressed air
1
IP65
0.248 kg

Technical data

Part No.	Scope of delivery
R503AS425575001	Sandwich plate, sealing kit, mounting screws

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







Throttle plate, series 503



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Protection class	IP65
Weight	0.028 kg

Technical data

Part No.	Scope of delivery
R503AS425575002	Sandwich plate, sealing kit, mounting screws

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







Pressure plate for additional pressure supply, series 503



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Protection class	IP65
Weight	0.028 kg

Technical data

Part No.	Scope of delivery	
G503AW428300004	Sandwich plate, sealing kit, mounting screws	
Part No.	Compressed air connection	
	Input	
	[1]	
G503AW428300004	G 1/4	

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







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Pressure plate ISO 15407-2 for additional pressure supply, series 503

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Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Protection class	IP65
Weight	0.028 kg

Technical data

Part No.	Scope of delivery	
G503AW428300003	Sandwich plate, sealing kit, mounting screws	
Part No.	Compressed air connection	
	Input	
	[1]	
G503AW428300003	G 1/4	

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Nitrile rubber
Screws	Stainless steel







End plate, series 503



Vorking pressure min./max.	
mbient temperature min./max.	
ledium temperature min./max.	
/ledium	
Protection class	
Veight	

F

-0.95 ... 10 bar -10 ... 50 °C -10 ... 50 °C Compressed air IP65 1.33 kg

Technical data

Part No.	Scope of delivery	
G503AK428327013	Left and right end plate, sealing kit, mounting screws	
Part No.	Compressed air connection	Compressed air connection

Part No.	Compressed air connection	Compressed air connection
	Input	Exhaust
	[1]	[3 / 5]
G503AK428327013	G 3/8	G 3/8

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	galvanized steel



AVENTICS





Exhaust plate for vertical stacking assembly, series 503



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Protection class	IP65
Weight	0.241 kg

Technical data

Part No.	Scope of delivery
G503AX428300002	Sandwich plate, sealing kit, mounting screws
Part No.	Compressed air connection
	Exhaust
	[3 / 5]
G503AX428300002	G 1/4

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







Exhaust plate ISO 15407-2 for vertical stacking assembly, series 503



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed ai
Number of valve positions max.	1
Protection class	IP65
Weight	0.241 kg

Technical data

Part No.	Scope of delivery	
G503AX428300001	Sandwich plate, sealing kit, mounting screws	
Part No.	Compressed air connection	
	Exhaust	
	[3 / 5]	
G503AX428300001	G 1/4	

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







AVENTICS

Pilot air supply plate for vertical stacking assembly, series 503



Working pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed air
Number of valve positions max.	1
Protection class	IP65
Weight	0.028 kg

Technical data

Part No.	Scope of delivery
G503AP428300006	Sandwich plate, sealing kit, mounting screws
Part No.	Compressed air connection
	Pilot connection
	[12]
G503AP428300006	G 1/4

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Acrylonitrile butadiene rubber
Screws	Stainless steel







air

VENTICS

Pilot air supply plate ISO 15407-2 for vertical stacking assembly, series 503



Norking pressure min./max.	-0.95 10 bar
Ambient temperature min./max.	-10 50 °C
Medium temperature min./max.	-10 50 °C
Medium	Compressed a
Protection class	IP65
Weight	0.028 kg

Technical data

Part No.	Scope of delivery
G503AP428300005	Sandwich plate, sealing kit, mounting screws
Part No.	Compressed air connection
	Pilot connection
	[12]
G503AP428300005	G 1/4

Delivery includes sealing kit and 1x mounting screw

Technical information

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. Further information can be found in the "Technical information" document (available in the MediaCentre).

Material	
Housing	Die-cast aluminum
Seal	Nitrile rubber
Screws	Stainless steel







Spring clamp element



Technical data

Part No. 240-179





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