

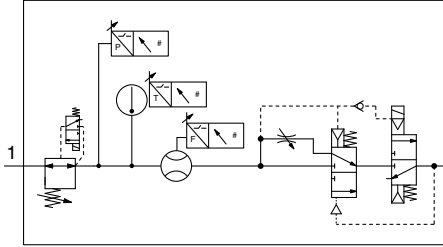
Air Management System Regulator Type



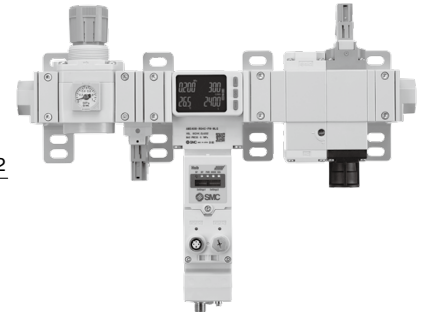
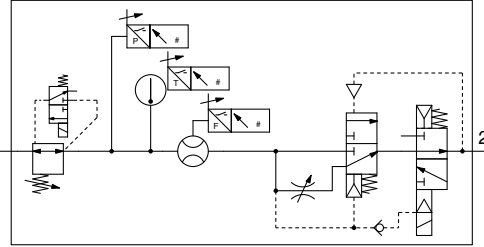
RoHS

AMS20B/30B/40B/60B Series

Symbol
N.C.



N.O.



How to Order

AMS **40** B - **F** **04** **C** - **PN** - **M** **L** **G** -

1

2

3

4

5

6

7



Made to Order
p.56

X101	Without residual pressure relief 3-port solenoid valve
X102	Without standby electro-pneumatic regulator

		Symbol	Description	1				
				Body size				
				20	30	40	60	
2	Pipe thread type*1	R	Rc	●	●	●	●	
		N	NPT	●	●	●	●	
		F	G	●	●	●	●	
3	Port size	01	1/8	●	—	—	—	
		02	1/4	●	●	—	—	
		03	3/8	—	●	●	—	
		04	1/2	—	—	●	—	
		06	3/4	—	—	—	●	
		10	1	—	—	—	●	
		00	Without attachments	●	●	●	●	
4	Regulator, Residual pressure relief 3-port solenoid valve	N.O./N.C.	C	N.C. (Normally closed)	●	●	●	●
			D	N.O. (Normally open)	●	●	●	●
5	Air management hub	Protocol	SA	Standalone (When wireless adapter is connected*4: Wireless remote)	●	●	●	●
			PN	PROFINET, OPC UA (When wireless adapter is connected*4: Wireless base)	●	●	●	●
			EN	EtherNet/IP™, OPC UA (When wireless adapter is connected*4: Wireless base)	●	●	●	●
			EC	EtherCAT*5 (When wireless adapter is connected*4 : Wireless base)	●	●	●	●
6	Regulator, Air management hub	Unit	K*2	Pressure gauge: MPa/psi dual scale, EXA1: Units selection function	●	●	●	●
			M	Pressure gauge in SI units: MPa, EXA1: SI units only*3	●	●	●	●
7	Regulator/Residual pressure relief 3-port solenoid valve	Manual override	G	Non-locking push type	●	●	●	●
			E	Push-turn locking type (Manual)	●	●	●	●

*1 For port size "00", specify thread type of the standby regulator (ARS).

*2 Applies to overseas destinations only

*3 Fixed units
Instantaneous flow: L/min
Accumulated flow : L
Pressure : kPa, MPa
Temperature : °C

*4 The wireless adapter is sold separately. (Refer to page 48.)

*5 EtherCAT is not compatible with OPC UA. In addition, the PLC (Programmable Logic Controller)/controller must support EoE (Ethernet over EtherCAT).

* The connection cable for the standby electro-pneumatic regulator/residual pressure relief valve is connected.

Standard Specifications: Regulator Type

Model		AMS20B	AMS30B	AMS40B	AMS60B
Component*1	Standby regulator	AR20S	AR30S	AR40S	AR50S
	Air management hub	EXA1-20	EXA1-30	EXA1-40	EXA1-60
	Residual pressure relief 3-port solenoid valve	VP346E	VP546E	VP746E	VP946E
Port size		1/8, 1/4	1/4, 3/8	3/8, 1/2	3/4, 1
Fluid		Air			
Rated flow range		5 to 500 L/min	10 to 1000 L/min	20 to 2000 L/min	40 to 4000 L/min
Ambient and fluid temperatures		0 to 50°C			
Proof pressure		1.0 MPa			
Max. operating pressure		0.7 MPa			
Supply pressure range		0.3 to 0.7 MPa			
Standby pressure range		0.2 to 0.4 MPa			
Power supply voltage		24 VDC ±10%			
Current consumption		400 mA or less			
Input/Output		DI x 2 DI, DO IO-Link, DI			
Enclosure		IP65 (Electrical equipment part only)			
Weight		1800 g	2500 g	3800 g	6500 g

*1 Refer to the table below for the single unit specifications of the components.

- Standby regulator p. 28
- Air management hub p. 21
- Residual pressure relief 3-port solenoid valve p. 30

AMS20A/30A/
40A/60A

AMS20B/30B/
40B/60B

EXA1

ITV2050 to 3050
-X399

AR20S to 50S

VP346E/546E/746E/
946E-X660/X661

Accessories

Made to
Order

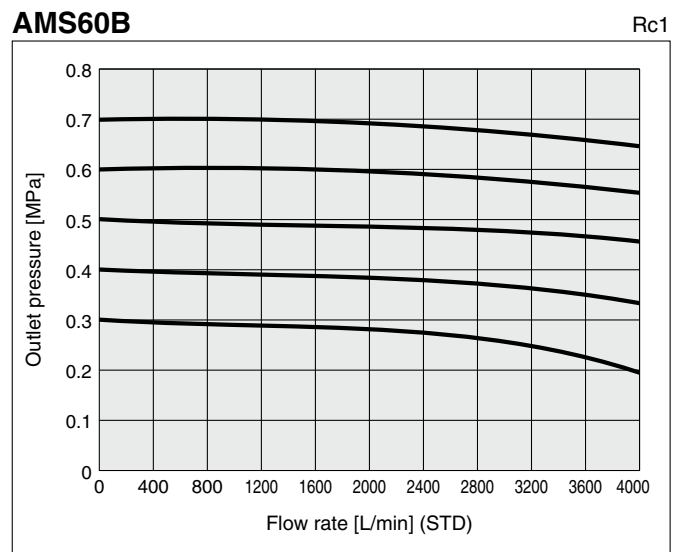
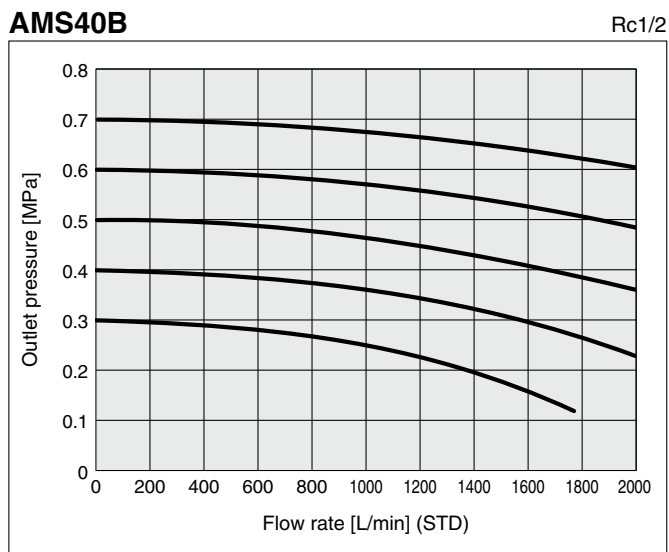
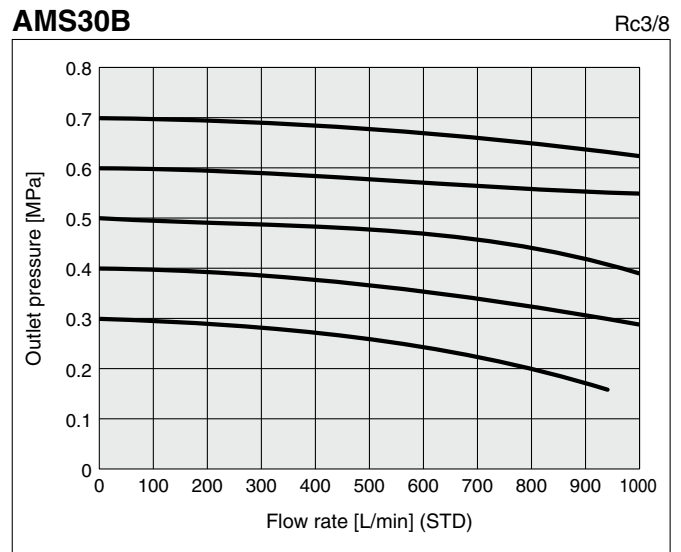
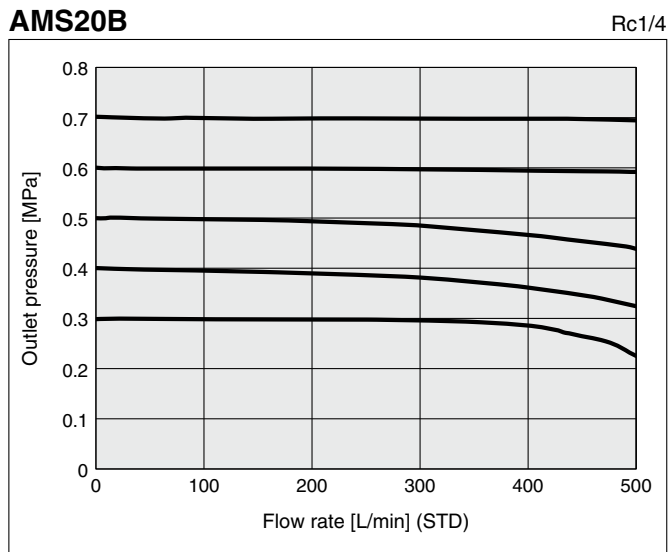
Related
Products

Specific Product
Precautions

AMS20B/30B/40B/60B Series

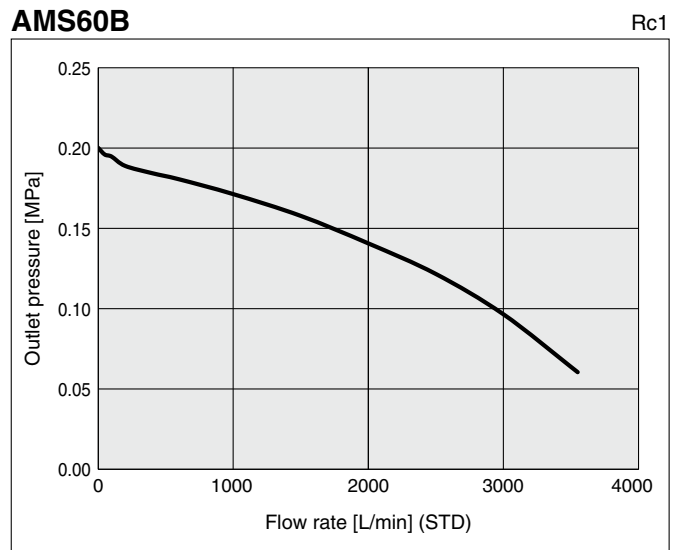
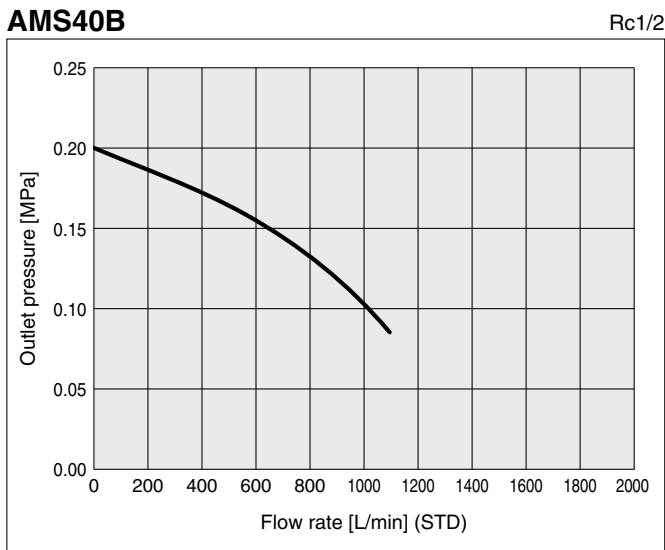
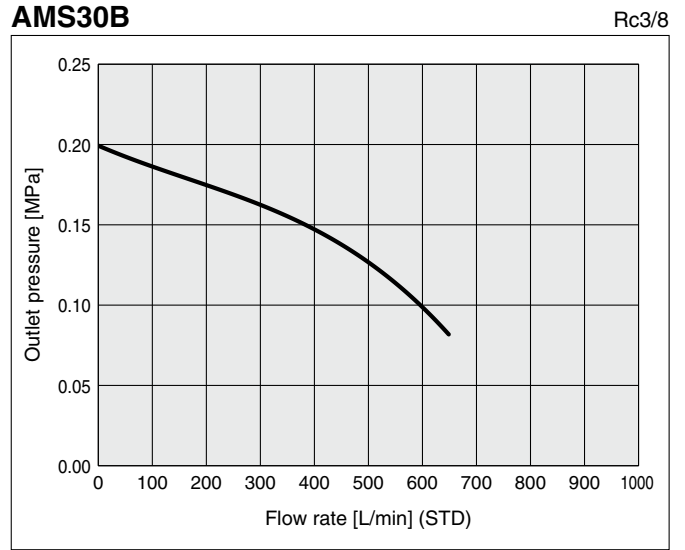
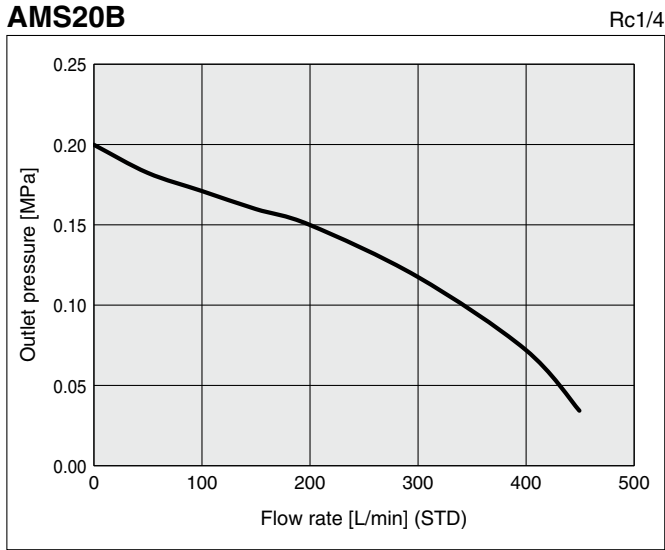
Flow Rate Characteristics (Representative values): AMS20B/30B/40B/60B/Regulator Type

Conditions/Supply pressure: 0.3 to 0.7 MPa, Standby pressure: 0.2 MPa Operation mode



Flow Rate Characteristics (Representative values): **AMS20B/30B/40B/60B/Regulator Type**

Conditions/Supply pressure: 0.5 MPa, Standby pressure: 0.2 MPa **Standby mode**



AMS20A/30A/
40A/60A

AMS20B/30B/
40B/60B

EXA1

ITV2050 to 3050
-X399

AR20S to 50S

VP346E/546E/746E/
946E-X660/X661

Accessories

Made to
Order

Related
Products

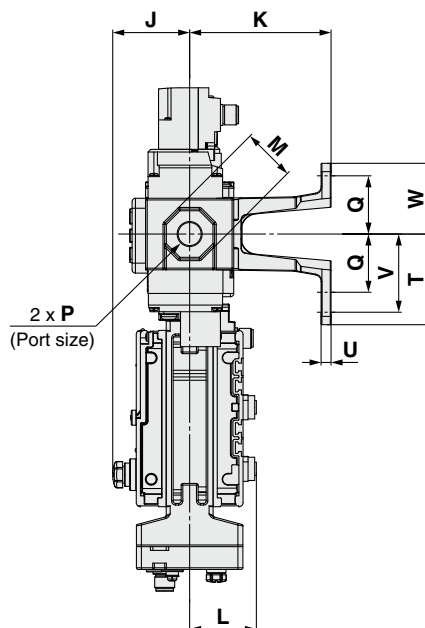
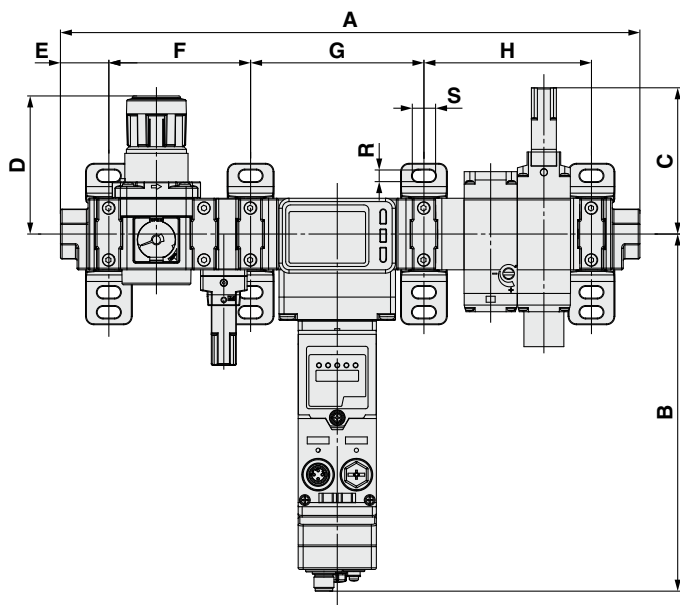
Specific Product
Precautions

AMS20/30/40/60 Series

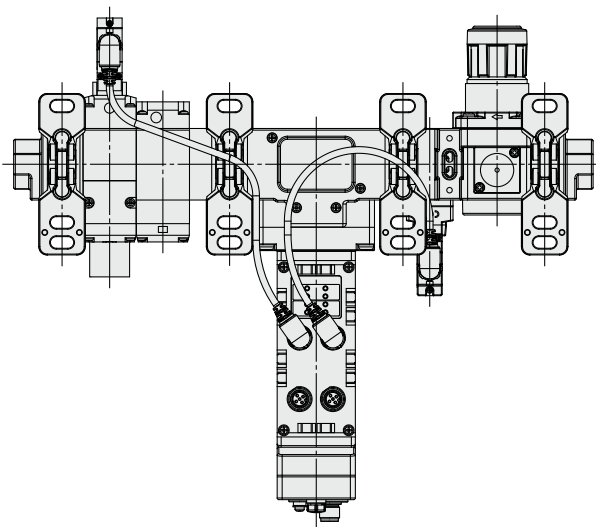
Dimensions: Regulator Type

N.C. (Normally closed)

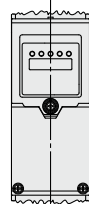
AMS20/30/40/60B-R/N/F□C



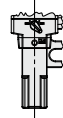
Back side



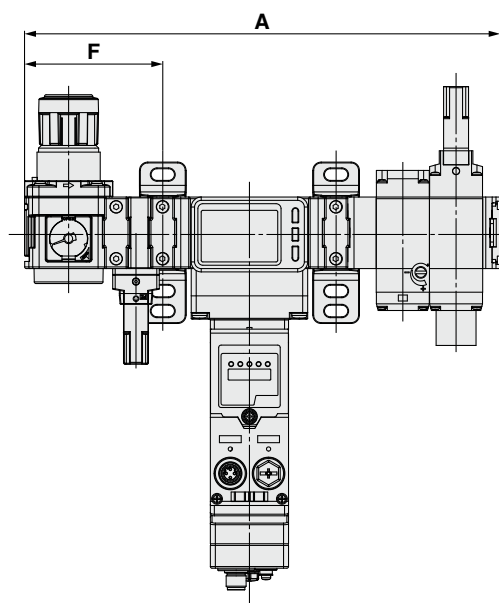
SA: Standalone
(Wireless remote)



E: Push-turn
locking type



AMS20/30/40/60B-□00C
(Without attachments)



* With connection cable for standby regulator/
residual pressure relief valve

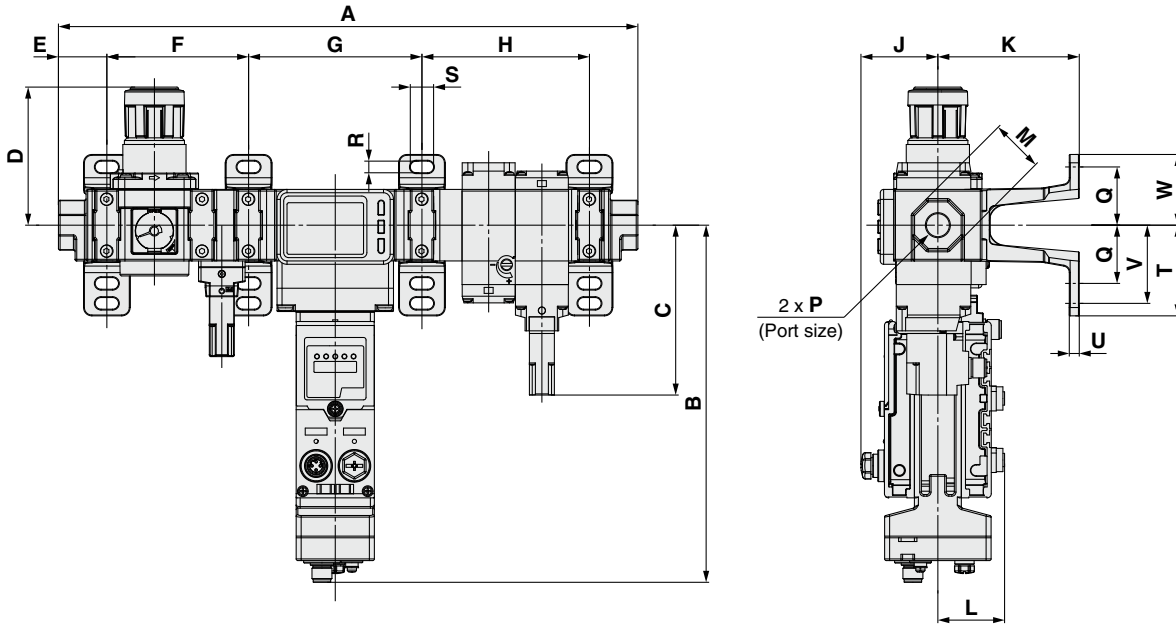
Model	P	A	B	C	D*1	E	J	M	L	Bracket dimensions										
										K	F	G	H	Q	R	S	T	U	V	W
AMS20B-□C	1/8, 1/4	301.8	214.7	81.7	66.8	25.6	46.2	24	40.1	85	71.2	103.2	76.2	35	7	14	54.5	6	47	42.5
AMS30B-□C	1/4, 3/8	348.3	214.7	87.9	86.5	29.1	46.2	30	40.1	85	85.2	104.2	100.7	35	7	14	54.5	6	47	42.5
AMS40B-□C	3/8, 1/2	395.8	214.9	92.4	91.5	32.6	46.2	36	40.1	85	103.2	105.2	122.2	40	9	18	65	7	55	50
AMS60B-□C	3/4, 1	491.8	214.8	93.4	125	42.1	46.2	46	40.1	100	124.2	126.2	157.2	50	11	20	80	8	70	60

Model	P	A	F
AMS20B-□00C	—	247.4	69.6
AMS30B-□00C	—	285.9	83.1
AMS40B-□00C	—	325.4	100.6
AMS60B-□00C	—	401.4	121.1

*1 The dimension of D is the length when the regulator knob is unlocked.

Dimensions: Regulator Type

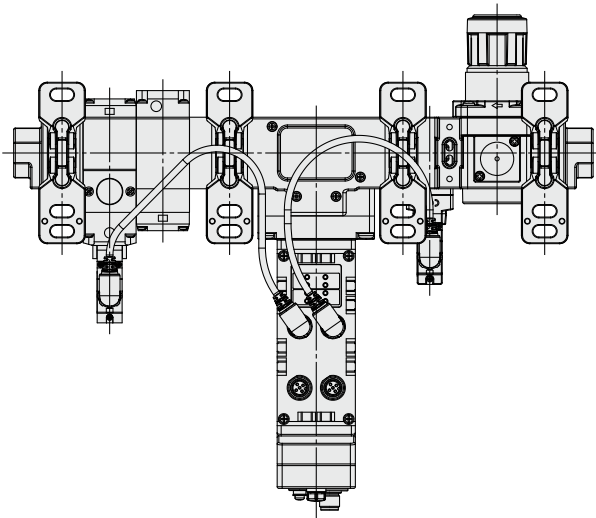
N.O. (Normally open)
AMS20/30/40/60B-□D



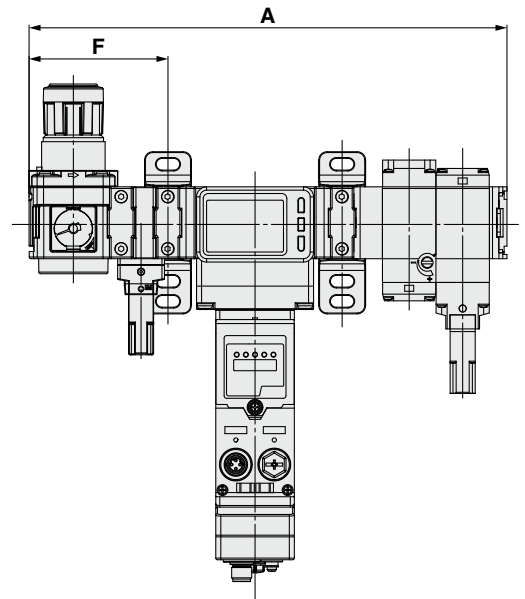
Back side

SA: Standalone
(Wireless remote)

AMS20/30/40/60B-□00D
(Without attachments)



E: Push-turn
locking type



* With connection cable for standby regulator/
residual pressure relief valve

Model	P	A	B	C	D*1	E	J	M	L	Bracket dimensions										
										K	F	G	H	Q	R	S	T	U	V	W
AMS20B-□D	1/8, 1/4	301.8	214.7	85.1	66.8	25.6	46.2	24	40.1	85	71.2	103.2	76.2	35	7	14	54.5	6	47	42.5
AMS30B-□D	1/4, 3/8	348.3	214.7	102.1	86.5	29.1	46.2	30	40.1	85	85.2	104.2	100.7	35	7	14	54.5	6	47	42.5
AMS40B-□D	3/8, 1/2	395.8	214.9	119.4	91.5	32.6	46.2	36	40.1	85	103.2	105.2	122.2	40	9	18	65	7	55	50
AMS60B-□D	3/4, 1	491.8	214.8	118	125	42.1	46.2	46	40.1	100	124.2	126.2	157.2	50	11	20	80	8	70	60

Model	P	A	F
AMS20B-□00D	—	247.4	69.6
AMS30B-□00D	—	285.9	83.1
AMS40B-□00D	—	325.4	100.6
AMS60B-□00D	—	401.4	121.1

*1 The dimension of D is the length when the regulator knob is unlocked.

AMS20A/30A/
40A/60A

AMS20B/30B/
40B/60B

EXA1

ITV2050 to 3050
-X399

AR20S to 50S

VP346E/546E/746E/
946E-X660/X661

Accessories

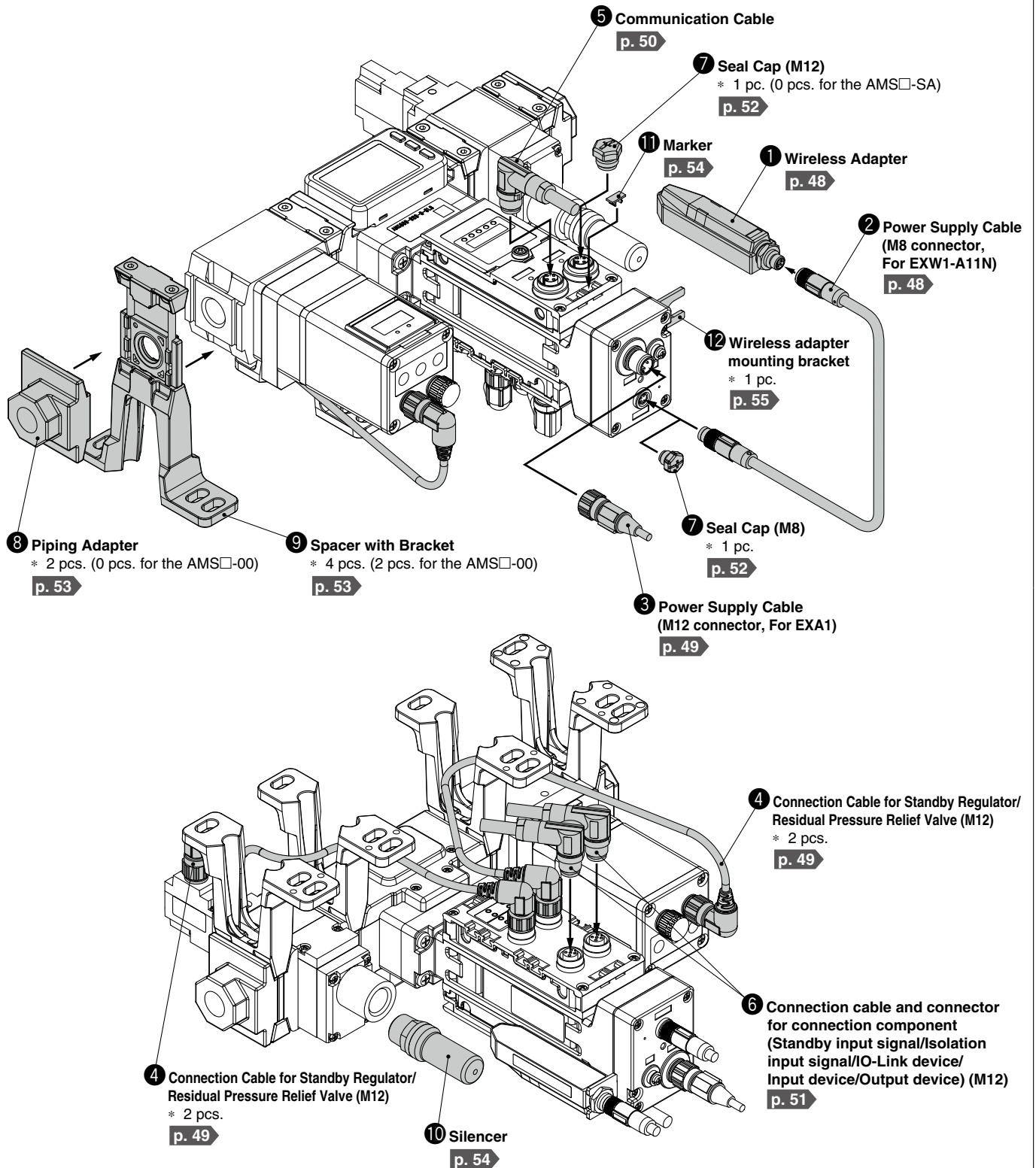
Made to
Order

Related
Products

Specific Product
Precautions

AMS20/30/40/60 Series Accessories

List of Accessories



* The number of pieces included for the AMS model

① Wireless Adapter

Wireless adapter for air management hub EXA1

A wireless adapter needs to be connected to both the wireless base and the wireless remote.

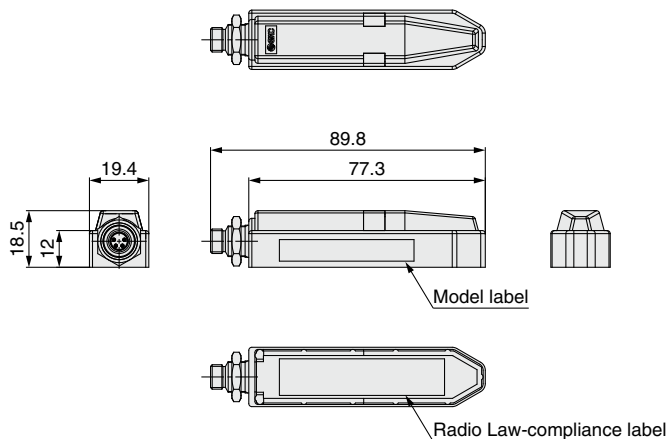
EXW1-A11N

Specifications

	Item	Specifications
Wireless communication	Protocol	SMC original protocol (SMC encryption)
	Radio wave type (spread)	Frequency Hopping Spread Spectrum (FHSS)
	Frequency	2.4 GHz (2403 to 2481 MHz)
	Number of frequency channels	79 ch
	Channel bandwidth	1.0 MHz
	Communication speed	1 Mbps
	Communication distance	Approx. 100 m (Depending on the operating environment)
Electrical	Power supply voltage range	24 VDC +10%
	Current consumption	50 mA or less
General	Enclosure	IP67
	Ambient temperature (Operating temperature)	0 to 50°C
	Ambient temperature (Storage temperature)	-10 to 60°C
	Ambient humidity	35 to 85%RH (No condensation)
	Withstand voltage	500 VAC, 1 min
	Insulation resistance	500 VDC, 10 MΩ or more
	Vibration resistance	Conforms to EN 61131-2 5 <= f < 8.4 Hz 3.5 mm 8.4 <= f < 150 Hz 9.8 m/s ²
	Impact resistance	Conforms to EN 61131-2 147 m/s ² , 11 ms
	Standards	CE/UKCA marking, UL (CSA)*1
	Weight	40 g

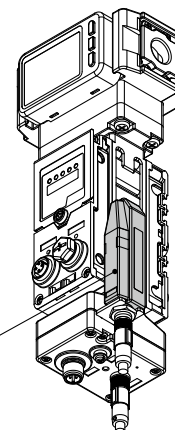
*1 UL (CSA) compliance applies only when connected to an EXA1 air management hub.

*2 Please purchase an EXW1-AC-X1 connection cable separately.



Connector

M8, 4-pin, plug	Terminal no.	Description
	1	24V (US1)
	2	Internal bus B
	3	0V (US1)
	4	Internal bus A



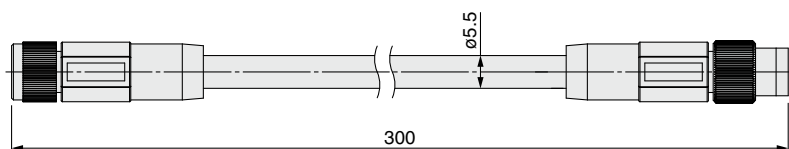
Wireless adapter

* Included parts: Fixing bracket

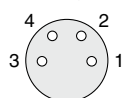
② Power Supply Cable [M8 connector, For EXW1-A11N, With connectors on both sides (socket/plug)]

EXW1-AC1-X1 Straight 0.3 m

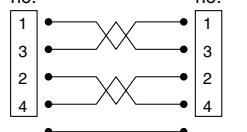
* This product must be used in a fixed position.



Socket connector pin arrangement

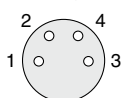


Terminal no.



Connections

Plug connector pin arrangement



Item	Specifications
Cable O.D.	ø5.5 mm
Conductor nominal cross section	AWG24
Wire O.D. (Including insulator)	1.12 mm
Min. bending radius	22 mm

AMS20A/30A/
40A/60A

AMS20B/30B/
40B/60B

EXA1

ITV2050 to 3050
-X399

AR20S to 50S

VP346E/546E/746E/
946E-X660/X661

Accessories

Made to Order

Related Products

Specific Product Precautions

AMS20/30/40/60 Series

③ Power Supply Cable (M12 connector, For EXA1)

* The shape of the M12 connector is A-coded (Normal key).

EX500-AP **050** - **S**

Cable length (L)

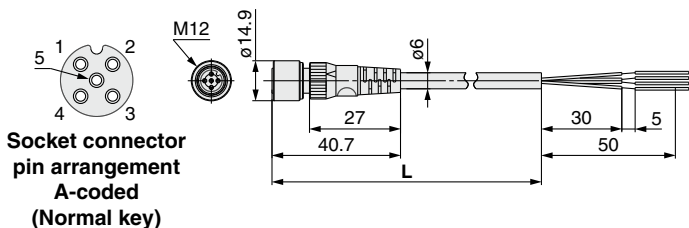
010	1000 mm
050	5000 mm

Connector specification

S	Straight
A	Angled

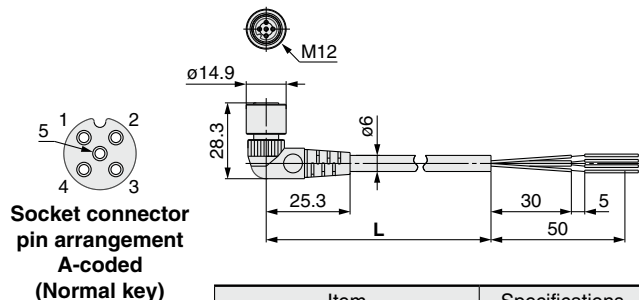


Straight connector type

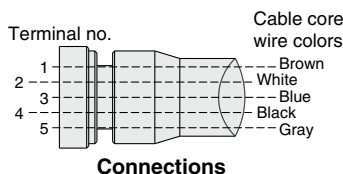


Item	Specifications
Cable O.D.	ø6 mm
Nominal cross section	0.3 mm ² /AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	40 mm (Fixed)

Angled connector type



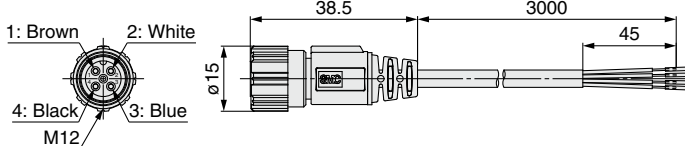
Item	Specifications
Cable O.D.	ø6 mm
Nominal cross section	0.3 mm ² /AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	40 mm (Fixed)



ZS-37-A

Lead wire with M12 connector

Pin no.	Pin name	Wire color
1	DC(+)	Brown
2	N.C.	White
3	DC(-)	Blue
4	N.C.	Black



Cable Specifications

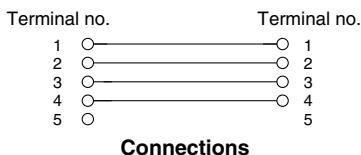
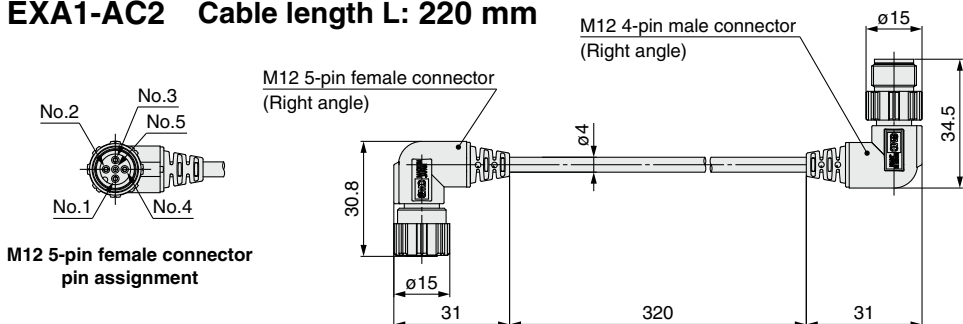
Item	Specifications
Conductor	Nominal cross section AWG23
Insulator	Outside diameter Approx. 1.1 mm
	Color Brown, Blue, Black, White
Sheath	Finished outside diameter ø4

④ Connection Cable for Standby Regulator/Residual Pressure Relief Valve [With M12 angle connectors on both sides (male/female)]

EXA1-AC1 Cable length L: 320 mm

EXA1-AC2 Cable length L: 220 mm

* Included with AMS□A/B air management systems



Component and Connection Cable Suitable Table

Body size	Standby electro-pneumatic regulator	Standby regulator	Residual pressure relief valve
20	EXA1-AC1	EXA1-AC2	EXA1-AC2
30			
40			
60			EXA1-AC1

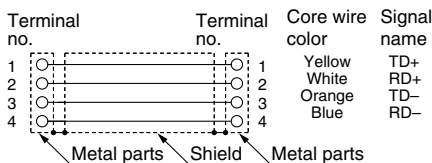
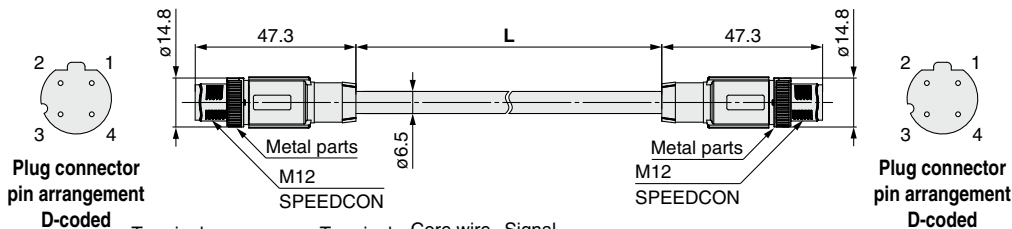
⑤ Communication Cable

For EtherCAT® For PROFINET For EtherNet/IP™

EX9-AC 005 EN-PSPS (With connector on both sides (Plug/Plug))

● Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



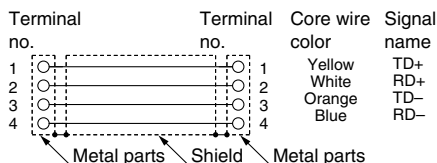
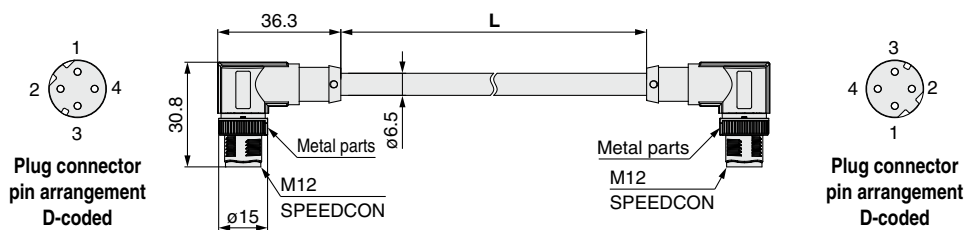
Item	Specifications
Cable O.D.	ø6.5 mm
Conductor nominal cross section	0.34 mm ² /AWG22
Wire O.D. (Including insulator)	1.55 mm
Min. bending radius (Fixed)	19.5 mm

Connections (Straight cable)

EX9-AC 005 EN-PAPA (With angled connector on both sides (Plug/Plug))

● Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



Item	Specifications
Cable O.D.	ø6.5 mm
Conductor nominal cross section	0.34 mm ² /AWG22
Wire O.D. (Including insulator)	1.55 mm
Min. bending radius (Fixed)	19.5 mm

Connections (Straight cable)

AMS20A/30A/
40A/60A

AMS20B/30B/
40B/60B

EXA1

ITV2050 to 3050
-X399

AR20S to 50S

VP346E/546E/746E/
946E-X660/X661

Accessories

Made to
Order

Related
Products

Specific Product
Precautions

AMS20/30/40/60 Series

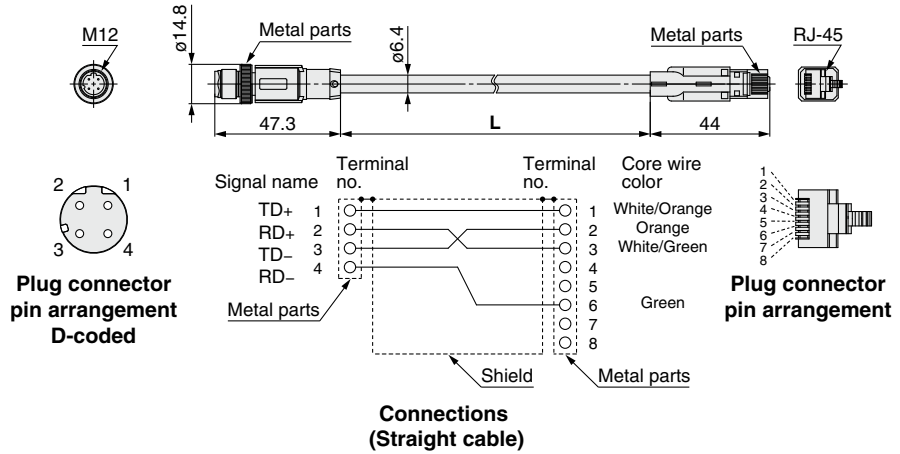
⑤ Communication Cable

For EtherCAT® For PROFINET For EtherNet/IP™

EX9-AC 020 EN-PSRJ (Plug/RJ-45 connector)

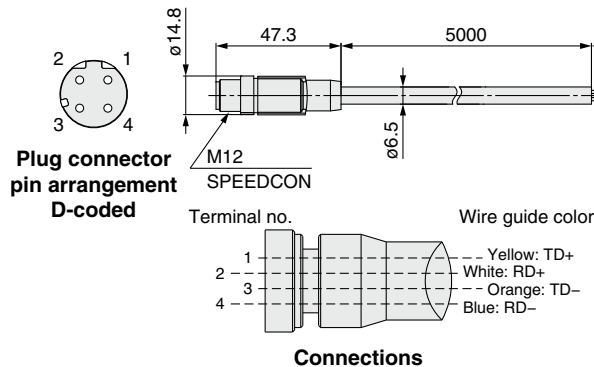
• Cable length (L)

010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



Item	Specifications
Cable O.D.	$\phi 6.4$ mm
Conductor nominal cross section	0.14 mm ² /AWG26
Wire O.D. (Including insulator)	0.98 mm
Min. bending radius (Fixed)	26 mm

PCA-1446566 (Plug)



Item	Specifications
Cable O.D.	$\phi 6.5$ mm
Conductor nominal cross section	AWG22
Wire O.D. (Including insulator)	1.55 mm
Min. bending radius (Fixed)	45.5 mm

⑥ Connection cable and connector for connection component

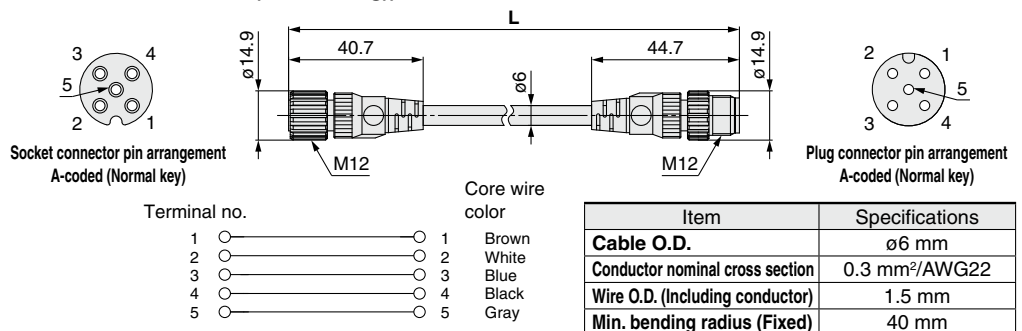
(Standby input signal/Isolation input signal/IO-Link device/Input device/Output device) (M12)

IO-Link Device Cable

EX9-AC 005 -SSPS (With connector on both sides (Socket/Plug))

• Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



Item	Specifications
Cable O.D.	$\phi 6$ mm
Conductor nominal cross section	0.3 mm ² /AWG22
Wire O.D. (Including conductor)	1.5 mm
Min. bending radius (Fixed)	40 mm

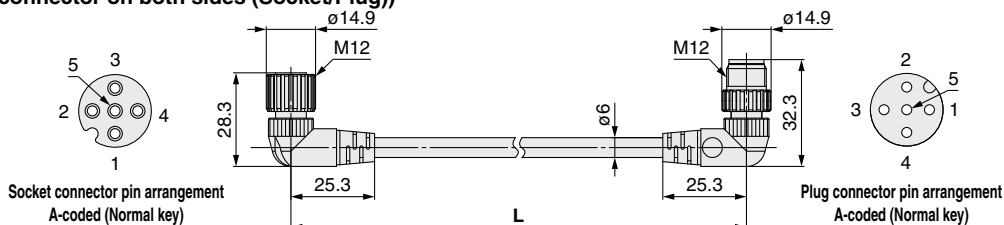
⑥ Connection cable and connector for connection component
 (Standby input signal/Isolation input signal/IO-Link device/Input device/Output device) (M12)

IO-Link Device Cable

EX9-AC 005 -SAPA (With connector on both sides (Socket/Plug))

Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



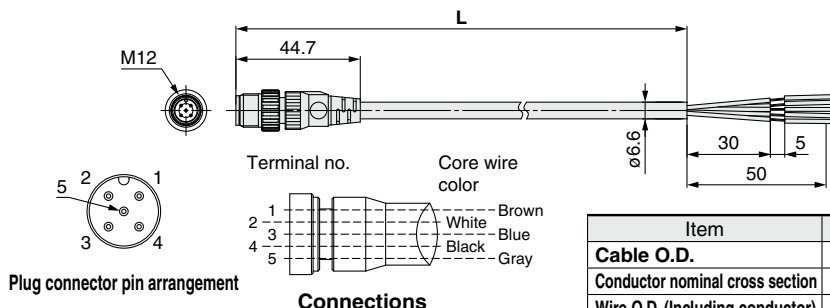
Connections

Item	Specifications
Cable O.D.	ø6 mm
Conductor nominal cross section	0.3 mm ² /AWG22
Wire O.D. (Including conductor)	1.5 mm
Min. bending radius (Fixed)	40 mm

EX9-AC 030 -7

Cable length (L)

010	1000 [mm]
030	3000 [mm]



Connections

Item	Specifications
Cable O.D.	ø6.6 mm
Conductor nominal cross section	0.3 mm ² /AWG22
Wire O.D. (Including conductor)	1.65 mm
Min. bending radius (Fixed)	40 mm

Standby input signal/Isolation input signal/Input device/Output device

Name	Use	Part no.	Description
Cable with connector	For sensor	PCA-1557769	Cable with M12 connector (4 pins/3 m)
Field-wireable connector	For sensor	PCA-1557743	Field-wireable connector (M12/4 pins/Plug/QUICKON-ONE connection/SPEEDCON)
		PCA-1557756	
Y connector	For sensor	PCA-1557785	Y connector (2 x M12 (5 pins)-M12 (5 pins)/SPEEDCON)
		PCA-1557798	Y connector (2 x M8 (3 pins)-M12 (4 pins)/SPEEDCON)

* When using the Y connector, connect it to the connector on the I/O unit through the sensor cable (PCA-1557769) with the M12 connector.

⑦ Seal Cap (10 pcs.)

Be sure to mount a seal cap on any unused I/O connectors. Otherwise, the specified enclosure cannot be maintained.



AMS20A/30A/40A/60A

AMS20B/30B/40B/60B

EXA1

ITV2050 to 3050 -X399

AR20S to 50S

VP346E/546E/746E/946E-X660/X661

Accessories

Made to Order

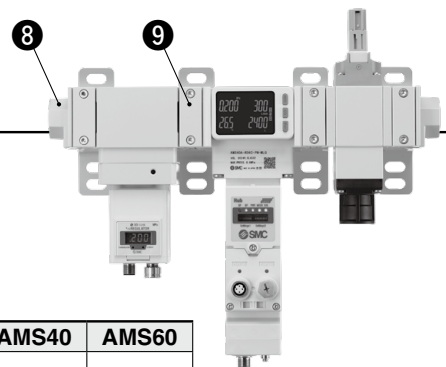
Related Products

Specific Product Precautions

AMS20/30/40/60 Series

8 Piping Adapter

A piping adapter allows for the installation/removal of the component without removing the piping and thus makes maintenance easier.



E 200 - □ 01 - D

Applicable size

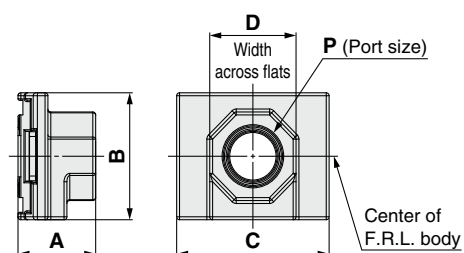
200	AMS20
300	AMS30
400	AMS40
600	AMS60

Thread type

Symbol	Thread type
Nil	Rc
F	G
N	NPT

Port size

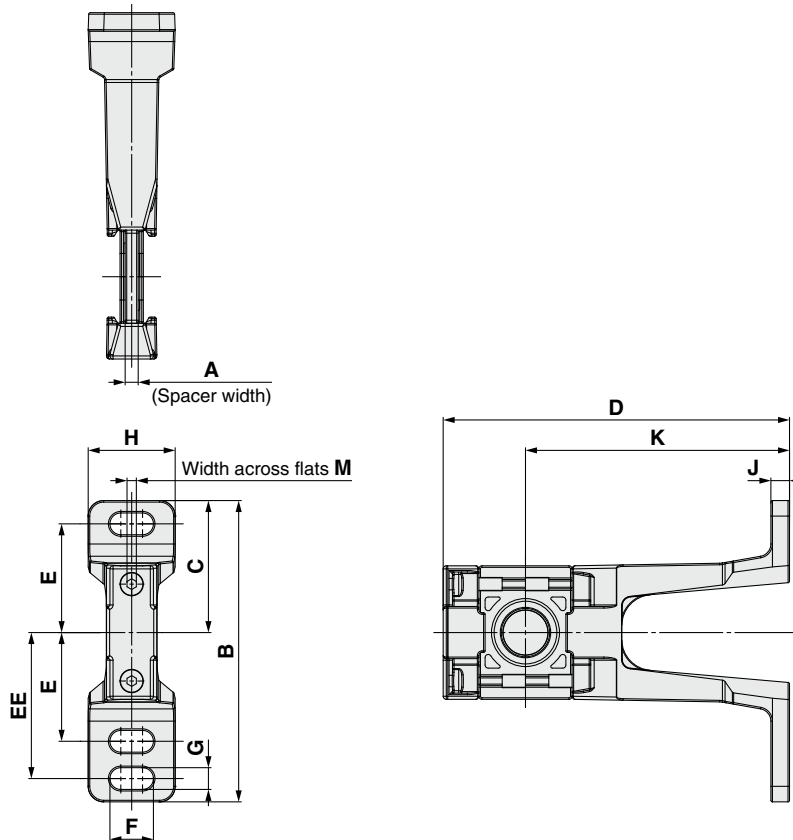
Symbol	Port size	AMS20	AMS30	AMS40	AMS60
01	1/8	●			
02	1/4	●	●		
03	3/8		●	●	
04	1/2			●	
06	3/4				●
10	1				●



Model	P	A	B	C	D
E200-□01-D	1/8	24	35	42	24
E200-□02-D	1/4	24	35	42	24
E300-□02-D	1/4	27	43	53	30
E300-□03-D	3/8	27	43	53	30
E400-□03-D	3/8	30	51	71	36
E400-□04-D	1/2	30	51	71	36
E600-□06-D	3/4	39	64	90	46
E600-□10-D	1	39	64	90	46

* A spacer with bracket is required for modular unit.

9 Spacer with Bracket



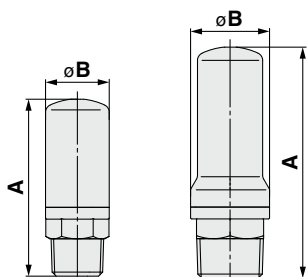
Model	A	B	C	D	E	EE	F	G	H	J	K	M	Applicable size
Y200T-2-D	3.2	97	42.5	106	35	47	14	7	28	6	85	2	AMS20
Y300T-2-D	4.2	97	42.5	111.5	35	47	14	7	28	6	85	3	AMS30
Y400T-1-D	5.2	115	50	120.5	40	55	18	9	32	7	85	3	AMS40
Y600T-2-D	6.2	140	60	145	50	70	20	11	37	8	100	4	AMS60

⑩ Silencer

Compact Resin Type

AN20

AN30, AN40



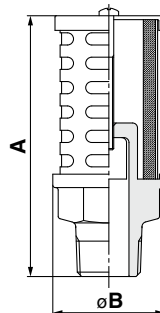
Dimensions

[mm]

Model	Port size R	A	B
AN20-02	1/4	45	16.5
AN30-03	3/8	58.5	20
AN40-04	1/2	68	24

Metal Body Type

AN500, 600



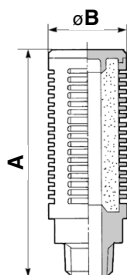
Dimensions

[mm]

Model	Port size R	A	B
AN500-06	3/4	107	46
AN600-10	1	127	50

High Noise Reduction Type

AN202 to 402



Dimensions

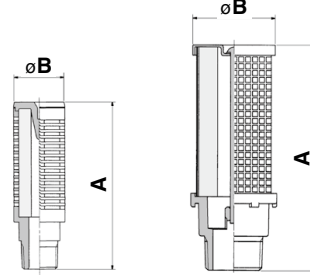
[mm]

Model	Port size R	A	B
AN202-02	1/4	64	22
AN302-03	3/8	84	28
AN402-04	1/2	95	34

High Noise Reduction Type

ANA1-06

ANA1-10



Dimensions

[mm]

Model	Port size R	A	B
ANA1-06	3/4	111	46
ANA1-10	1	132	50

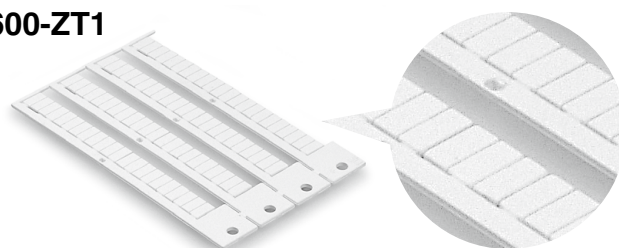
Compatibility Chart for Residual Pressure Relief Valve and Silencers

	Silencer	Compact resin type					High noise reduction type				
	Model	AN20-02	AN30-03	AN40-04	AN500-06	AN600-10	AN202-02	AN302-03	AN402-04	ANA1-06	ANA1-10
	Port size	1/4	3/8	1/2	3/4	1	1/4	3/8	1/2	3/4	1
VP346E	X660 (N.C.)	○	—	—	—	—	○	—	—	—	—
	X661 (N.O.)	○	—	—	—	—	—	—	—	—	—
VP546E	X660 (N.C.)	—	○	—	—	—	—	○	—	—	—
	X661 (N.O.)	—	○	—	—	—	—	—	—	—	—
VP746E	X660 (N.C.)	—	—	○	—	—	—	—	○	—	—
	X661 (N.O.)	—	○	—	—	—	—	—	—	—	—
VP946E	X660 (N.C.)	—	—	—	—	○	—	—	—	—	○
	X661 (N.O.)	—	—	—	○	—	—	—	—	○	—

⑪ Marker (1 sheet, 88 pcs.)

The signal name of I/O device and each unit address can be entered and mounted on each unit.

EX600-ZT1



AMS20A/30A/
40A/60A

AMS20B/30B/
40B/60B

EXA1

ITV2050 to 3050
-X399

AR20S to 50S

VP346E/546E/746E/
946E-X660/X661

Accessories

Made to
Order

Related
Products

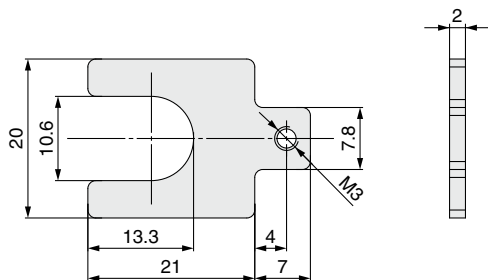
Specific Product
Precautions

AMS20/30/40/60 Series

12 Wireless Adapter Mounting Bracket

1 round head combination screw (M3 x 10) is included.

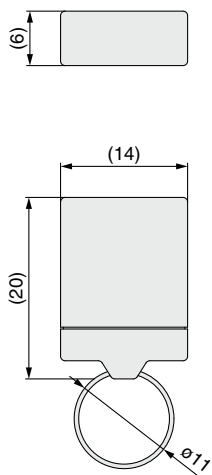
EXA1-AB1



13 IO-Link Device Tool License Key

USB dongle

EX9-ZSW-LDT1



AMS20/30/40/60 Series

Made to Order

Please contact SMC for detailed dimensions, specifications, and lead times.



1 Without Residual Pressure Relief 3-Port Solenoid Valve Specification

Symbol
X101

Combination of a standby electro-pneumatic regulator and an air management hub

AMS A - - - L G - X101

For "How to Order," refer to page 7.

Combination of a standby regulator and an air management hub

AMS B - D - - L - X101

For "How to Order," refer to page 13.

2 Without Standby (Electro-Pneumatic) Regulator Specification

Symbol
X102

Combination of an air management hub and a residual pressure relief 3-port solenoid valve

AMS A - - - L - X102

For "How to Order," refer to page 7.

Combination of an air management hub and a residual pressure relief 3-port solenoid valve (with soft start-up function)

AMS B - - - L - X102

* Port size: For the "00" type without attachments, the pipe thread type is fixed as "R."

For "How to Order," refer to page 13.

AMS20A/30A/
40A/60A

AMS20B/30B/
40B/60B

EXA1

ITV2050 to 3050
-X399

AR20S to 50S

VP346E/546E/746E/
946E-X660/X661

Accessories

Made to
Order

Related
Products

Specific Product
Precautions

AMS20/30/40/60 Series Related Products

Compressed Air Preparation Filter Line Filter AFF-D



Series	Port size	Nominal filtration rating [μm]
AFF20 to 60-D	1/8, 1/4, 3/8, 1/2, 3/4, 1	1.0 [Filtration efficiency: 99%]

Air Filter AF-D



Series	Port size	Nominal filtration rating [μm]
AF20 to 60-D	1/8, 1/4, 3/8, 1/2, 3/4, 1	5

Filter Regulator AW-D



Series	Port size	Nominal filtration rating [μm]
AW20 to 60-D	1/8, 1/4, 3/8, 1/2, 3/4, 1	5